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IDENTIFICATION OF ANXIETY MANIFESTATIONS OF PRESCHOOL TONSILLECTOMY CHILDREN AND THEIR MOTHERS

by

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A professional paper submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of

MASTER OF NURSING

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C.M.S.
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ABSTRACT

The problem of this study was: How can the nurse identify anxiety manifestations of hospitalized, preschool, tonsillectomy children and their mothers and aid them in expressing and perhaps in reducing these anxieties?

Seven preschool children, ranging in age from three through five years, who were admitted to three general hospitals in Montana during a three-month period, and their mothers were selected as participants in this study.

A tool was designed to assess mother-child preoperative preparation for a tonsillectomy and to aid in identification and recording of their physical and behavioral anxiety manifestations. The tool consisted of two interview guides of structured questions and three checklists of twelve physical and fifteen behavioral anxiety manifestations, and twelve pre- and postoperative occurrences associated with tonsillectomies. Projective play and art materials were selected as aids for identification of children's anxiety manifestations.

The study revealed that:
1. Anxiety manifestations of children could be identified through observation of responses to projective play with a toy doctor-nurse kit, dolls, and water-color paints.
2. Preoperatively, play techniques seemed to provide outlets for children to express their anxieties and may have aided in reducing some of them. (Anxiety manifestations identified: before play, 30; during play, 35; after play, 25.)
3. Postoperatively, play techniques seemed to elicit anxiety expressions from the children. (Anxiety manifestations identified: before play, 10; during play, 23; after play, 20.)
4. Anxiety manifestations of mothers could be identified through the use of structured interview questions and planned observation.
5. As expected, fewer anxiety manifestations of children and mothers were identified postoperatively. (Anxiety manifestations identified: Preoperatively, 48, children; 38, mothers; Postoperatively, 32, children; 4, mothers.)
IDENTIFICATION OF ANXIETY MANIFESTATIONS OF PRESCHOOL TONSILLECTOMY CHILDREN AND THEIR MOTHERS

CHAPTER I

INTRODUCTION

The child who enters the hospital, is likely to be confronted with a strange, sometimes terrifying, new world. He is under the stress of his illness, separation from his parents and home environment, and the additional stress of a new, complex and unknown setting. The experience can be traumatic for the child, producing anxieties which he seeks to alleviate on his own and through help from his parents and others.

Several authors suggest that the pediatric nurse is in a prime position to help the child through his hospital experience. Some authors state that she can help the child by providing him with realistic, factual knowledge about his illness and hospitalization, thus, making many of the awesome aspects of hospital life familiar and less fearful. Other authors suggest that the child's anxieties can be vented or expressed through play. Toys have been found to provide the media through which the child can release his feelings.

Another avenue of expression for children is through the art media, specifically water-color paints. The art activity provides the child not only with an outlet for anxieties, but also with an opportunity for communication. For young children this may be their only means of communicating their feelings, since verbal expression is often an
inadequate means.

The pediatric nurse is also believed to be in an excellent position to help the child's parents through the hospital experience. It has been suggested that the parents also experience much of the same anxieties about the situation as their child does. It is believed that they, too, need realistic, factual knowledge about the child's illness and hospitalization, as well as emotional support. This support from the registered nurse has been recognized as being of extreme value in helping the parents to help their child to comprehend aspects of a situation and to deal with difficulties he may encounter in this situation. It is, therefore, important that the parents receive the support they need from the registered nurse in order to fulfill their role.

The problem, therefore, is: How can the nurse identify anxiety manifestations of hospitalized, preschool, tonsillectomy children and their mothers, and aid them in expressing and perhaps in reducing these anxieties? This study was an attempt to provide a means by which registered nurses can identify anxiety manifestations of preschool children and their mothers and to provide several means by which the children and mothers can express their anxieties and in doing so, perhaps reduce them.
Statement of the Problem

How can the nurse identify anxiety manifestations of hospitalized, preschool, tonsillectomy children and their mothers, and aid them in expressing and perhaps in reducing these anxieties?

The Purposes of the Study

The purposes of this study were:

1. To develop a specific tool to aid the nurse in assessing mother-child preoperative preparation for a tonsillectomy, and to aid her in identifying and recording anxiety expressions of hospitalized, preschool children and their mothers, both pre- and postoperatively.

2. To investigate the usefulness of the specific tool developed.

3. To identify physical and behavioral manifestations of anxiety expressed by children through the use of selected play techniques, preoperatively in the hospital and postoperatively at home.

4. To identify anxiety expressions of mothers, pre- and postoperatively, through observation and the use of structured, interview guides.

5. To initiate nursing intervention, in the form of anticipatory guidance, to mothers as indicated by the investigator's assessment of their preoperative preparation for their child's tonsillectomy.
Assumptions

The assumptions are:

1. In anticipation of a tonsillectomy, children and mothers will have anxiety that can be identified.

2. Anxiety can be communicated from one individual to another.

3. Projective play and child art are avenues of self-expression and outlets for pent-up emotions.

4. Appropriate nursing actions are based on perceived patient needs.

Definition of terms

In order to establish a common basis of understanding, the following definitions were used:

- **anxiety manifestations**: Those physical signs of anxiety such as dilated pupils, dryness of mouth, muscular tension; and behaviors, such as crying, restlessness, and sighing that can be identified through observation.

- **preschool children**: Any child, from three through five years of age.

- **selected play techniques**: Means by which a child is permitted to work out temporary, disturbed feelings or anxieties; specifically through the use of water-color paints and projective play with a toy doctor-nurse kit.

- **anticipatory guidance**: A technique by which a registered nurse assists
a person in visualizing a potentially, threatening situation and ways of coping with it.

**intrusive procedures:** Procedures that involve an invasion of one's body privacy through the use of instruments such as a syringe and thermometer.

**Methodology**

The nursing personnel of three general hospitals and six physicians were notified of the study. Permission for the children's participation was obtained from their mothers and their attending physicians. An attempt was made to ascertain from the physicians the nature of their preparation of mothers and children for the tonsillectomy.

Seven preschool children, four boys and three girls, ranging in age from three through five years, were selected for participation in this study from ten preschoolers who were admitted to three Montana general hospitals for tonsillectomies during a three-month period from January through March, 1969. The mothers of these seven children were also participants in this study.

A tool was designed to aid the investigator in assessing mother-child preoperative preparation for a tonsillectomy, and to aid her in identifying and recording anxiety expressions of the children and their mothers pre- and postoperatively. The tool consisted of two interview guides of structured questions pertaining to mother-child preoperative
preparation, and three checklists: one of which was to determine the children's knowledge of pre- and postoperative occurrences associated with tonsillectomies; one of which aided the investigator in identifying and recording observed, physical manifestations of children and mothers; and, one of which aided the investigator in identifying and recording observed, behavioral manifestations of children and mothers.

In order to aid the investigator in identifying the physical and behavioral anxiety manifestations, and in order to aid the children in expressing their anxieties, play techniques were selected. These techniques included projective play and art materials.

Anticipatory guidance was initiated by the investigator in response to the mothers' "No" answers to questions pertaining to their preoperative preparation in an attempt to reduce any anxieties attributed to gaps in their preparation.

Each observation was recorded within a 1\(\frac{1}{2}\)-hour time period at each hospital and again at each home on the day following each child's surgery.

A more detailed description of the methodology is included in a chapter under that heading.

Variables

There were several variables which the investigator was unable to control. These included: 1) The amount of preoperative knowledge or preparation the children and mothers had before participating in this study, 2) The degree of anxiety they were experiencing, 3) The significance of the anticipatory guidance given to the mothers, 4) The thera-
peutic value of selected play techniques.

Limitations

Limitations to be considered: 1) The small population, 2) The children and mothers' unique ways of meeting and coping with their problems, 3) The differences in philosophies and approaches to mother-child preparation used by physicians, 4) The investigator's perception of anxiety manifestations.
CHAPTER II

REVIEW OF LITERATURE

In order to gain insight into the present problem, a review of literature was undertaken to learn of current thinking and research on this and similar topics. Specifically, sources dealing with anxiety, anticipatory guidance, play techniques and child art were reviewed.

ANXIETY

Anxiety is generally thought of as a "reaction to a danger, often nonspecific, that causes a person to feel a vague, uneasy sense of dread, nervousness or apprehension. It is frequently associated with three underlying states of mind, all of which threaten a person's identity: 1) sense of helplessness, 2) sense of isolation or alienation, 3) sense of insecurity or threat to identity."

It has been recognized that although it is difficult to define the nature of anxiety, it is usually not difficult to recognize its manifestations. The manifestations are classified into two categories: physical and behavioral. The following are some observable physical and behavioral manifestations:

"rapid pulse, cold, clammy skin, blanching skin, diarrhea, dry mouth, muscular tension, especially of the neck; dilated eyes, frequency of urination; anger, crying, denial, complaining, panic, constructive action, defensive behavior, irritation,

Anxiety may also be classified as to degrees, which vary from mild to severe. They have been described as follows: 1) A person experiencing mild anxiety is able to focus on most of what is happening in a situation; 2) A person experiencing moderate anxiety is limited in his ability to focus on what is happening; 3) A person experiencing severe anxiety cannot focus on what is happening. Therefore, it is apparent that anxiety is not static, but tends to grow if not dealt with adequately in its mild stage. This may be considered when one thinks of the anxiety that is likely to be associated with illness and hospitalization. "In its milder forms, anxiety contributes to a patient's discomfort. In its more severe forms, anxiety may seriously interfere with a patient's treatment and his response to it."

Anxiety is not exclusively limited to adults but is also experienced by children. Hospitalization of a child may be one situation that contributes to his anxiety. The child is confronted with a new environment of strange gadgets, people, noises, smells, clothing and rules.

Anxiety of children can be identified by the following manifestations:

"Changes in facial expression---blushing or palor; dilatation of pupils, and movements of facial musculature; changes in mobility, such as muscle rigidity, restlessness,"
sudden interruption of movement, overactivity, chewing on parts of the body or objects, biting; rituals or compulsive acts or mannerisms. Language functions may be affected, resulting in mutism, talkativeness, or stuttering. There may be loss of sphincter control, vomiting, loss of appetite, disturbances of sleep, nightmares, or night terrors; temper tantrums, breath holding spells, or crying. 4

Many of these manifestations have been identified by pediatric nurses who recognize that the children need more support and comfort from nurses in addition to routine, physical ministrations. However, before the nurses can give the children the support they need, they should try to determine the source of the children's anxiety. There are three sources for nurses to consider: 1) Contagion, which is described as being absorption of apprehensiveness though close contact with anxious people; 2) Fright, caused by a sudden upsetting event which may leave the child defenseless for a time until he can mobilize some defenses; 3) Intra-psychic conflict, arising from problems in the parent-child relationship.

Thus, one might assume that the children's anxiety may have been communicated from their parents who, according to Perry Mahaffy, "often feel anxious and helpless...uncertain of their role in the hospital... and communicate this feeling to their child, who, in turn, becomes more

5 Ibid.
6 Or, one might assume that the anxiety may be attributed to a routine hospital procedure, such as a rectal temperature, which is not understood. Florence Erickson states: "Children show severe reactions to procedures of bodily intrusion, and many times out of all proportion to the pain of the procedure. The child reacts more to the fantasy aroused by the procedure than to the procedure itself. However, little is known about children's interpretations of intrusive procedures." Or, the child may feel anxious because he thinks that he is being punished or being abandoned by his parents. Florence Erickson comments: "A hospital experience at this age level, (children under four years) is likely to be interpreted by the child as punishment, or even as an attempt to eliminate him, which relates to feelings and thoughts associated with the Oedipal conflict, for which the child expects to be punished."

One or all of these sources may be the basis for the children's anxiety, and after having considered these, nurses can attempt to initiate appropriate nursing intervention to reduce it. They may begin their intervention with the children or with the parents.

8 Ibid.
ANTICIPATORY GUIDANCE FOR CHILDREN

In a study done by Jacqueline Holt which dealt with children's recall of a hospital experience, Miss Holt described her findings, which included the children's knowledge and understanding of their experience. She stated that one-half of all the children in her study knew the name of their illness and why they were hospitalized, but out of the total of thirty, only seven had a good understanding. She said that: "This finding indicates the fallacy of parents and hospital personnel assuming, because a child can parrot the name of his illness, he understands the illness or what has happened to him."9

She continued by stating:

"If children are made anxious by poorly understood disease conditions and if recognition is made of the potentially damaging aspects of anxiety, then pediatric nurses and other professional personnel would do well to increase their efforts to help children attain realistic, factual knowledge about their illnesses and hospitalizations. ...The parents of the children in this study expressed many misconceptions on the part of the children, and perhaps the parents, too, need the opportunity to express their own lack of knowledge so they will, in turn, be able to help their children."10

Petrillo, in her study, "Preventing Hospital Trauma in Pediatric Patients," suggests that: "Attempts should be made to eliminate the

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9 Jacqueline Holt, "Discussion of the Method and Clinical Implications from the Study 'Children's Recall of a Preschool Age Hospital Experience After an Interval of Five Years'," Communicating Nursing Research, (July, 1968), p. 69.
element of surprise; to make the many awesome aspects of hospital life familiar and less fearful, and to supply reasonable explanations of the nature of the illness and treatment involved in the care of hospitalized children. ...There is no question but that hospitalization has become a less traumatic experience for children cared for in this way."

Thus, it is believed that children should be prepared for their hospital experiences. The preparation provided for the children depends on how much they can understand and what preparation they have had prior to their admissions. Latham and Heckel state: "Telling a child what is going to happen and giving the child time to think about it, lessens the degree of adjustment the child has to make, and prevents him from being startled."

They further add that the information nurses give to the children can contain specific details of such things as ward routines, preoperative medication, and the method of going to the operating room. They conclude: "In any event, children should know what to expect."

In addition, it has been recognized that the mother-child relationship during hospitalization may govern the degree of the child's anxiety.

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13 Ibid. p. 390.
and whether changes in his anxiety are detrimental or beneficial. Therefore, nursing intervention, initiated to help the child cope with his anxieties, may be begun with the mother.

ANTICIPATORY GUIDANCE FOR MOTHERS

In establishing the kind of relationship with parents that would help free them to help their children effectively, Mahaffy found that it is often necessary to identify and discuss with parents their feelings of discomfort concerning hospitalization of their children. This is in agreement with the theory that anxiety can be contagious.

He states: "Next to the surgeon, parents are the most important factor in their child's forthcoming hospital experience. Parents have to support the child and help him comprehend his situation and guide him over fear provoking obstacles."

He feels that it is the nurse's responsibility to accurately assess the parents' feelings and their emotional capacity to care for their child. This, he feels, can be accomplished through an effective nurse-parent relationship. He adds: "The mother must be comfortable and secure in order for her to meet her child's needs."

Holt, who supports the idea that parents should be included in the preparation of their children for hospitalization, and who believes that


professional health personnel, especially pediatric nurses, should provide anticipatory guidance for parents, states that: "The parent can provide factual information, clear up misconceptions and provide the support needed by preschool children to work through or master the past experiences (attributed to hospitalization)."

Whether nurses begin preparing children for the hospital with the children or with their parents, the purpose in doing so remains the same: To reduce or relieve anxiety of children that may be associated with hospitalization.

Besides providing children with factual knowledge as a means of attempting to reduce their anxieties, nurses may institute another approach for helping children to cope with their feelings associated with the hospitalization. This approach, which seems to be a natural way for children to express themselves and which is an important part of their every day lives, is play.

PROJECTIVE PLAY

Play has been said to be one of the most satisfactory ways for children to express and to attempt to resolve their feelings and anxieties. "The child repeats actively what he has experienced as a passive victim and gradually masters the fear produced in the situation."

Margaret Lowenfeld describes play as being the highest expression in childhood, for it affords children the opportunity to express what is in their souls.

Freud states that children repeat in their play everything that has made a great impression on them in their actual lives. It permits them to be in command of the situation, thus, allowing them to master it.

C.E. Moustakas describes play as being either free and spontaneous or controlled and situational. About the latter he states:

"The therapist familiar with the disturbing elements of the child's life, sets up toys and suggests a more or less specific scene. The most important use of this method is to treat specific symptoms, preferably those of short duration. A number of studies have been reported which show that situational play therapy provides the normal child with an opportunity to work out temporary disturbed feelings, and is useful as a short cut to understanding the emotional adjustments and needs of children."  

It has become apparent to some hospitals that play therapy should be included as part of the children's total care. It has been recognized that the play not only has meaning to the children, but also can have meaning to the professional workers caring for them. "...If the nurse

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watches the child in his use of play materials, she may get a clue as to how he feels and what he thinks about his operation."

For preschool children who are hospitalized, toys such as dolls, doll equipment, toy hypodermic syringes, stethoscopes, crayons, clay, water paints and paper, or creative materials; not only help to develop the children's imagination and creative abilities, and their muscle coordination, but they also can serve as emotional outlets.

"Toys that can be pounded and punched as well as cuddled, provide some release for feelings... they allow the child's imagination to roam and keep the child in contact with the world." 22

There are two theories of play therapy: 1) Catharsis, in which play is viewed as a safety valve for pent-up emotions, 2) Self expression, in which play is viewed as a medium for satisfying a majority of children's emotions. The latter is a particularly useful means for children to satisfactorily play out the feelings that they cannot adequately express verbally.

Although play is meaningful for children, and although observers of this play may get clues about some of the children's feelings during the activity, Margaret Lowenfeld states that adults observing children

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playing are not really integrated with those children. She says that what adults observe of children's play may be equated with what a person in an airplane observes of the ground. The adults are looking down at it, but they cannot know what really is occurring. They do not know why the child is playing the way he is or what he feels while playing. Thus, play may be considered to have an inner and outer aspect; the outer is observed by the adult observer and the inner has meaning only to the child who is playing. Therefore, one may only speculate what meaning or value play has for children. Schuster states: "While they (projective techniques of play) allow free expression of unique, idiosyncratic experiences, it is difficult to establish standardized, objective criteria to measure the responses on which valid interpretations may be based."

In addition to projective play, another media which allows children to successfully express their feelings is art.

CHILDREN'S ART

Although child art is only a few decades old, the term itself is very young. It is thought to be parallel with or perhaps a consequence of the recognition of children as individual, human beings. It has been described as follows: "Child art is a process by which the feelings and

thoughts of the child are expressed."

Since creativity is natural for young children and has not yet been inhibited by society, it is at first a spontaneous reification of sensation. It is a child's attempt to make visible an invisible actuality which he cannot adequately do with words. He may paint what he sees, feels, or knows, and is not limited to showing what is actually visible. His art, however, is not entirely symbolic for at times it may show expressions of realism.  

There seems to be agreement among child art experts, that children tend to pass from one state of artistic development to another. These states of development are: "1) Scribbling or manipulative, which occurs between the ages of two and five; 2) Symbolic, which occurs between the ages of four and eight; and, 3) Dawning realism, which occurs between the ages of nine and twelve." There is no clear break which separates the different stages from each other; they are all overlapping. These stages may be termed differently by the various authorities, but the underlying development is the same.

The first two stages are of primary significance to this study. The first stage, scribbling and manipulative, is initially characterized by

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what appears to be uncontrolled scribbles or scratchings, which are partly an activity of muscles and partly a creative expression. Children produce them unintentionally and from imagination. As they progress in the stage, their drawings become more representative of objects or rhythmical patterns, and they begin to produce more from memory and nature.

The second stage, symbolic, is characterized by greater muscular development and coordination, and by greater expansion of the children's conceptual faculties, which enable them to define and organize pictorial details, such as animation, size, and texture. Children in this stage are also know to draw themselves and in doing so, greatly exaggerate their size. They also exaggerate the size of objects that they feel to be of importance to them. Some children at this stage also name their drawings.

The art of preschool children has also been described as lacking perspective and proportion. The former is not present because perspective is not perceived by the children, and the latter lack goes back to the fact that children want to create or represent what is most important to them.

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30 Ibid.
31 Viola, op. cit., p. 20, 22.
Color also seems to play a subordinate role in preschool children's art. The children enjoy the use of color, but, too many colors divert them from the experience of establishing motor coordination. Children, who become too much attracted by color frequently interrupt their scribbling and begin splashing the paint. While this may release tensions and thus, may be important for children, it may become a habit if done too often. According to Viola, "Too many colors is not advisable because they tend to confuse children." Lowenfeld adds: "Only when the child begins to name his scribblings does he have the desire to use different colors to designate meanings."

In an article by Mary Bartholet, the significance of several colors was discussed. Among these colors were red, green and black, which are of significance to this study. She described red as being exciting, restless, nervous; suggesting danger, anger and aggression as well as motion, vitality and vigor; green as being generally the color of life, youth, tranquility and is frequently symbolic of hope, peace and plenty. It may also be thought of as being pacifying, with a tendency to reduce nervous and muscular tension; black as being negative, bespeaking death, anxiety, misery, mourning, and destruction.

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34 Lowenfeld, op. cit., p. 102.
In addition to color, perspective, and proportion another aspect of preschool children's art is the way they utilize space, which may designate their feelings for proper distribution and organization of their motions. If a child uses only a small fraction of space, he, according to Lowenfeld, obviously has not developed the feeling for utilizing the rest of the space. This may be due to emotional restriction, but it may also be a sign that the child's aesthetic feelings have not yet been developed.36

Viola states that there may be other reasons for children not covering the available space. He states that the color of the paper, mainly white, causes some children to be afraid to cover it. He also states that the size of the paper may also cause this effect. The selection of the size of the paper is purely individual; some children prefer large paper and for other children this size may be very inadequate, and they will leave large, empty spaces. This is particularly true when some three year olds work at an easel. The easels are too big and frighten the children. They would be much happier if they could work on the floor.37

In summary, it is apparent that art provides children with a means of communicating their expressions, uncomplicated by the abstractions of

words. It is image symbols of children which stand for a host of their sensations, associations, and understandings, but which are unintelligible to adults. This raises the question of whether or not adults should ask children for explanations of their art. Viola answers such a question as follows: "Not by leading questions! Some children never should be asked...very, young children will often by quite incapable of explaining what they mean in their drawings. ...Most of the conversation should be done by the child...we (adults) should always use an indirect method in talking with the child about his drawings." 38

Therefore, one may conclude that unless adults are tactful in their questioning of children's art, and unless children are capable of explaining what they mean in their drawings, the meaning of their art will not be conveyed to adults, who can, therefore, only speculate about the meaning.

As is apparent by the review of literature, much research has been done in the areas of anxiety, anticipatory guidance, projective play, and child art. The material cited is felt to be relevant and significant to this study. However, it is also apparent that there is need for more study of the cited areas in the pediatric clinical setting. Such study would better help nurses to assist preschool children and their parents during the children's hospitalization.

CHAPTER III

METHODOLOGY

Statement of the Problem: How can the nurse identify anxiety manifestations of hospitalized, preschool, tonsillectomy children and their mothers and aid them in expressing and perhaps in reducing these anxieties?

Selection of the Sample

The sample consisted of seven preschool children, four boys and three girls, ranging in age from three through five years. They were selected from a total of ten preschoolers admitted to three general hospitals in Montana for tonsillectomies during a three-month period from January through March, 1969. The other three children were excluded from this study for the following reasons: 1) The child was accompanied to the hospital by four brothers and sisters who were also scheduled for tonsillectomies the same day; 2) The child's physician would not consent to his participation in the study; 3) The child did not participate preoperatively in the projective play and art portions of the study.

The mothers of these seven children were also participants in this study.

Methodology of the Study

A tool was designed by the investigator to aid her in assessing mother-child preoperative preparation for a tonsillectomy and to aid her in identifying and recording anxiety expressions of the preschool children and their mothers, pre- and postoperatively. The tool consisted of two
interview guides and three check lists.

The purpose of the first interview guide was to try to establish the meaning which the tonsillectomy held for the mothers and their children. This interview with the mothers was done at the hospital two or three hours after the children were admitted. The questions are as follows:

1. Why is the tonsillectomy being done?
2. Was it recommended before this time?
   If yes, was there some reason for putting it off?
3. Who prepared the child for the tonsillectomy?
   If mother, how were you prepared to do this, and by whom?
4. When was he prepared?
5. How did the child respond to the information?
   How much do you think he understood?
6. Is this his first hospital experience?

The purpose of the second interview guide was to ascertain each mother's concerns and feelings regarding her preparation for the tonsillectomy and hospital experience, and her role in her child's postoperative care. This interview was conducted with the mothers postoperatively in their homes on the day following the children's tonsillectomies and dismissals from the hospitals. The questions are as follows:

1. Were you sufficiently informed about what
you could expect concerning the hospital experience?

2. Was the information adequate, making you feel more at ease in the situation?

3. If "NO" to the above, what would you like to have known?

4. What would you like to have done for your child postoperatively, and what would you like the nurse to have done?

In addition to the interview guides, the tool involved the use of three check lists. The purpose of the first of these check lists was to determine the children's knowledge of several happenings associated with a tonsillectomy; to elicit verbal expressions of anxiety from the mothers.* The following information was included in this check list:

1. Was the child prepared for the following which occur in relation to the surgery? (Yes-No)
   a. No water or food after midnight.
   b. Ride on cart to surgery.
   c. Seeing doctors and nurses in caps and masks.
   d. Awakening in a room other than his own.
   e. Being sleepy after surgery.
   f. Having a sore throat.
   g. Having an upset tummy.
   h. Vomiting.
1. Diet of cold fluids.

j. Shot for sleep before surgery.

k. Other: painful ears, ride on elevator to surgery.

The content of this check list was obtained by the investigator's observation of routine occurrences associated with a tonsillectomy in the three general hospitals used for this study, and which she found children to experience during their hospitalizations for this surgery.

The second check list was designed to aid the investigator to identify and record selected physical manifestations of anxiety displayed both by the children and their mothers during a 1½-hour time period preoperatively in the homes. The children were observed before, during, and after their play for these expressions of anxiety: pounding heart, rapid, deep respirations; dryness of mouth, dilated pupils, palor, flushing of the face, cold, clammy skin; muscle tension of arms or neck, and changes in the quality and tone of voice and pace of speech. The mothers were also observed for these same manifestations.

The manifestations were selected from the following sources: Rollo May, The Meaning of Anxiety; an American Journal of Nursing article, "Anxiety-Recognition and Intervention," (September, 1965); and an article in the publication, Feelings, "Fear and Anxiety in Children," (June, 1966).

The third check list was designed to aid the investigator in identifying and recording selected behaviors associated with anxiety of children and their mothers, pre- and postoperatively. The children were observed before, during, and after their play for the following behaviors:
crying, excitement, restlessness, irritation, withdrawal, denial, aggression, talkativeness, silence, projection, sighing, hand movements, chewing on objects or self, and rocking. The mothers were also observed for these manifestations.

In order for the investigator to more accurately observe for these manifestations, which were randomly selected from the same sources as the physical manifestations, definitions were obtained and are as follows:

"Cry": to make a loud vocal sound or shout as in pain, anger, fright, sorrow.

Excitement: an emotional state in which there is strong pressure toward activity expressed in quick, impulsive, usually inconsecutive movements, agitation.

Restlessness: characterized by inability to rest or relax; uneasy; unquiet, never or almost never quiet or still, a tendency to aimless and constantly changing movements.

Irritation: an accumulation of excitation or an inability to tolerate such an accumulation.

Withdrawal: to move back, to retire within one's self, shy away from.

Denial: a denying, saying "NO", opposed to compliance, conscious or unconscious.

Aggression: hostile action resulting from frustration; direct, action against the person or object producing the frustration; displaced, action against a person or object other than that which was or is the source of frustration; may be disguised.

Talkativeness: talking in excess or a great deal.

Silence: refraining from speech or the making of sounds.

Projection: the unconscious act or process of ascribing to another one's own ideas or impulses, especially when the ideas or impulses are considered undesirable.

Sighing: to take in and let out a long, deep, audible breath, especially in expressing sorrow, relief, fatigue, anxiety, or longing.

Hand movements: wringing, twisting of hands, thumping of fingers, biting of or picking or nails.
Rocking: movement of the body back and forth or from side to side.³⁹

A copy of this tool is included in the appendix. (p.

Initially, contact was made by the investigator with the children and mothers the evening preceding the tonsillectomies and a few hours after the children's admissions to the hospitals. The investigator introduced herself and asked the mothers' permission for their children's and their own participation in this study. All mothers gave their permission for participation. The following is the introduction and explanation that the investigator gave to these mothers:

My name is Mrs. Carol Sikonia and I am a graduate student at Montana State University working on my Master's Degree in Nursing. I am very interested in children who are going to have their tonsils removed and in their mothers who will share much of this experience with them. I am interested in knowing how children and their mothers are prepared for the experience and how they feel about it. I would like to ask you (the mother) some questions pertaining to this and would like to watch your child play with some toys that I have brought with me to the hospital. I would like to repeat this again in your home the day after the surgery and dismissal from the hospital.

During this time, the investigator was also able to begin making observations of anxiety expressions of the children and their mothers and was able to record these observations.

In order to accomplish the third purpose of this study, which was to

identify physical and behavioral manifestations of anxiety expressed by children through the use of selected play techniques, preoperatively in the hospital and postoperatively at home, some play techniques were selected, which would allow the children to express their anxieties. From the review of literature, it was apparent that toys designed for projective play and the art media would provide outlets for these expressions. Therefore, a toy doctor-nurse kit with stethoscope, thermometer, tongue blade, emesis basin, syringe, and toy pills was selected as the media for projective play. A plastic doll and stuffed Teddy bear were also selected for this purpose.

The art media consisted of three colors of water-color paint; red, black and green. Red and black were used initially and the green was substituted for the black when it was no longer available. The colors were selected because they are contrasting and because they may be associated with feelings of anxiety.

In addition to the water-color paints, long handled, large bristled, brushes; newsprint, and a cover-up apron were selected.

A private room, away from, as much as possible, the usual hospital routine, was secured for the children's play and painting sessions.

The art materials were assembled by the investigator in a quiet section of the designated room, either on the floor or in the bathtub, prior to the children's admittance to these rooms. Upon their admittance, the investigator explained to the children that they could paint anything that they wished, could paint as many paintings as they wanted,
could spend as much time as they wanted, and, were told not to worry about dripping paint. This was an attempt to encourage the children's self-expression and creativity. The investigator then retired to another section of the room away from the children to observe and record the anxiety expressions during this activity, and immediately after, using the check lists of physical and behavioral manifestations of anxiety.

All of the children's paintings were retained by the investigator so that they could be analyzed for anxiety expressions.

The projective play materials were placed on an available table or chair near to and within easy access of the children. The investigator attempted to encourage the children's self-expression in playing with these materials. Their play activity, and the immediate period following it, was also observed and recorded by the investigator. The investigator entered their play activity only when the children asked questions concerning the equipment or their uses. Some questions and replies are as follows: "What is this?" (referring to a thermometer) "It is an instrument that tells us how hot you are;" "Does this hurt?" (referring to a syringe) "Yes, it does hurt, but the hurt only lasts a short time."

The order in which the children participated in these activities was determined by the children's own individual preferences. Their activity, however, was restricted to a $1\frac{1}{2}$-hour time period and to the designated room.

The children's activities and the investigator's data collecting procedures were repeated in the children's homes on the day following
their surgeries and dismissals from the hospitals.

In order to accomplish the fourth purpose, which was to identify anxiety expressions of mothers, pre- and postoperatively, through observation and the use of structured interview guides, the investigator, following her introductions to the mothers and children, asked the mothers to accompany her to the waiting room where she initiated a preoperative interview with them. She explained that she would first ask them some questions about the reasons for the tonsillectomy and about their children's and their own preparation for it, and secondly, would ask them, from a list of occurrences associated with a tonsillectomy, if their children had any knowledge about any of these occurrences. The questions used in and purposes for this interview have been described earlier in this chapter.

In response to the mothers' negative answers to the questions pertaining to their children's knowledge of the occurrences associated with a tonsillectomy, the investigator initiated anticipatory guidance. For example, one mother answered "No" to her child's knowing about (a) No water or food after midnight, which she said hadn't occurred to her, although she was familiar with this practice; (b) Vomiting, which she said she did not know about, and did not know what to watch for, and, (k) Painful ears, which she said she was not aware of. The investigator stressed that although the latter two are common occurrences for some children, other children may not experience them. She described the emesis as being dark red in appearance and as occurring occasionally
during the child's operative day. She described the painful ears or earache as being referred pain from the throat which is swollen and sore as a result of the surgery, and as occurring between the second and the sixth postoperative day.

During these interviews with the mothers, the investigator observed and recorded, not only their verbal expressions of anxiety, but also their physical and behavioral expressions.

A second interview with the mothers occurred in their homes on the day following their children's tonsillectomies and dismissals from the hospitals. The questions asked pertained to their feelings regarding their preparation for the surgery and hospital experience, and their roles in caring for their children postoperatively. It was hoped that the questions would elicit verbal expressions of anxiety. The mothers were also observed for physical and behavioral manifestations. Their expressions were recorded by the investigator.

In summary, a tool was designed to aid the investigator in identifying and recording anxiety manifestations of preschool children and their mothers, play techniques were selected, pre- and postoperative observations were made of the children before, during, and after their play for anxiety expressions, pre- and postoperative observations were made of the mothers for anxiety expressions, and, anticipatory guidance was given to the mothers where indicated.
CHAPTER IV

ANALYSIS OF DATA

The data was classified into appropriate categories for greater ease in analysis. No statistical evaluation of the responses was attempted because of the small size of the sample.

PHYSICAL AND BEHAVIORAL MANIFESTATIONS OF ANXIETY

Six tables illustrate the observed physical and behavioral anxiety manifestations of seven preschool children and their mothers pre- and postoperatively. The manifestations were observed by the investigator before, during, and after each child's play sessions, which included both the projective play and painting activities, pre- and postoperatively, and before, during, and after each interview with the mothers, pre- and postoperatively.

Table I illustrates the observed physical manifestations of anxiety of seven children preoperatively. The following manifestations were identified:

1. Rapid, deep respirations (Child 7)
2. Dryness of mouth (Child 5)
3. Dilated pupils (All children, except 2)
4. Pallor (Children 2, 3, 5, 7)
5. Flushing of the face (Children 1, 4, 5, 6, 7)
6. Muscle tension of arms (Child 7)
7. Change in tone of voice (Child 1)
8. Change in word pace (Children 1, 4)
### TABLE I

**OBSERVED PHYSICAL MANIFESTATIONS OF ANXIETY OF SEVEN CHILDREN PREOPERATIVELY**

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<th>PHYSICAL MANIFESTATIONS</th>
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*B* Before play  
*D* During play  
*A* After play  
*C* Child
9. Frequent urination (Child 3)

Child 2 was the only child that the investigator was unable to determine whether or not he had dilated pupils. The dilated pupils of the other children may have been the result of room lightings as well as due to anxiety.

Of the identifiable manifestations, the most commonly identified were dilated pupils (6-7), pallor (4-7), and flushing of the face (5-7).

Table II illustrates the observed physical manifestations of anxiety of seven children postoperatively. The following manifestations were identified:

1. Rapid, deep respirations (Child 7)
2. Pallor (All children)
3. Flushing of the face (Child 7)
4. Change in skin temperature (Child 7)
5. Muscle tension of the arms (Child 7)
6. Change in voice pitch (Child 7)
7. Change in tone of voice (Children 3, 7)
8. Change in word pace (Children 6, 7)

All of the children exhibited pallor, which may have been an outcome of the surgeries rather than anxiety expressions.

Of the identifiable manifestations, the most commonly identified were pallor (7-7), and changes in tone of voice and word pace (2-7).

The total number of physical manifestations identified by the investigator is as follows: preoperatively, 22 per seven children;
TABLE II
OBSERVED PHYSICAL MANIFESTATIONS OF ANXIETY
OF SEVEN CHILDREN POSTOPERATIVELY

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<th>MANIFESTATIONS</th>
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<tr>
<td>breaking</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>whining</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>c. Face</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>halting</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>mod.</td>
<td></td>
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</tr>
<tr>
<td>slow</td>
<td></td>
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</tr>
</tbody>
</table>

B=Before play  D=During play  A=After play  C=Child
postoperatively, 16 per seven children. Therefore, these figures demonstrate that more physical manifestations were observed preoperatively while the children were hospitalized.

Table III illustrates the observed behavioral manifestations of seven children preoperatively. The following manifestations were observed by the investigator:

1. Excitement (Child 7)
2. Restlessness (Children 1, 3, 7)
3. Withdrawal (All children)
4. Denial (Child 4)
5. Aggression (Children 1, 3, 5, 6, 7)
6. Talkativeness (Child 4)
7. Silence (Children 2, 4, 5)
8. Sighing (Children 4, 5)
9. Chewing on objects or self (Children 2, 6)
10. Stuttering (Child 7)

Of the identifiable manifestations, the most commonly identified were withdrawal (7-7), aggression (5-7), and silence (3-7).

The children's selection of toys included a syringe (5-7), thermometer (4-7), stethoscope (3-7), and emesis basin (1-7). Most of their play was centered around the syringe and the thermometer.

Their play with the syringe included giving injections to the doll or Teddy bear. The buttocks (2-7), arms (1-7), finger and arms (1-7), and mouth (1-7) were selected as sites for this activity by five of the
TABLE III
OBSERVED BEHAVIORAL MANIFESTATIONS OF ANXIETY PREOPERATIVELY DURING PROJECTIVE PLAY

<table>
<thead>
<tr>
<th>Behavioral Manifestations</th>
<th>B=Before play</th>
<th>D=During play</th>
<th>A=After play</th>
<th>C=Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crying</td>
<td></td>
<td>X</td>
<td>X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Excitement</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Restlessness</td>
<td>X</td>
<td>X X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irritation</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td>X</td>
<td>X X X X</td>
<td>X X X X</td>
<td></td>
</tr>
<tr>
<td>Denial</td>
<td></td>
<td></td>
<td></td>
<td>X X X</td>
</tr>
<tr>
<td>Aggression</td>
<td>X</td>
<td>X</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Talkativeness</td>
<td></td>
<td>X</td>
<td>X X X X</td>
<td></td>
</tr>
<tr>
<td>Silence</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sighing</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hand movements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chewing</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rocking</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Other: Stuttering</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Of the five children, four of them forcefully administered the injection, while the remaining child inappropriately inserted the syringe in the doll's mouth.

Of the five children who used the syringe in their play, only one child demonstrated the mechanics involved in preparing a syringe for injection.

The thermometer was used orally by four children in their play. The age range of these children was from four to five years, which may be considered the age when mothers begin taking their children's temperature orally.

The facial expressions of the children could be classified as:
expressionless, smiling, and angry. Four of the children were expressionless, one child was smiling, and none of the children displayed any anger.

Two children made verbal comments during their play. One child stated, referring to the syringe, "This won't hurt.", however, postoperatively, his comment concerning the syringe was "This hurts." The other child asked questions about the toy equipment: "What is this?", referring to the thermometer, "Does this hurt?", referring to the syringe. She selected these toys to play with and used them appropriately. Postoperatively, she asked no questions about the equipment, but proceeded with her selection of these toys and used them correctly.

Two children examined the toy equipment, but did not select any of the equipment for play, and did not participate in any projective play. However, both of these children engaged in play postoperatively, and selected the thermometer, syringe, tongue blade and stethoscope for their play. All of these toys, except the stethoscope, may be thought to be intrusive by children.

All of the children initially withdrew from the investigator, who was dressed in a white, hospital uniform which may have contributed to their response to her.

Child 4 initially denied knowing why he had been hospitalized, but later was able to correctly relate this.

Table IV illustrates the observed behavioral manifestations of seven children postoperatively. The following manifestations were
identified by the investigator:

1. Crying (Child 7)
2. Excitement (Child 7)
3. Restlessness (Child 7)
4. Irritation (Child 3, 7)
5. Withdrawal (Child 7)
6. Aggression (All children)
7. Silence (Children 2, 5)
8. Rocking (Child 7)
9. Stuttering (Child 7)

Of the identifiable manifestations, the most commonly identified was aggression.

The children's selection of toys postoperatively included: the syringe (7-7), the thermometer (6-7), the stethoscope (2-7), the emesis basin (1-7), and the tongue blade (1-7).

Their play with the syringe involved giving injections to the doll or Teddy bear. These injections were given in the buttocks (4-7), arms (1-7), and the buttocks and arms (2-7). All seven injections were given forcefully.

As noted preoperatively, only one child demonstrated the mechanics of preparing a syringe for injection. Postoperatively, in addition to her previous techniques, she included another step, that of cleansing the area selected for the injection. Perhaps this child had observed this procedure performed previously, and maybe many times before. In addition,
TABLE IV

OBSERVED BEHAVIORAL MANIFESTATIONS OF ANXIETY
POSTOPERATIVELY DURING PROJECTIVE PLAY

<table>
<thead>
<tr>
<th>BEHAVIORAL MANIFESTATIONS</th>
<th>C. 1</th>
<th>C. 2</th>
<th>C. 3</th>
<th>C. 4</th>
<th>C. 5</th>
<th>C. 6</th>
<th>C. 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B=Before play</td>
<td>D=During play</td>
<td>A=After play</td>
<td>C=Child</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crying</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excitement</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td></td>
<td></td>
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<tr>
<td>Restlessness</td>
<td>X</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Irritation</td>
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<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denial</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talkativeness</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silence</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Projection</td>
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<td>X</td>
<td>X</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sighing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand movements</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chewing</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Rocking</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: Stuttering</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
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</tr>
</tbody>
</table>

she was the only child to cuddle the doll, both pre- and postoperatively, after the injections.

The thermometer was used orally by two children, ages 3 and 4, rectally by three children, ages 3, 5, and 5, and orally and rectally by one child, age 5, who administered the procedure firmly. One child did not use the thermometer in her play. Two of the four children who used the thermometer orally preoperatively, used it rectally postoperatively, and both of the children were age 5. Perhaps one could consider this to have been an intrusive procedure for them.

The facial expressions of the children identified were: expres-
The children did not initially withdraw from the investigator, who was dressed in street clothes, which may indicate that street clothing had no adverse effect upon them. However, the children were familiar with the investigator, as this was her second association with them. In addition, they may have associated her with the play materials that she brought for them during their hospitalization, rather than with the injections or other intrusive procedures imposed upon them by other nurses during this time.

In summary, the syringe and thermometer were used most frequently by the children both pre- and postoperatively, and one might assume that these are intrusive procedures for preschoolers; preoperatively, four of five children administered injections forcefully, while postoperatively, all of the children did so; no rectal temperatures were taken preoperatively, however, postoperatively, rectal temperatures were taken by three of six children; facial expressions varied from expressionless and smiling preoperatively to expressionless and anger postoperatively; verbal comments and the play activity varied pre- and postoperatively, and all of the children initially withdrew from the investigator preoperatively, whereas, they did not postoperatively.

The total number of behavioral manifestations identified by the investigator is as follows: preoperatively, 26 per seven children; postoperatively, 16 per seven children. Therefore, these figures
demonstrate that more behavioral manifestations were observed preoperatively.

In summary, the total physical and behavioral manifestations of anxiety identified preoperatively is 48 per seven children. The total physical and behavioral manifestations of anxiety identified postoperatively is 32 per seven children. Therefore, it is apparent that more anxiety manifestations were observed preoperatively while the children were hospitalized than postoperatively while they were at home. One may assume, therefore, that the hospital environment or thoughts of the forthcoming surgery may have contributed to the children's anxieties.

Considering the children's anxiety manifestations as to their occurrences before, during, and after play, the following was obtained: Preoperatively: before play, 30; during play, 35; and, after play, 25. Therefore, it is apparent that more anxiety manifestations were identified during the children's play sessions. Postoperatively: before play, 10; during play, 23; and, after play, 20. Therefore, it is apparent that more anxiety manifestations were identified during the children's play sessions, and one may assume that the play techniques provided outlets for their anxieties. It is also apparent that there were more anxiety manifestations identified after the children's play sessions than before, and one might assume that the children's anxiety before play was suppressed and after their play was still in need of outlets for expression. Perhaps a longer play period would have reduced the number of anxiety manifestations identified after the play sessions.
Table V illustrates the observed physical manifestations of anxiety of seven mothers pre- and postoperatively. The following manifestations were identified by the investigator preoperatively:

1. Dryness of mouth (Mothers 1, 2, 4, 7)
2. Dilated pupils (Mothers 1, 4, 5, 7)
3. Pallor (Mothers 1, 6, 7)
4. Flushing of the face (Mothers 1, 3, 4, 6)
5. Cold, clammy skin (Mother 7)
6. Muscle tension of arms (Mother 3)
7. Muscle tension of the neck (Mothers 1, 3, 7)
8. Changes in tone of voice (Mothers 6, 7)
9. Wringing hands (Mothers 1, 7)

Of the identifiable manifestations, the most commonly identified were dryness of mouth, dilated pupils, and flushing of the face (4-7). Mother 7 was identified as having expressed more manifestations than the other mothers, which not only may be attributed to her child's hospitalization and forthcoming surgery, but also to her knowledge of her own mother's recent hospitalization for a serious illness.

Those manifestations identified postoperatively are:

1. Pallor (Mother 7)
2. Wringing hands (Mother 7)

It is apparent, therefore, that more physical manifestations of anxiety of mothers were identified preoperatively when their children were hospitalized than postoperatively when their children were at home.
### TABLE V

**OBSERVED PHYSICAL MANIFESTATIONS OF ANXIETY OF SEVEN MOTHERS PREOPERATIVELY AND POSTOPERATIVELY**

<table>
<thead>
<tr>
<th>M = Mother</th>
<th>Preoperative</th>
<th>Postoperative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL MANIFESTATIONS</strong></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Pounding heart</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid, deep resp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dryness of mouth</td>
<td>X X X X</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>Dilated pupils</td>
<td>X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Pallor</td>
<td>X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Flushing face</td>
<td>X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Cold, clammy skin</td>
<td>X X X</td>
<td>X X X</td>
</tr>
<tr>
<td>Warm skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot skin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle tension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. arms</td>
<td>X X X X X X X X X X X X X X</td>
<td></td>
</tr>
<tr>
<td>b. neck</td>
<td>X X X X</td>
<td>X X X X</td>
</tr>
<tr>
<td>Quality of voice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Pitch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mod.</td>
<td>X X X X X</td>
<td>X X X X X X X X X X X X X X</td>
</tr>
<tr>
<td>low</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Tone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>strong</td>
<td>X X X</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>mod.</td>
<td>X X X X X X X</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>weak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>breaking</td>
<td>X X X X</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>c. Pace</td>
<td></td>
<td></td>
</tr>
<tr>
<td>halting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mod.</td>
<td>X X X X X X X</td>
<td>X X X X X X X X</td>
</tr>
<tr>
<td>slow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wringing hands</td>
<td>X X X</td>
<td>X</td>
</tr>
</tbody>
</table>
Table VI illustrates the observed behavioral manifestations of seven mothers pre- and postoperatively. The following manifestations were identified preoperatively:

1. Denial (Mother 7)
2. Talkativeness (Mothers 1, 2, 3, 4, 6)
3. Projection (Mother 7)
4. Hand movements (Mothers 1, 2, 3, 4, 7)
5. Other: smoking (Mother 4)

Of the identifiable manifestations, the most commonly identified were talkativeness and hand movements (5–7).

The manifestations identified postoperatively are:

1. Withdrawal (Mother 2)
2. Hand movements (Mother 3)

Therefore, it is apparent that more behavioral manifestations of anxiety were identified preoperatively while the children were hospitalized.

The total of all of the anxiety manifestations of mothers identified by the investigator is as follows: Preoperative: physical and behavioral manifestations, 11; Postoperative: physical and behavioral manifestations, 4.

Results of further analysis of the children and mothers' anxiety manifestations identified by the investigator, are as follows: Total number of anxiety manifestations per child and mother preoperatively and postoperatively.
TABLE VI

OBSERVED BEHAVIORAL MANIFESTATIONS OF ANXIETY OF MOTHERS PREOPERATIVELY AND POSTOPERATIVELY

<table>
<thead>
<tr>
<th>M = Mothers</th>
<th>PREOPERATIVE</th>
<th>POSTOPERATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHAVIORAL</td>
<td>M M M M M M M</td>
<td>M M M M M M M</td>
</tr>
<tr>
<td>MANIFESTATIONS</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Crying</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Excitement</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Restlessness</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Irritation</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Denial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Talkativeness</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Silence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projection</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Sighing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hand movements</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Chewing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Other: Smoking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is apparent that five of the seven children and their mothers expressed a similar number of manifestations, and that the child and mother expressing the most manifestations are related. Therefore, one might assume that in these instances anxiety was communicated from
mother to child or vice versa.

A description of the children's behavior during both play activities (pre- and postoperatively) is included in the appendix. (p.

**SUMMARY OF IDENTIFIED ANXIETY MANIFESTATIONS FOR SAMPLE OF SEVEN CHILDREN AND MOTHERS**

<table>
<thead>
<tr>
<th>Composite of Children's Anxiety Manifestations</th>
<th>Preoperatively and Postoperatively*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preoperative</td>
<td>Postoperative</td>
</tr>
<tr>
<td>48</td>
<td>32</td>
</tr>
</tbody>
</table>

*Without distinction of before, during, and after play

**Children's Anxiety Manifestations Before, During, and After Play Preoperatively and Postoperatively**

<table>
<thead>
<tr>
<th></th>
<th>Preoperative</th>
<th>Postoperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before play:</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>During play:</td>
<td>35</td>
<td>23</td>
</tr>
<tr>
<td>After play:</td>
<td>25</td>
<td>20</td>
</tr>
</tbody>
</table>

**Composite of Mother's Anxiety Manifestations Preoperatively and Postoperatively**

<table>
<thead>
<tr>
<th></th>
<th>Preoperative</th>
<th>Postoperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**PRE- AND POSTOPERATIVE INTERVIEWS WITH MOTHERS**

The structured questions of both interview guides and the mothers' responses to these questions are presented under two sections, Interview-I, preoperatively; and Interview-II, postoperatively. In addition, assessment of the children's knowledge of occurrences associated with a
tonsillectomy is presented in section one.

**Interview-I with Mothers Preoperatively**

**QUESTION 1:** Why is the tonsillectomy being done?

Three mothers, 2, 6, 7, stated that recurring sore throats were the primary reasons for their children's tonsillectomies. In addition to sore throats, mothers 1, 4, 5, stated that their children had accompanying earaches, colds, runny noses, and enlarged tonsils. Mother 3 stated that her child had had pustules that were not successfully treated with antibiotics.

**QUESTION 2:** Was it recommended before this time? If yes, was there some reason for putting it off?

Mothers, 1, 2, 3, 4, 6, stated that it had been recommended before this time. The reasons they gave for postponing it were: flu and colds (1, 4), financial (2, 5), and treatment with antibiotics (3). This was the first recommendation for children 5 and 7.

**QUESTION 3:** Who prepared the child for the tonsillectomy?

In response to this question, five mothers, 1, 2, 3, 5, 6, stated that they alone had prepared their children for this experience. Mother 4 stated that she and the doctor had prepared her child, and, mother 7 stated that the doctor alone had prepared her child.

As a second portion of this question, the investigator asked: If you, the mother, prepared the child, how were you prepared to do this, and by whom?

Mothers 2 and 4 stated that some of their other children had had
the experience. Mother 1 stated that in addition to an older son, she had had her tonsils removed as a child. Other responses were: Mother 3 stated that she had had no previous experience with this situation so, therefore, she had attempted to acquaint herself and her child with the experience by reading a story book, titled, *A Visit to the Hospital*. Mother 5 stated that the doctor and her own mother gave her some information concerning the operation. Mother 6 stated that no one had talked with her about it and that she received very little help. None of the mothers stated that both they and their children had been prepared by the physician. However, all of the physicians reported that they had prepared both the mother and child in each case. Perhaps the degree of anxiety each mother was experiencing at the time the physicians were preparing them hindered their reception of the information.

**QUESTION 4**: When was he prepared?

Mothers, 2 and 6, stated that their children were prepared the evening before admission to the hospital. Mothers, 1 and 5, stated that their children were prepared two or three days before hospitalization, however, child 1 had been prepared twice before for the tonsillectomy. The remaining mothers, 3, 4, and 7, stated that their children had been prepared one week in advance.

**QUESTION 5**: How did the child respond to the information? How much do you think he understood?

In response to these questions the following answers were given: Mother 1 stated: "He seemed to understand and accept it. He asked some
questions like how long he would have to stay, and if it would hurt." Mother 2 stated: "He seemed to understand. He asked some questions." Mother 3 stated: "She seemed to understand. She asked some questions, but doesn't seem to be afraid, although I think she is quite awed with everything." Mother 4 stated: "I think he understood what it was all about. Dr. C. did a real good job explaining things to him and he has a great deal of faith in the doctor." Mother 5 stated: "She seemed to understand, I guess. She's awfully curious about the hospital and wanted to know what was going to happen here." Mother 6 stated: "I really don't know. He was playing with toys and didn't seem to be listening." Mother 7 stated: "I guess she understands. I don't really know." All of the physicians stated that they felt that each child had some degree of understanding concerning the experience.

Although this question gave the investigator clues as to what the mothers and physicians thought the children understood of the information given them as preparation for their tonsillectomy, it did not give her a true picture of what the children really did or did not understand, and no further attempt was made to determine this.

QUESTION 6: Is this his first hospital experience?

All of the mothers stated that this was the first hospitalization for their children.

The second portion of the interview dealt with the assessment of the children's knowledge of certain occurrences that are associated with tonsillectomies. The investigator asked each mother if her child had any
knowledge of the following: a) No water or food after midnight, b) Ride on the cart to surgery, c) Seeing doctors and nurses in caps and masks, d) Awakening in a room other than his own, e) Being sleepy after surgery, f) Having a sore throat, g) Having an upset tummy, h) Vomiting, i) Diet of cold fluids, j) Shot for sleep before surgery, k) Other: painful ears, ride on the elevator to surgery. The results have been tabulated in the following table, VII, with "X" representing those areas of the children's knowledge. However, these results are the mother's impressions of what they believe their children to know or understand about these occurrences and not what the children actually did or did not know or understand.

It is apparent that the children had most knowledge concerning 1) Having a sore throat (7-7), 2) Diet of cold fluids (4-7), and, 3) Seeing doctors and nurses in caps and masks (3-7).

In addition, when comparing the children's knowledge with their total anxiety manifestations, the following is revealed:

<table>
<thead>
<tr>
<th>CHILD</th>
<th>KNOWLEDGE</th>
<th>MANIFESTATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>7</td>
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<td>3</td>
<td>3</td>
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<td>6</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>27</td>
</tr>
</tbody>
</table>
TABLE VII

ASSESSMENT OF CHILDREN'S PREOPERATIVE KNOWLEDGE
OF OCCURRENCES ASSOCIATED WITH TONSILLECTOMIES

<table>
<thead>
<tr>
<th></th>
<th>a. No water or food after midnight</th>
<th>b. Ride on cart to surgery</th>
<th>c. Seeing Drs. &amp; NAs in caps &amp; masks</th>
<th>d. Awakening in a room other than own</th>
<th>e. Being sleepy after surgery</th>
<th>f. Having a sore throat</th>
<th>g. Having an upset tummy</th>
<th>h. Vomiting</th>
<th>i. Diet of cold fluids</th>
<th>j. Shot for sleep before surgery</th>
<th>k. Other: Painful ears</th>
<th>Ride on elevator to surg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILD 1</td>
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</tbody>
</table>
Looking at this data, it is apparent that there is no simple relationship between the children's knowledge of occurrences associated with tonsillectomies and the anxiety manifestations expressed.

Mothers 3 and 5 stated that they thought that their children would become upset knowing about having an upset tummy, vomiting, and a shot for sleep before surgery. Mother 3 stated, referring to the upset stomach and vomiting, "She dislikes this feeling, and I think it would bother her knowing about it."

As an incidental part of child 7's preoperative knowledge, she and her mother were shown the recovery room, which was the only unoccupied room available for the investigator to observe her while painting and playing. This is indicated in Table VII, under letter "d", Awakening in a room other than his own, by an "X" in parentheses.

**Interview-II with Mothers Postoperatively**

**QUESTION 1:** Were you sufficiently informed about what you could expect concerning the hospital experience?

Mothers, 2, 3, 4, and 5, answered "Yes" to this question, while mothers, 6 and 7, stated "No".

**QUESTION 2:** Was the information adequate, making you feel more at ease in the situation?

Mothers, 1, 2, 3, 4, answered "Yes", mother 5 replied, "To some degree", and mothers 6 and 7 stated "No".

**QUESTION 3:** If "No" to the above, what would you like to have known?

Mother 6 stated: "What you told me about his vomiting and difficulty
swallowing, because these happened. I think that the doctor or his nurse should have told me before we ever got to the hospital. They should have told me something."

Mother 7 stated: "1) That there was no pediatric unit, and that my child would have to be in with adults; 2) Why she couldn't have any milk." The mother had been told that the milk would "coat" the child's throat, but she felt too embarrassed to ask the doctor what he meant by "coat", as she thought that it was something she should already know.

QUESTION 4: What would you like to have done for your child postoperatively, and what would you like the nurse to have done?

Mothers 1, 2, 3, 4, and 5 answered "Nothing" to this question, while mothers 6 and 7 stated that they would have appreciated some nursing assistance, or support, for them during this time.

The data, therefore, indicated that four of the seven mothers felt that they had been sufficiently informed about what they could expect concerning the hospital experience, and that the information was adequate in making them feel more at ease in the situation. However, this study didn't distinguish between the preoperative preparation given them by others and the preoperative preparation given them by the investigator.

In addition, the data regarding mothers caring for their children postoperatively, indicated that five mothers had performed the care themselves and perferred to do so, while two mothers indicated that they would have appreciated some assistance from nurses during this time.

Analysis of the children's paintings was done by Mrs. Helen Conrad,
Child Art instructor at Montana State University. Her analysis revealed that it cannot be said with any certainty that the children expressed anxiety in their paintings, as it is impossible to determine what the children had in mind while they were painting, and the investigator did not further attempt to find this out. In addition, their paintings may have been representatives of the various stages of their art rather than expressions of anxiety.

However, if one could assume that the paintings showed evidences of anxiety, those paintings done preoperatively could be representative of this expression, as most of the paintings were not representative of the children's stages of art expression; many showed forms of regression.

On the following pages are the descriptions of the children's pre- and postoperative painting activities made by the investigator and Mrs. Conrad.
DESCRIPTION OF THE CHILDREN'S PAINTING ACTIVITIES 
PREOPERATIVELY AND POSTOPERATIVELY

**Investigator's Comments**

**CHILD 1** boy 5 years

Used both colors, painting one over the other.
Used a large area.
Used scrubbing strokes, quick and forceful.
Talked occasionally, not directed.
Sat like a frog.
Unhurried, expended a great deal of energy.
Named painting "A Church".

**Preoperatively**

**Postoperatively**

Started with green paint, switched to red.
Used both hands on the brush.
Scrubbing strokes.
Unhurried, expended a moderate amount of energy.
Named painting "Flowers".

**Mrs. Conrad's Comments**

Manipulative, experimental, no expression.

Painting shows thought, expression.
CHILD 2  boy  5 years

Used both colors, mixing them at times.
Began painting around the edge.
Used large areas.
Started with circles, used vertical lines, curves, and fill-ins.
Used scrubbing strokes, painted slowly, silently and unhurried.
Chewed on brushes.
Expended a moderate amount of energy.
No names given.

Preoperatively

Purely manipulative, without expression or thought.

Postoperatively

Painting shows expression; gave painting some thought; had a plan of action.
CHILD 3 girl 4 years

Started with green paint, then painted over this with red. Confined self to a small space. Used blotches of color, with scrubbing strokes. Sat on knees, erect. Movement, cramped. Moderate amount of energy. Painted quickly and silently; no names.

Refused to paint.

CHILD 4 boy 3 years

Used red only. Painted silently. Confined to one area. No forms, blotches of color. Used scrubbing and dotting strokes. Unhurried, expended little energy. No names given.

Child was not interested in the project of painting; painting is purely manipulative. She may have been complying with the investigator's wish for her to paint.

Shows some indications of thinking, but not much interest. May have been complying with the investigator's wish to have him paint.
Started with the green paint; then with the red.
Used more area.
No forms, blotches.
Used circles, and back and forth motions, scrubbing at times.
Short time spent and expended a moderate amount of energy.
No names given.

No change from those done in the hospital.
Child is painting at his level. He shows no product and is not interested in a product. He was merely manipulating the paint, brushes, and paper.

CHILD 5  girl  4 years

Used only red.
Slapped and dabbed with the brush, forcefully at times.
Face showing some anger.
Slow pace at first, then faster, quicker motions.
Sighed.
Made two red dabs, both hands on the brush, firm scrubbing pressure. Spent a great deal of time doing this.

The first picture indicates that she thought about or organized her work, and therefore, showed expression. Her second picture was regressive. She showed no thought or expression but was reacting to the media in an experimental way and without thought.
Preoperatively

Started with green paint.
Triangle shape, scrubbing,
back and forth movements.
Slow movements.
With red, slapped on paper,
back and forth movements,
dabbed.
Named painting "A Tree".

Postoperatively

Painting showed thought
and planning in her
endeavor; expression.
Used both paints and
was interested in a
product.
CHILD 6 boy 3 years

Red color only, used a small space, dabbed; quick movements.
Painted silently.
Spent most time moving brush firmly back and forth on a solid line.
No forms, and no name.

Preoperatively

Red color first used then green; painted over the colors on the sheet.
Spread painting over a large area.
No forms, used lines.
Gliding strokes.
Moderate amount of energy expended.
Did two paintings quickly, without naming.

Postoperatively

Painting showed manipulative or experimental work, no expression or thought. No awareness of space or color.
Little interest in the activity.

Painting shows development of interest and awareness of space and color. No product, merely manipulative activity. The child is painting at his level. His painting shows muscle activity and manipulation of the art media, but no thought or expression.
CHILD 7 girl 5 years

Little body movement; arm movement mainly.
Strong lines but little pressure on the brush.
Pleasure expressed in facial expression.
Interested in a product and wanted to keep her work.
Created content in her paintings; named each.
First painting, "Clouds"; second painting, "A Christmas tree".

First two paintings show manipulation, with some design. The remaining pictures show much expression, thought, and design. She was interested in products, however, the first two paintings appear more abstract than the remaining pictures.
Used entire body, rocking back and forth.
Very few lines; great deal of pressure on brush; paper worn.
Anger expressed at times; mostly little affect.
No product and did not want to keep her work.
Created at first, but did not name paintings.

**Postoperatively**

The first painting is purely manipulative, with no thought or expression; no product.
The second painting shows some thought, awareness of space and symbolism. The third painting shows regressive representation, manipulation; no product, no awareness of color or space; no expression. Child shows some regressive representation in her art, as well as symbolism, which is characteristic of her developmental stage.
Summary

How can the nurse identify anxiety manifestations of hospitalized, preschool, tonsillectomy children and their mothers, and aid them in expressing and perhaps in reducing these anxieties? This study revealed that it is possible for the nurse to identify anxiety manifestations of these children and their mothers through structured interview and observation techniques; and, through structured questions and play techniques, she can aid them in expressing and perhaps in reducing these anxieties.

The sample consisted of seven preschool, tonsillectomy children who were admitted to three general hospitals in Montana during a three-month period from January through March, 1969. Their mothers were also participants.

The tool, consisting of two interview guides and three check lists, was designed to aid the investigator in assessing mother-child preoperative preparation for a tonsillectomy, and, to aid her in identifying and recording anxiety expressions of the children and their mothers pre- and postoperatively.

The first guide consisted of structured questions pertaining to the meaning which the tonsillectomy held for the mothers and their children, and pertaining to their preoperative preparation for the experience. The interview occurred with mothers preoperatively.
The second guide consisted of structured questions pertaining to each mother's concerns and feelings regarding her preparation for the tonsillectomy and hospital experience, and, her role in her child's postoperative care. This interview occurred with mothers postoperatively.

Both interviews were attempts at providing the mothers with opportunities for expressing their anxieties that may have been associated with the hospital experience.

The purpose of the first check list was to determine the children's knowledge of several hospital experiences which occur in relation to a tonsillectomy, and to elicit verbal expressions of anxiety from the mothers. In addition, anticipatory guidance was initiated by the investigator in response to the mother's "No" answers to the questions pertaining to these experiences in an attempt at reducing any anxieties associated with the gaps in their preoperative preparation for these experiences.

The second and third check lists were designed to aid the investigator in identifying and recording selected physical and behavioral manifestations of anxiety expressed by the children and their mothers, pre- and postoperatively.

These check lists provided the investigator with guidelines for making observations of anxiety manifestations.

Observations for anxiety expressions were made and recorded before, during, and after the children's play sessions pre- and postoperatively, and before, during, and after the mother's interview sessions pre- and postoperatively.
Conclusions

On the basis of the data obtained, certain conclusions can be drawn. However, it must be recognized that the results from a larger sample may strengthen or refute these results. The conclusions are as follows:

1. Anxiety manifestations of children could be identified through observation of their responses to projective play with a toy doctor-nurse kit, dolls, and water-color paints.

2. Preoperatively, play techniques seemed to have provided outlets for the children to express their anxieties and may have aided in reducing some of them. (Anxiety manifestations identified: before play, 30; during play, 35; after play, 25.)

3. Postoperatively, play techniques seemed to have elicited anxiety expressions from the children. (Anxiety manifestations identified: before play, 10; during play, 23; after play, 20.)

4. Anxiety manifestations of mothers could be identified through the use of structured interview questions and planned observation.

5. As expected, fewer anxiety manifestations of mothers and children were identified postoperatively. (Anxiety manifestations identified: preoperatively, 48, children; 38, mothers; postoperatively, 32, children; 4, mothers.)

Recommendations

The following recommendations are indicated: 1) a similar study, using a larger sample, to give more validity, 2) a similar study with
emphasis on determining the child's understanding of the preoperative preparation so that appropriate anticipatory guidance can be initiated by a nurse, 3) an experimental study of similar nature with the experimental group receiving anticipatory guidance by an investigator and the control group receiving routine hospital care in order to determine which group would exhibit fewer anxiety manifestations, 4) a study to determine which of the hospital experiences contributes most to a child's anxiety so that the child can be prepared for its occurrence, 5) a study to determine what kind of beliefs parents, doctors, and nurses have concerning children's preparation for hospitalization, 6) a study to determine who should prepare the child for hospitalization, 7) a study to determine how doctors and nurses define their role in preparing children and parents for a hospital experience, 8) a study to determine if nurses and doctors are aware of the psychological aspects of a hospital experience for children and parents and to determine if nurses and doctors are helping the children and parents deal with these aspects.

The investigator would further recommend that the preceding suggestions could be implemented in hospital in-service education programs where measures could be taken to assist the staff in increasing their awareness of children and parent's potential need for help in coping with the entire hospital experience.
INTERVIEW WITH MOTHER

1. Why is the tonsillectomy being done?
   a. recurring sore throats
   b. other

2. Was it recommended before this time? If yes, was there some reason for putting it off?
   a. Yes
      1. afraid of separation
      2. fear of surgery
      3. dread of more sore throats
      4. fear of hospitalization
      5. financial problems
      6. other
   b. No

3. Who prepared the child for the tonsillectomy?
   a. Mother
   b. Doctor
   c. Father
   d. Other
   If mother, how were you prepared to do this, and by whom?

4. When was he prepared?
   a. evening before hospitalization
   b. 2-3 days before
   c. week before
   d. several weeks before
   e. other

5. How did the child respond to the information? How much do you think he understood?

6. If this his first hospital experience?
CRITERIA FOR ASSESSING PREPARATION FOR A TONSILLETOXY

Was the child prepared for the following experiences which occur in relation to the surgery?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No water or food after midnight</td>
<td></td>
</tr>
<tr>
<td>2. Ride on cart to surgery</td>
<td></td>
</tr>
<tr>
<td>3. Seeing doctors and nurses in caps and masks</td>
<td></td>
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<tr>
<td>4. Awakening in a room other than his own</td>
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<tr>
<td>5. Being sleepy after surgery</td>
<td></td>
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<tr>
<td>6. Having a sore throat</td>
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<tr>
<td>7. Having an upset tummy</td>
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<tr>
<td>8. Vomiting</td>
<td></td>
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<tr>
<td>9. Diet of cold fluids</td>
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<td>10. Shot for sleep before surgery</td>
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<td>11. Other</td>
<td></td>
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<tr>
<td>a. Painful ears</td>
<td></td>
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<tr>
<td>b. Ride on elevator to surgery</td>
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<tr>
<td></td>
<td>CHILDREN</td>
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<tr>
<td></td>
<td>HOSPITAL</td>
</tr>
<tr>
<td>1.</td>
<td>Pounding heart</td>
</tr>
<tr>
<td>2.</td>
<td>Rapid, deep respirations</td>
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<tr>
<td>3.</td>
<td>Dryness of mouth</td>
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<tr>
<td>4.</td>
<td>Dilated pupils</td>
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<td>5.</td>
<td>Pallor</td>
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<tr>
<td>6.</td>
<td>Flushing of face</td>
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<td>7.</td>
<td>Cold, clammy skin</td>
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<td>8.</td>
<td>Warm skin</td>
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<td>9.</td>
<td>Hot skin</td>
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<td>10.</td>
<td>Muscle tension</td>
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<tr>
<td></td>
<td>a. arms</td>
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<td></td>
<td>b. neck</td>
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<td>11.</td>
<td>Quality of voice</td>
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<td></td>
<td>A. Pitch</td>
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<td></td>
<td>1. high</td>
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<td></td>
<td>2. moderate</td>
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<td>3. low</td>
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<td>B. Tone</td>
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<td>1. strong</td>
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<td></td>
<td>2. moderate</td>
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<td>3. weak</td>
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<td>4. breaking</td>
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<td>C. Pace</td>
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<td>1. halting</td>
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<td>2. fast</td>
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<td></td>
<td>3. moderate</td>
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<tr>
<td></td>
<td>4. slow</td>
</tr>
<tr>
<td>12.</td>
<td>Other</td>
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**BEHAVIORAL MANIFESTATIONS**

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<tr>
<th>CHILDREN</th>
<th>MOTHERS</th>
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<td>HOSP.</td>
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<th>AP</th>
<th>BP</th>
<th>DP</th>
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<td>2.</td>
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<td>3.</td>
<td>Restlessness</td>
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<td>4.</td>
<td>Irritation</td>
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<td>5.</td>
<td>Withdrawal</td>
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<td>6.</td>
<td>Denial</td>
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<td>7.</td>
<td>Aggression</td>
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<td>8.</td>
<td>Talkativeness</td>
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<td>9.</td>
<td>Silence</td>
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<td>10.</td>
<td>Projection</td>
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<td>11.</td>
<td>Sighing</td>
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<tr>
<td>12.</td>
<td>Hand movements</td>
<td></td>
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</tr>
<tr>
<td>13.</td>
<td>Chewing</td>
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<tr>
<td>14.</td>
<td>Rocking</td>
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<tr>
<td>15.</td>
<td>Other</td>
<td></td>
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</tbody>
</table>
POSTOPERATIVE INTERVIEW WITH MOTHERS

1. Were you sufficiently informed about what you could expect concerning the hospital experience?

2. Was the information adequate, making you feel more at ease in the situation?

3. If "No" to the above question, what would you like to have known?

4. What would you like to have done for your child postoperatively, and what would you like the nurse to have done?
# Description of Children's Behavioral Manifestations of Anxiety During Projective Play Pre- and Postoperatively

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Home</th>
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</thead>
<tbody>
<tr>
<td><strong>CHILD 1:</strong> boy 5 years</td>
<td><strong>Aggression:</strong> forceful movements used in administering injections.</td>
</tr>
<tr>
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<td><strong>Aggression:</strong> forceful movements used in administering injections.</td>
</tr>
<tr>
<td></td>
<td><strong>Silence:</strong> quiet during play.</td>
</tr>
<tr>
<td></td>
<td><strong>Aggression:</strong> forceful movements used with the syringe, thermometer, and tongue blade.</td>
</tr>
<tr>
<td><strong>Restlessness:</strong> running in the halls.</td>
<td><strong>Withdrawal:</strong> moved away from investigator to mother's lap.</td>
</tr>
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<tr>
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<td><strong>Withdrawal:</strong> moved away from the investigator.</td>
</tr>
<tr>
<td><strong>CHILD 3:</strong> girl 4 years</td>
<td><strong>Aggression:</strong> forceful movements used in administering injections.</td>
</tr>
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<td><strong>Aggression:</strong> forceful movements used with the syringe and thermometer.</td>
</tr>
<tr>
<td><strong>Restlessness:</strong> constant moving about room.</td>
<td><strong>Irritation:</strong> whining, &quot;I'm tired, I don't want to play with your baby.&quot;</td>
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<td><strong>CHILD 4:</strong> boy 3 years</td>
<td><strong>Sighing:</strong> released a long, deep</td>
</tr>
<tr>
<td><strong>Withdrawal:</strong> moved away from the investigator.</td>
<td><strong>Sighing:</strong> released a long, deep</td>
</tr>
</tbody>
</table>
breath.

Denial: "I don't know." (why he was hospitalized.)

CHILD 5: girl 4 years

Aggression: forceful movements used in administering injections.

Withdrawal: moved away from investigator.

Silence: quiet

Sighing: released a long, deep breath.

CHILD 6: boy 3 years

Aggression: twisting doll's arms and legs.

Withdrawal: moved away from investigator to mother's lap.

Chewing: chewed ends of stethoscope and syringe

CHILD 7: girl 5 years

Excitement: spurts in painting and playing; frequent changing from one to the other.

Restlessness: moving constantly about the room.

Aggression: forceful movements used in administering injections.

Stuttering

Aggression: forceful movements used when administering injections.

Silence: quiet

Aggression: forceful movements used when giving injections.

Chewing: chewed ends of stethoscope and syringe

Aggression: forceful movements used in giving injections and twisting off doll's leg.

Stuttering

Excitement: pulling doll's hair, slapping her.

Restlessness: constant movement.
Withdrawal: moved away from investigator.

Withdrawal: moved away from investigator after play session.

Crying

Rocking: moved back and forth while sitting on the floor.

Irritation: crying, expressing anger.
### Hospital

**CHILD 1:** boy 5 years

1. Withdrew to mother's lap when approached.
2. Played verbally, addressing bear.
3. No initial investigation of play equipment.
4. With bear: listened to chest with stethoscope, administered injection forcefully in buttocks with syringe, stated: "This won't hurt."; temperature taken orally.
5. Little facial expression during play; running in halls.

**CHILD 2:** boy 5 years

1. Withdrew to mother's lap when approached.
2. Examined equipment, without play, and silently.

### Home

1. Greeted investigator.
2. Played verbally to bear.
3. Selected thermometer and syringe.
4. With bear: administered injections forcefully several times in buttocks, stated: "This hurts."; temperature taken rectally.
5. Anger expressed during play.

1. Greeted investigator.
2. Removed syringe, tongue blade, thermometer, stethoscope.
4. With bear: administered in arms and buttocks with firm pressure; tongue blade pushed firmly into mouth, thermometer firmly inserted into mouth and buttocks.
5. Little facial expression, rigid arm movements.
CHILD 3: girl 4 years

1. Withdrew from investigator.
2. Played verbally, addressing investigator. Constant moving about room with toys.
3. Examined equipment in kit. Asked questions, "What is this?" "Does this hurt?"
4. With doll: listened to chest with stethoscope, temperature taken orally several times, forcefully gave injections in finger and arms.
5. Little facial expression.

CHILD 4: boy 3 years

1. Greeted investigator.
2. Played silently, but whined, "I'm tired, I don't want to play with your baby."
3. Selected syringe and thermometer.
4. With doll: forcefully inserted thermometer into mouth several times, administered injections forcefully several times into buttocks.
5. Anger, rigid, firm movements.

CHILD 5: girl 4 years

1. Greeted investigator.
2. Selected syringe; played silently.
3. With grandmother: temperature taken orally, administered injections forcefully, making grandmother wince, in arms; listened to her heart with stethoscope.
4. Little facial expression; rigid, firm movements.

CHILD 6: girl 4 years

1. Greeted investigator.
2. Selected syringe; played silently.
3. With doll: listened to chest with stethoscope, temperature taken orally several times, forcefully gave injections in finger and arms.
4. With doll: forcefully inserted thermometer into mouth several times, administered injections forcefully several times into buttocks.
5. Anger, rigid, firm movements.

CHILD 7: girl 4 years

1. Greeted investigator.
2. Selected syringe; played silently.
3. With doll: listened to chest with stethoscope, temperature taken orally several times, forcefully gave injections in finger and arms.
4. With doll: forcefully inserted thermometer into mouth several times, administered injections forcefully several times into buttocks.
5. Anger, rigid, firm movements.
3. With doll: listened to her chest with stethoscope, took emesis basin and simulated filling it with water, inserted syringe in basin, withdrew plunger, and held syringe at eye level looking at it; administered forcefully an injection in buttocks; temperature taken orally. Held doll cuddling her.

4. Little facial expression, gentle but firm movements, sighing.

CHILD 6: boy 3 years

1. Withdrew from investigator to mother's lap.

2. Played verbally, addressing no one.

3. Examined equipment. Chewed on ends of stethoscope and syringe during his examination of the equipment.

4. With doll: undressed doll, twisting her arms and legs; put syringe in her mouth, dressed her.

5. Smiling, little other expression; gentle movements.

CHILD 7: girl 5 years

1. Withdrew from investigator.

2. Played silently and in spurts.

3. With doll: repeated procedure of preparing doll for injection, rubbed an area on buttocks, forcefully administered injection several times. Cuddled doll.

4. Little facial expression, gentle but firm movements.

1. Greeted investigator.

2. Played verbally, addressing no one.

3. Selected thermometer and syringe.

4. With doll: firmly administered injections in buttocks, stating: "This won't hurt."; temperature taken rectally several times.

5. Little facial expression; firm, sometimes, rigid body movements.

1. Greeted investigator, withdrew later in play.

2. Played verbally, stuttering occasionally.
3. Examined equipment.

4. With doll: undressed her, administered injections in arms; temperature taken orally, pulled doll's hair and twisted her arms, dressed doll. Moving constantly about room with doll and equipment.

5. Little facial expression; firm movements; stuttering.

3. Removed syringe and thermometer.

4. With doll: gave several firm injections in arms, buttocks; temperature taken rectally; twisted leg off and pulled doll's hair; slapped her body; moving constantly.

5. Great deal of anger; firm movements; crying, rocking.
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