A STUDY INVESTIGATING THE THEMES OF CHILDREN'S
PLAY AFTER MAJOR HEART SURGERY

by

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ABSTRACT

This study was designed to gather information about the nature and content of post-surgical play behaviour displayed by hospitalized pre-school children. Four questions were explored: Are common themes expressed in the play behaviour of hospitalized pre-school children after major surgery? Does the quality and intensity of the play behaviour demonstrated by pre-school children follow a similar pattern? Will pre-school children use play therapy as a medium through which to express fears and concerns about their hospital experience? Do children tend to act out their perceptions of what has happened to them in hospital?

The population selected for the study were four girls and one boy between the ages of three and five years, who were admitted for major surgery on the heart or great vessels. During the recovery period after surgery each child had the opportunity to take part in at least five play therapy sessions lasting approximately one hour each.

Play therapy took the form of situational play using real or simulated hospital equipment and various dolls representing children and adults. Each child chose the direction and content of play. The investigator took part in play as directed by the child. Parents could join in if they wished. The verbal and non-verbal behaviour displayed by each child during play therapy was recorded by audio tape and by process recordings.

Four out of five children in the study participated actively in play therapy. In the course of play they expressed five common
themes: intrusive procedures; re-enactment of procedures; testing reality; autonomy: regaining control; separation from home and family; and nurturing activities. The quality and intensity of the children's play behaviour followed a pattern from intense to more relaxed and from aggressive to more gentle play. During play each child expressed some individual fears and concerns about his hospitalization. Intrusive procedures were the most frequent topic of play for all the children. Finally, each child tended to act through specific procedures so that play behaviour became a factual account of the child's hospital experience. One child, the only boy in the study, did not want to participate in play therapy. The reasons for this were not investigated.

It was concluded that play therapy is a useful technique which can assist nurses understand the pre-school child's perception of his hospital experience. Play therapy also has potential as a therapeutic intervention to help a child come to terms with the traumatic events of his hospitalization.
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CHAPTER I

INTRODUCTION TO THE STUDY

Every year approximately two hundred thousand pre-school children are admitted to hospital in Canada. Some of these children are in hospital for weeks and may have to endure painful and frightening procedures. Children at this developmental level have many age-related characteristics which makes the hospital experience especially traumatic for them.

There is still much to be done in the hospitals of British Columbia to ensure that effective age-related interventions are consistently used to help the pre-school child understand and accept his hospitalization. Over the past 25 years there has been a steadily increasing body of knowledge about the emotional care of the child. Much of this theory can be translated into nursing practice.

Unrestricted parent visiting is one improvement in the care of the hospitalized child that is accepted in most areas. Some hospitals also allow sibling visiting. A few areas provide pre-hospitalization tours and booklets explaining hospital routines. In some instances pre-operative teaching is carried out. However these interventions do not generally occur consistently in all pediatric units. Furthermore, not all of these interventions are evaluated to determine if they do alleviate the trauma of hospitalization for the pre-school child.

Footnote:
The problem of providing consistent and effective emotional care for the pre-school child is not peculiar to British Columbia. Azarnoff states that:

"The manner in which children’s stress is managed by families and hospital staff, if it is dealt with at all, varies."2

She also states that in California the most common forms of preparation for hospitalization for the pre-school child are pre-admission tours and booklets about hospital routines.3 The results of the study carried out by Azarnoff et al. indicate that this form of preparation would seem to have limitations in helping the child understand what is happening to him.4 Hardgrove also points out that materials such as booklets, tours and slide tapes may be misunderstood by younger children. She suggests that they should be used with discretion and in the presence of an understanding adult who could provide guidance and further explanation.5

Although there seems to be a lack of detailed preparation in many pediatric areas there are also some well documented accounts of individualized programs especially designed to teach the pre-school child about his hospitalization. In particular, Petrillo describes

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3Ibid., p. 2.

4Ibid., p. 57.

the guidelines used at Cornell Medical Centre to prepare children for hospitalization. In this program dolls and hospital equipment are utilized as teaching aids to assist the pre-school child understand the reasons for his hospitalization, and to prepare him for what is going to happen to him.\(^6\)

However, such preparation programs may also have some limitations. They must be skillfully geared to each child's level of understanding. Tesler and Hardgrove point out that, in preparing the young child for procedures, the danger lies in overestimating their intellectual and emotional growth and consequently giving them too much information. Furthermore, the pre-school child's transductive mode of thinking can lead to misconceptions about what is going to happen to him.\(^7\) They also point out that, no matter how effective a preparation program may be, not all children will be exposed to it. For example, preparation is not possible for children who are admitted in emergency situations. Preparation programs alone may not be totally effective in ensuring that each child understands and comes to terms with his hospitalization.

Play therapy has been suggested by several writers as an appropriate intervention which may facilitate the child's understanding


\(^7\)Mary Tesler and Carol Hardgrove, "Cardiac Catheterization: Preparing the Child", *American Journal of Nursing*, (January 1973) p. 82.
of his hospitalization.\textsuperscript{8,9,10} Play therapy usually occurs after a major procedure such as surgery, has already taken place. Using dolls and hospital equipment the child is encouraged to express his feelings about hospitalization. It is believed that through the medium of play a child may gain insight into the reasons for his hospitalization. As play therapy is considered to be an effective way for the pre-school child to communicate his feelings and beliefs, areas of misunderstanding may also be revealed. Erik Erikson considers this type of play to be cathartic in nature, allowing the child to act out his problems in the same way that an adult may talk out his problems.\textsuperscript{11}

Play therapy appears to be a promising intervention which could be utilized by nurses to help reduce the traumatic effects of hospitalization for the pre-school child. Unlike most individually designed preparation programs it is relatively simple to conduct and does not require a large capital outlay. It also appears to be an intervention that could be beneficial to a child, even when a hospital does not also have a fully developed preparation program. Although play therapy should never replace preparation programs, preparation programs which are not followed by play therapy may result in a child returning home

\textsuperscript{8}Madeline Petrillo, "Preventing Hospital Trauma in Pediatric Patients", \textit{American Journal of Nursing}, (July 1968) pp. 1469-1473.

\textsuperscript{9}Hardgrove, op. cit., pp. 17-19.


Because of the possible benefits of play therapy for the pre-school child, the writer became interested in studying the postsurgical play behaviour of this age group in an acute clinical area of the hospital. A number of general questions related to play therapy were identified: When given the opportunity do all pre-school children engage in play related to their hospital experiences? Do children display similar themes in play? If this is so what are these themes? Would the play behaviour of hospitalized children be similar to that described in the literature? From these general questions specific questions were formulated and a descriptive study was designed to gather further information about the nature and content of postsurgical play behaviour.

THE PROBLEM

Pre-school children have many age-related characteristics that compound the traumatic effects of hospitalization. At this developmental stage the child is still very dependent on his parents and perceives them as protectors against hurt. In the hospital situation parents can no longer protect their child from necessary medical and nursing interventions. When parents are perceived by the child to fail in the role of protectors the child may suffer from conflicting emotions of guilt, fear, and anger. These strong emotions may confuse the child and can lead to psychological upset which could continue after

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12 Hardgrove, op. cit., p. 19.
he returns home. In some cases such psychological upset can interfere with the child's emotional and social growth.

An important contributing factor to the hospitalized preschool child's stress is his limited ability to understand the reasons for his hospitalization, surgery or treatments. At this


24 J. Robertson, Young Children in Hospitals. (London: Tavistock Publications Ltd., 1958.)
developmental stage the child may develop misconceptions and unrealistic fears about what is happening to him.\(^{25,26,27,28}\) Many common medical and nursing interventions such as surgery, injections and temperature taking, are of an intrusive nature. The pre-schooler is particularly frightened of threats to his body integrity and frequently perceives such treatments as punishment.\(^{29,30}\)

Piaget states that the pre-school child's language does not always serve the function of communication. The child cannot assume the point of view of a listener who requires information.\(^{31}\) This quality of language makes it very difficult for the child to verbalize his feelings about hospitalization. Furthermore, at this stage of development the child's reasoning capacity is limited, and his inter-


\(^{26}\)Florence Erickson, "Reactions of Children to Hospital Experience." *Nursing Outlook*, (September 1958) pp. 501-504.


\(^{30}\)Irene Riddle, "Nursing Interventions to Promote Body Image Integrity in Children". *Nursing Clinics of North America*, VII (December 1972) pp. 651-661.

pretation of the surrounding environment is frequently illogical and unrealistic.\textsuperscript{32} Both of these age-related characteristics make it difficult for parents and for the health care team to understand which aspects of hospitalization contribute most to an individual child's psychological upset.

As the pre-schooler cannot logically verbalize his fears an alternate method of communication appropriate for the child's developmental level should be utilized. Sigmund Freud, Erik Erikson and Piaget all interpret play behaviour of pre-school children as the child's way of gaining better understanding of his world.\textsuperscript{33,34,35} The child communicates his feelings and emotions through the medium of play. Axline and Moustakas believe that a child "plays out" his feelings and problems just as an adult "talks out" his difficulties.\textsuperscript{36,37} Axline, Erik Erikson and Moustakas all believe that solitary play therapy with toys, in the presence of a sympathetic adult is the best way to understand a child's problems and to help him

\begin{itemize}
\item \textsuperscript{32}Jean Piaget, \textit{Plays, Dreams and Imitation in Childhood.} (New York: W. W. Norton Co., 1951).
\item \textsuperscript{33}Sigmund Freud, \textit{Beyond the Pleasure Principle.} XVIII (London: Hogarth Press, 1955).
\item \textsuperscript{34}Erik Erikson, \textit{Childhood and Society.} (Revised Edition, New York: W. W. Norton Co., 1950).
\item \textsuperscript{35}Piaget, op. cit., 1951.
\item \textsuperscript{36}Virginia Axline, \textit{Play Therapy.} (Cambridge, Massachusetts: The Riverside Press, 1947).
\item \textsuperscript{37}Clark Moustakas, \textit{Children in Play Therapy.} (New York: Ballantine Books, 1953).
\end{itemize}
adjust to new and overwhelming situations. \(^{38,39,40}\)

In conclusion, a problem exists in understanding the preschool child's perception of his hospitalization. Play is the preschooler's natural medium for self expression. In play the child can act out his feelings and in doing so can communicate his perceptions of his experiences to a sympathetic and knowledgable adult. It therefore seems to follow logically that the hospitalized child could be assisted to express his feelings and to gain understanding of his hospitalization through the medium of play therapy.

**PURPOSE OF THE STUDY**

A study was designed to explore various aspects of play behaviour displayed by hospitalized pre-schoolers after major surgery. The study posed four questions:

1. Are common themes expressed in the play behaviour of hospitalized pre-school children after major surgery?
2. Does the quality and intensity of the play behaviour demonstrated by pre-school children follow a similar pattern?
3. Will pre-school children use play therapy as a medium through which to express fears and concerns about their hospital experience?
4. Do children tend to act out their perceptions of what has happened to them in hospital?

\(^{38}\) Axline, op. cit., 1947.

\(^{39}\) Erikson, op. cit., 1950.

\(^{40}\) Moustakas, op. cit., 1953.
ASSUMPTIONS

Pre-schoolers, because of age-related characteristics, are particularly prone to psychological upset as a result of hospitalization. The longer the hospital stay and the more traumatic the interventions the greater the psychological upset.

Play is one important way that pre-schoolers normally learn to understand and master the complexities of their environment. As part of their normal growth and development children use play to express feelings and anxieties that they cannot verbalize.

DEFINITION OF TERMS

Psychological upset and psychological trauma refer to adverse reactions exhibited by a child in response to the stressful experience of hospitalization, surgical, medical and nursing interventions. In hospital these adverse reactions are considered to be behaviours such as: crying, screaming, continued resistance to procedures, extreme shyness, apathy or withdrawal. Following hospitalization psychological upset is indicated by a comparative increase from before hospitalization in behavioural responses such as: fear of separation from parents, disturbed sleep patterns, aggression towards authority, regression to more infantile behaviours, or apathy and withdrawal.

Stress is defined as a state of physiological and/or psychological imbalance which occurs when an external stimulus or stressor is perceived as threatening. The total impact of all aspects of hospitalization is considered to be the major stressor.

Play therapy refers to individual play carried out by the child in the presence of the researcher. The equipment is either real or
simulated hospital equipment, for example: stethoscopes, blood pressure apparatus, syringes, instruments, bandages, catheters, intravenous sets, and oxygen masks. There is also a collection of male and female dolls. The child is presented with the equipment and invited to play hospitals. The child chooses the direction of the play and is allowed to express himself freely. The researcher establishes rapport with the child, recognizes and accepts all feelings expressed by the child and reflects them back. It is expected that each child will act out his hospital experiences and express in play personal feelings and perceptions about his total hospitalization. The researcher may make use of opportunities during play to correct misconceptions expressed by the child about his hospitalization and to clarify reasons for medical and nursing interventions. The researcher will use doll demonstrations in conjunction with verbal explanations to assist the child to understand his hospitalization.

The child is considered to have taken part in play therapy when:

a) he acts out at least three events that have occurred in hospital;
b) he verbalizes by words, exclamations or sounds as he acts through events;
c) he expresses emotions as he plays either by words or body language or by both, i.e. aggression, fear, anger;
d) he plays the part of an "authority figure" on one occasion, i.e. a doctor, nurse or parent.

LIMITATIONS

The study will describe the themes and patterns of play carried out by English speaking children only from similar cultural backgrounds who have undergone major surgery on the heart or great vessels.
Play behaviour will be observed only while the child is in hospital.

The sample is small therefore not all common themes of postsurgical play may be expressed.

The implications for children who may not express themselves through play will not be studied.
CHAPTER II

REVIEW OF THE LITERATURE

INTRODUCTION

This chapter presents a review of the literature related to factors which affect the emotional care of the pre-school child. First, those aspects of hospitalization which are particularly stressful to the pre-school child are reviewed. As the children in this study undergo corrective heart surgery, the special implications of congenital heart disease for the child and his family are explored. Studies examining the effect of various stress reducing interventions are discussed. As play therapy is the intervention used in this study, selected theories of play are reviewed and the therapeutic application of play is examined. Discussion of these aspects of the emotional care of the hospitalized child further define the problem of stress due to hospitalization and surgery. This review of the literature also provides a theoretical framework and an empirical basis for the use of play therapy as a viable stress reducing intervention for the hospitalized pre-school child.

THE STRESSFUL EFFECTS OF HOSPITALIZATION ON THE PRE-SCHOOL CHILD

Because of his developmental level, the pre-school child is particularly prone to the traumatic effects of hospitalization. His growth towards independence is just beginning and he is unable to deal
with a new and fearful environment without the constant support of his significant others. His growing intellectual abilities are not yet sufficient for him to fully understand why hospitalization must take place; his social competency is not yet sophisticated enough to deal with unfamiliar people and new strange routines.

Edelston was one of the first to write about the adverse effects of separation from parents for the young child. Edelston states that protection and affection from the parents give young children a feeling of confidence and security. Loss of parental protection results in feelings of rejection or fear of loss of his mother.¹ Robertson and Bowlby elaborate on Edelston's ideas.²,³ Both proposed three phases of behavioural responses, "protest", "despair", and "detachment", which are expressed by the young child during separation. Bowlby hypothesized that all three phases are an expression of mourning for the lost mother. The "protest" phase of weeping and aggression demonstrates behaviour that may result in mother's return. The sad behaviour of the "despair" phase indicates loss of hope for a reunion, and the "detachment" phase with seemingly calm and accepting behaviour indicates an unconscious reproach for the mother's desertion.⁴

Bowlby considers that the seriousness of the child's reaction

¹H. Edelston, "Separation Anxiety in Young Children". Genetic Psychological Monograms, XXVIII: 1943, pp. 3-95.


⁴Ibid., p. 92.
depends upon which phase is reached. The first two phases are reversible, but the "detachment" phase may lead to loss of emotional capacity and have long-term adverse effects on the ability to form close relationships. Bowlby considers that "detachment" does not develop for several months. However, Robertson states that even short-term separations can have long-lasting effects. He suggests that a child's sense of security may be severely shaken by a brief loss of maternal care and may result in long-term difficult behaviour.

Anna Freud considers that the separation of a child from his mother is especially serious during illness. However, her proposed reason for the adverse effect differs from those of Bowlby and Robertson. She suggests that a child considers his mother as the rightful owner and protector of his body, and that his need for extra love, affection and physical comfort from her is heightened at this time. She also suggests that it is difficult to differentiate the adverse psychological effects of the illness from those of separation. Örsten and Mattsson like Anna Freud, propose that illness and separation may interact and that the combined upset is greater than either illness or separation alone.

A few authors, for example, Smith, state that most children fare very well when separated from their parents as long as they have

5Ibid., p. 102.

6Robertson, op. cit.


the companionship of other children and a diversion such as television. However, Smith does not distinguish between age, social background, length of hospital stay or seriousness of illness. Rothman discounts separation as the cause of trauma. He considers that the major cause of upset is the limited and impersonal contact the hospital staff has with the children. Moncrieff states that if a child "settles down" and does not appear to be unhappy, psychologists claim without proof that the child is brooding. However, the behavioural characteristics of the child who has settled in, which are described by Moncrieff, are indistinguishable from the behaviour of a child who is in the "detachment" phase described by Robertson and Bowlby. Moncrieff, unlike Robertson and Bowlby, does not describe the post hospital behaviour in these children so his statement could be open to doubt.

Overall, in the literature there is a widespread acceptance of the idea that separation contributes to psychological upset both in hospital and after discharge. However, there is a lack of agreement about whether the upset lasts a few weeks or a few months. It is also unclear which variables are most significant. Age does seem to be important and there may be a curvilinear relationship of age to psychological upset. In an early study by Levy the data points to more upset

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in the young child. In a study by Prugh, et al. the data shows a quantitative difference in the upset behaviour displayed by various age groups with most upset displayed by children under 4 years of age. The data also indicates an increase in regressive behaviours in this age group on return from hospital. Anna Freud and Orsten and Mattsson both consider severity of illness to be an important contributing factor. In conclusion the literature strongly suggests that age, separation and severity of illness all contribute to increase the stress of hospitalization. There are however, other age-related characteristics that compound the traumatic effects of hospitalization for the pre-school child.

The pre-school child has a poor concept of time and this factor may contribute to the upset of hospitalization. In early speech patterns, children refer almost exclusively to their existence in the present tense. The child begins to use the future tense at about 30 months. Yesterday, as a reference to any time in the past, is a concept that seems to appear from about 36 months. Spayde states that the pre-schooler has difficulty in distinguishing morning from afternoon.


14Anna Freud, op. cit.

15P. Orsten and A. Mattsson, op. cit.

and in knowing the days of the week. Gellert expresses this belief and considers that for the young child in hospital, unable to conceptualize future or past time clearly, hours and days drag on interminably.

The pre-school child's reasoning capacity is still very limited and his interpretation of the surrounding environment is frequently illogical and unrealistic. Piaget considers that between the ages of two and four, the child enters a period of cognitive development known as pre-conceptual thought. During this stage, the child learns to differentiate words and images from objects or events to which the words or images refer. This development of symbolic functioning is seen most clearly in children's play behaviour when the child can create mental images of objects which are not physically present. Although symbolic functioning increases the child's intellectual ability his mode of thought is still immature. In the period of pre-conceptual thought, Piaget considers reasoning to be "transductive" rather than deductive or inductive. In this type of reasoning, the child moves from the particular to the particular without touching on the general. Transductive reasoning finds a relationship between two concrete items where there is none. Piaget quotes from his daughter Lucienne: "I haven't had my nap so it isn't afternoon." As Lucienne usually had a


nap in the afternoon she saw a direct relationship between the two events and concluded that one event depended on the other. The pre-schooler and even the early school-age child will relate two events only because they occur at the same time. This can greatly increase the likelihood of misconceptions and unrealistic fears in the hospitalized child of this age. Tesler and Hardgrove emphasize the importance of understanding transductive thought when preparing the child for procedures. They state:

"We make cause and effect connections for the child knowing that his inexperience might otherwise lead him to faulty and frightening conclusions."21

Piaget considers another characteristic of the pre-conceptual period to be "egocentrism". The child sees the world from his own point of view and is unable to put himself in another person's situation. This "egocentric" quality is part of the child's language.22 Piaget believes that the child's language, especially in the years from 4 to 6, does not always serve the function of communication. Frequently, the child does not assume the point of view of the listener who requires information, but talks of himself, to himself, and by himself.23 This quality of language makes it very difficult for the pre-school child to accurately verbalize his feelings about hospitalization.


21Mary Tesler and Carol Hardgrove, "Cardiac Catheterization: Preparing the Child." American Journal of Nursing LXXIII: (January 1973) p. 82.


The entire theme of threats to body integrity and intrusive treatments seems to generate fear in the pre-school child. Florence Erickson states:

In addition to separation anxiety, pre-school children have intense fears of body mutilation. Very little is known about children's interpretations of intrusive procedures, and that has been gleaned in retrospect by analysts or through the sympathy of doctors and nurses who have observed hospitalized children's play and emotional reactions.24

Erik Erikson describes the modality of behaviour in the pre-school child as "intrusive". He states:

They are dominated by the intrusive mode. They intrude into other bodies by physical attack: into other peoples' ears and minds by aggressive talking; into space by vigorous locomotion; into the unknown by consuming curiosity.25

Fujita believes that:

Children are intensely interested in minimal differences between themselves and others. Children are most perceptive of body integrity and its surfaces.26

Actual assaults to body integrity such as scars and even bandages and casts, may inspire fears of mutilation and punishment in the pre-school child. As these children are in the phase of "egocentrism" described by Piaget, they tend to see other peoples' attitudes and actions as reflections of their own feelings and, therefore, may perceive any

24 Florence Erickson, "Reactions of Children to Hospital Experience." Nursing Outlook, VI: (September 1958) p. 501.


hospital procedure or treatment as a hostile act. Riddle says that when the child's tactile, kinesthetic, and visual perceptions are decreased he may be unable to define his body boundary and his location in space. She states:

In many instances, the only evidence a child may have that something has happened to him is the presence of a bandage after he wakes from the perplexing sleep of anesthesia and the experience of unusual, often painful, perceptions of a specific body part ... In all instances, body image distortion is most certainly magnified by the child's fantasy of what he does not comprehend.27

For the pre-schooler, imagination, fantasy, and guilt are intertwined. Erik Erikson believes:

Because of fantasies and imaginings of an Oedipal nature that the child may engage in, he may incur a deep sense of guilt. He begins automatically to feel guilty even for mere thoughts and deeds nobody has watched.28

This sense of guilt may allow the child to interpret any unexplained or misunderstood separations as punishment. Woodward and Jackson point out that the young child tends to feel that hospitalization represents loss of love because of disobedience, and that any unpleasant experiences are a punishment for his wickedness.29

Although the pre-schooler is actively striving for independence


28Erikson, op. cit. p. 195.

and social skills, he has only recently gained control of various bodily functions. He takes pride in the skills he has mastered and in his growing independence. In hospital, his ability to control his life is taken from him and he is thrust back into a dependent role.

Woodward and Jackson note that a young child in hospital generally feels he has little control over his environment and himself. They suggest that the child tries to cope with this loss of control by such behaviours as tantrums, refusal to eat, refusal to talk, or by regression to more infantile behaviours.  

Parents are still viewed by the pre-schooler as prestigious, powerful and the ultimate authority in his world. In the hospital situation the parent can no longer protect the child from harm. Strangers inflict strange treatments, and the parent stands by helplessly. O'Connell and Brandt indicate that the child may be upset when his parent is present because of the disillusionment and hostility arising when he discovers that the parent, whom he felt was all powerful, cannot protect him. Woodward and Jackson also point out that the young child cannot understand why parents can not control certain situations. The child may believe that because parents allow unpleasant things to happen to him they no longer love him.

The normal pre-schooler is an energetic physically vigorous being. The day is taken up with running, jumping, and other kinetic

30 Woodward, Jackson, op. cit., p. 323.


32 Woodward, Jackson, op. cit., p. 323.
activities. Even pre-school children who are physically handicapped will engage in this type of activity as long as their physical capacity allows. When a child is hospitalized his physical activity is usually curtailed. Vernon states that these limitations on general motor activity are frustrating for the pre-schooler and deny him a natural outlet for aggressions.  

In summary, there are a number of theories and studies which substantiate the idea that hospitalization is psychologically upsetting for the pre-schooler. There are also several well documented characteristics related to developmental level which contribute to this upset. These are: separation, seriousness of illness, a poor concept of time, limited reasoning capacity, limited communication skills, fear of intrusive treatment and threats to body integrity, a lively imagination and a sense of guilt, loss of recently gained independence, loss of parental protection and limitations in general motor activity. The degree to which specific characteristics contribute to upset is unclear, although separation and seriousness of illness seem to be important variants. The question has been raised by Vernon and Shulman that hospitalization may be beneficial to some children; that mastering the stress of hospitalization may promote maturity. There is no clear evidence on this issue and in a later


study by Vernon et al. this idea is not substantiated.\textsuperscript{35} This does not negate the belief that hospitalization can be beneficial, only that the characteristics of the experience which lead to benefit have not been fully identified. Some research has been carried out investigating various ways in which specific adverse effects of hospitalization can be instigated. This is discussed in the following section.

REVIEW OF SELECTED RESEARCH STUDIES INVESTIGATING THE HOSPITALIZATION OF PRE-SCHOOLERS

In this section selected studies investigating some adverse effects of hospitalization for the pre-school child will be discussed. Some interventions which may alleviate the psychological trauma of hospitalization are also discussed.

An early study conducted by Mahaffy identified the problem that children in hospital become anxious and frightened and that their anxiety increases as their mother's care is withdrawn. He also identified the problem that parents' anxiety increases when they leave their child alone in hospital and when they are unable or uncertain how to carry out normal parental functions in the hospital setting. Mahaffy postulated that if parental anxiety could be reduced, then the child's anxiety would also decrease. In this study the method used to decrease parental anxiety was termed "experimental nursing", that is a sincere warm acquaintance between the parents and the nurse which permitted them

to communicate freely with each other. The results of Mahaffy's study supports the hypothesis that a warm relationship between the nursing staff and the parents results in a decrease in the child's anxiety in hospital. However, a post-hospital questionnaire listing various regressive behaviours common to pre-schoolers revealed that both the experimental group and the control group demonstrated some regressive behaviours on return home. It would seem that one intervention which reduces the parents' and the child's anxiety in hospital does not prevent the occurrence of post-hospital upset in the child.

Vernon et al. conducted a study investigating and defining post-hospital behavioural change. They developed a post-hospitalization questionnaire consisting of 27 items derived from symptoms mentioned in six previous studies. Factor analyses of the 27 items revealed 6 categories of upset behaviour: general anxiety and regression; separation anxiety; anxiety about sleep; eating disturbances; aggression; and apathy-withdrawal. The questionnaire has been used in two other studies by Cassell and Azernoff. The data collected during the


39 P. Azernoff et al., The Preparation of Children for Hospitalization. A National Institute of Mental Health Grant, #22856, Department of Pediatrics, University of California, Los Angeles, 1975.
Vernon study confirmed the hypothesis that children from 6 months to 4 years are most likely to be upset following hospitalization. A relationship was demonstrated between length of hospital stay and degree of upset suffered. The data did not reveal a significant difference in response related to the sex of the child. 40

Wolfer and Visintainer conducted two extensive studies investigating the psychological preparation of children for hospitalization and for minor surgery. The first study confirmed the hypothesis that children and parents who receive systematic psychological preparation for hospitalization and continued supportive care, would show less upset behaviour, more cooperation, and less post-hospital upset than parents and children who were not prepared. This study is in agreement with the findings of other studies in that low parental anxiety is a factor in decreasing the child's anxiety, and that preparation for surgery reduces the child's anxiety. 41

The second study by Visintainer and Wolfer based on the results of the first study, proposed the hypothesis that if the child and parents were given preparation and information before surgery and also before other stressful procedures, there would be a greater decrease in the child's anxiety. The age range of the children in the study was from 3 to 12 years, and surgery was minor. Play was used extensively in preparing the pre-school children for surgery and procedures. The data confirmed the hypothesis that the combination of preparation for surgery

40 Vernon, op. cit., pp. 591-592.

41 John Wolfer and Madelon Visintainer, "Pediatric Surgical Patients' and Parents' Stress Responses and Adjustment." Nursing Research XXIV: (July-August 1975) pp. 244-255.
and procedures plus consistent supportive care was superior in reducing stress over consistent supportive care alone.42 This study emphasizes the effectiveness of information-giving in reducing anxiety in the child and the parents. It also supports the theory that play is a useful tool in teaching young children.

Johnson et al. used puppet therapy as a teaching tool to prepare an experimental group of children for hospitalization and minor surgery. The hypothesis that puppet therapy before surgery would reduce anxiety was confirmed.43 This study supports Cassell's findings that puppet therapy before surgical experiences reduces anxiety for children.44 The age range of the children in both studies was 5 years to 8 years. Again both studies support other literature that suggest pre-operative preparation is one way to reduce a child's anxiety. Both studies with that of Visintainer and Wolfer45, support the concept that play is a useful tool which can facilitate the transfer of information to the pre-school child.

Vredevoe et al. conducted a study investigating the degree of aggressive post-hospital play responses in hospitalized pre-schoolers,


44Cassell, op. cit., 1963.

age 4 to 5 years, who had minor surgery. The play responses of these children were compared with hospitalized children who did not have surgery and with non-hospitalized children. The data did not confirm the hypothesis that pre-schoolers' play was more aggressive after surgery. The play equipment used did not represent hospital equipment. Wooden dolls representing a family, a cat and dog, wooden blocks, a telephone and a dump truck were presented to each child. Using this play material the hospitalized childrens' play was described as less than free and spontaneous. Moustakas has noted that play immediately after a crisis tends to be serious and quieter. It may be that the play behaviour that occurs, using ordinary toys, taking place immediately after surgery, in a new environment, and with new people, would not reflect strong emotions. A more interesting question about post surgical play would seem to be, not whether it is more aggressive than normal play but what kind of post surgical play is displayed by pre-school children. It would also be interesting to investigate the content of this play.

Overall, the data from the studies discussed supports the belief that children do suffer from psychological upset after hospitalization. The data also strongly suggests that reducing parental anxiety is a factor in decreasing the child's anxiety. The studies support the idea that both information giving and teaching about procedures reduces anxiety in the parents and the child. The data also supports the idea that toys and puppets seem to be useful tools which can facilitate

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SELECTED THEORIES OF PLAY

In this century a number of psychologists have attempted to explain the underlying dynamics of children's play. The psychoanalytic interpretation of play behaviour, primarily in the writings of Sigmund Freud and Erik Erikson, is that one purpose of play is cathartic. That is, the cathartic theory interprets play as reflecting the child's attempt to master situations that at first, are too much for him. From the developmental school of psychological theory, Piaget believes that play is closely bound up with growth of intelligence. He also believes that repetitive play, especially of stressful events, helps the child assimilate a situation, thereby gaining a better understanding of the event.

Sigmund Freud suggests that children's play behaviours do not occur by chance but, like all other human behaviours, are determined by the individual's feelings and emotions. Originally Freud wrote that play is motivated by the "pleasure principle". That is, play is sought after because the behaviour brings pleasure. From observation of children at play, he determined that they use objects and situations from their real world but that in play children alter events so that re-enactment is more pleasing and gratifying than the real event. With continued observation Freud observed that this assumption did not explain why children frequently repeat unpleasant experiences in play. He believed that all organisms try to keep levels of nervous tension as low as possible. He therefore postulated that conflicts were repeated in play because repetition reduces the excitement which had been
aroused. He emphasized that by repetition in play, the child can master disturbing events by actively taking part in the event instead of being a passive participant. Freud's view of children's play has directly influenced various forms of therapeutic interventions which utilize play both as a form of catharsis and as a means of identifying events that may trouble a child.

Erik Erikson follows the psychoanalytic train of thought. He states that play attempts to synchronize bodily and social processes within the self. He believes that play helps the child adjust to the demands of external reality. Erikson distinguishes three stages of play development: "autosphere" play which is the infant's exploration of sensual perceptions; "microsphere" play which includes the child's interaction with manageable toys and provides him with the opportunity to project inner conflicts upon playthings; and finally "macrosphere" play which brings the child into social contact with other children or adults and is typical play behaviour of the pre-school child. This play involves re-enacting various social roles and seeking out social behaviours appropriate in the real world. Erikson believes that the child needs solitary play with toys in the presence of a sympathetic adult. He states:

Solitary play remains an indispensable harbour for the overhauling of shattered emotions after periods of rough going in the social seas . . .

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50 Ibid., p. 194.
He also believes that the most favourable condition for play therapy is that:

... the child has the toys and the adult for himself, and that sibling rivalry, parental nagging, or any kind of sudden interruption does not disturb the unfolding play intentions, whatever they may be. For to "play it out" is the most natural self-healing measure childhood affords.\(^{51}\)

Erik Erikson emphasizes the self-curative trend in spontaneous play and considers that play therapy can make use of this self-curative process.

Piaget describes the play behaviour of children 2 to 7 years old as symbolic, or make-believe play. He postulates that assimilation, the process by which an organism internalizes information from the outside world, and accommodation, the process by which an organism adjusts to the reality of the external world, are both utilized in symbolic play. He distinguishes symbolic play from mere imitation:

If symbolic play uses imitation, it is exclusively as a symbolic instrument. This follows because there are only two ways that an absent situation can be represented; it can either be described by language or evoked by imitative gestures or images. This in no way means, however, that symbolic play can be reduced to imitation since play is exclusively an assimilation of reality to the self.\(^{52}\)

Piaget distinguishes between play as repetition of an event already mastered and the repetition of an event in order to understand it. He writes:

Although play sometimes takes the form of repetition of painful states of mind, it does so not in order that the pain shall be preserved, but so

\(^{51}\)Erikson, op. cit., p. 475.

that it may become bearable, even pleasurable, through assimilation to the whole activity of the ego.53

In conclusion Piaget in common with Sigmund Freud and Erik Erikson, believes that children in the pre-school period utilize play as a means of understanding and coping with the world in which they live.

THE THERAPEUTIC APPLICATION OF PLAY

There are two classic sources on the subject of play therapy. Axline provides a theory and methodology for "non-directive" play therapy.54 Moustakas believes that what the play therapist says and does is important, but that how he feels towards the child determines to a greater degree his therapeutic effectiveness.55

Like Erik Erikson, Axline suggests that play therapy is a method of helping children help themselves. She states:

Play therapy is based on the fact that play is the child's natural medium of self expression. It is an opportunity which is given to the child to "play out his feelings and problems just as, in certain types of adult therapy an individual "talks out" his difficulties.56

Axline believes that there is a powerful force within each individual which strives continuously for complete self-realization. She states:

53 Jean Piaget, Play, Dreams and Imitation in Childhood, (New York: W. W. Norton Co., 1951) p. 149.


56 Axline, op. cit., p. 9.
Non-directive play therapy is based on the assumption that the individual has within himself, not only the ability to solve his own problems, but also this growth impulse that makes mature behaviour more satisfying than immature behaviour.57

The eight basic principles of "non-directive" play therapy reflect this assumption. They include: establishing a warm relationship with the child; accepting and respecting his actions; letting the child choose the subject of play, and recognizing feelings and reflecting them back to the child.

Moustakas follows the same line of thought when he describes the therapeutic process. He states:

The therapeutic process does not automatically occur in a play situation. It becomes possible in a therapeutic relationship where the therapist responds in constant sensitivity to the child's feelings, accepts the child's attitudes, and conveys a consistent and sincere belief in the child and respect for him.58

Moustakas differs from Axline in that he believes that play need not be totally non-directive. He says that children frequently have to face crisis in life and may respond by behaviours expressing confusion, aggression, hostility, hate and anxiety. For such children, Moustakas believes that controlled or situational play therapy is more effective than non-directive play. The control results only from specific toys suggesting a particular scene or situation that the therapist knows is troubling the child, not from control of the actual play. Moustakas makes the comment from his clinical experience that children, who take part in situational play therapy, establish a relationship with the therapist quickly and express their feelings earlier and more

57 Axline, op. cit., p. 15.
58 Moustakas, op. cit., p. 10.
directly than deeply disturbed children. He also comments that too much stress has been placed on responding skills. He believes that the use of reflection alone may be perceived by the child as a repetitious, unsympathetic static response.59

It would seem that both Moustakas and Axline are in agreement with Erik Erikson in that a child needs solitary play with toys, in the presence of a sympathetic adult, to help him adjust to new and overwhelming social situations. All three views would seem to substantiate the assumption that play therapy could be suitable intervention to reduce post-hospital psychological upset in the pre-school child. Through play therapy the child could express his feelings and his beliefs about his hospitalization.

A number of articles have been written on the subject of play in hospitals. In recent years a few hospitals have set up play programs for children undergoing medical and surgical procedures. These programs mainly offer the child an opportunity to play in a group setting. Play takes place in a playroom and the toys provided are a variety of ordinary playthings such as books, games, art materials, dolls and wheel toys. Some programs also provide climbing equipment, sand boxes, and dough. A few articles describe hospital programs where play is used to prepare children for surgery and procedures. Several authors have also described case studies and documented clinical observations of children's play behaviour after surgery or traumatic accidents.

Brooks, discussing a program where free play is allowed, says

that "messy media" such as dough, clay, and paints are useful because the children frequently use these materials to release pent-up feelings. Brooks believes that as the children pound dough or scrub with paints they can reduce the anger or fear they may feel. She also says that in undirected situations dramatic play most often takes the form of doctors and patients. This again demonstrates that children need to act out what has happened to them. It is also in agreement with Erik Erikson's observations that a child can be counted on to bring upsetting experiences into solitary play. It would appear that this also happens in group play. Brooks concludes that this form of play is not a casual re-enactment of the situation, but a factual account of what has happened to each child. She states:

Operations are performed which reveal surprising knowledge of medical techniques, casts made of masking tape are applied as are band aids and gauze dressings, often in the same location where the child has them.61

However there appears to be some drawbacks and limitations to group play. Adams points out that pre-school and early school age children need the opportunity to express the tremendous feelings of rage that they may have. They may therefore become very aggressive towards one another. This requires skilled limit setting by the play therapist to protect themselves and other children from injury.62 It would also seem that great skill is required to control and direct group situations so that all the children have an opportunity to vent


61 Ibid., p. 436.

aggressive feelings in a socially acceptable manner. Adams believes that a group situation helps the quiet and fearful child: "... to benefit vicariously from another child's catharsis in the group".

This belief is open to question and does not accord with the theories of play discussed here. It is doubtful if a second-hand experience would help a child work through his own feelings. Hyde expresses the belief that:

> It is not enough for a child merely to express his emotions through play; he must also know that his emotions are understood and accepted and that it is good for him to have these emotions.

This discussion does not negate the fact that group play can be helpful to many children, or that it is an effective part of the total use of play in hospital. However, it would appear that a one-to-one contact with an upset child could have more therapeutic possibilities.

A few pediatric hospitals use play with dolls and hospital equipment as a means of assisting the child to understand his surgery. Butler et al. and Knudsen both discuss the probable stress-reducing effects for the child who is prepared for surgery in this way. They report clinical observations made by operating room staff who have observed that children who receive pre-operative information about

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63 Adams, op. cit., p. 421.

64 Naida Hyde, "Play Therapy, the Troubled Child's Self Encounter". American Journal of Nursing, LXXI: (July 1971) p. 1366.
their surgery seem to demonstrate fewer generalized fear responses. Knudson lists four types of concrete information a child needs before surgery:

1) What will happen;
2) What is expected of him;
3) That he is not to blame for his illness;
4) Where the organ to be removed or repaired is located, and that no other body parts will be harmed.

Tesler and Hardgrove agree with Knudsen in that they also believe that the most important aspects of preparation for the pre-school child is the "what" of the procedure not the "why".

Tesler and Hardgrove also point out the importance of understanding the child's transductive mode of thinking:

We make the cause and effect connections for the child knowing that his experience may otherwise lead him to faulty and frightening conclusions.

Because the child's thought processes are pre-conceptual, it is


67 Ibid., p. 684.

68 Mary Tesler and Carol Hardgrove, "Cardiac Catheterization: Preparing the Young Child". American Journal of Nursing, LXXIII:

69 Tesler and Hardgrove, op. cit., p. 82.
difficult to be sure that he really understands the information given to him. Hardgrove believes that because of this it is necessary to have a play interview with the child after a procedure has taken place. She believes that in this way correction of misconceptions and reassurance can occur. This play interview helps the child separate reality from fantasy.  

All the preceding articles reinforce the idea that play is a useful way to teach and prepare the pre-school child for surgery. Play helps the child see what is going to happen to him and facilitates the communication process between the nurse-teacher and the child. However, there is also a belief that pre-surgical preparation alone does not ensure that all children fully understand and accept their surgery and hospitalization. There seems to be a need for the pre-school child to play about what has happened to him in hospital. During this play therapy further clarification of what has happened to him can take place.

A few authors have written about the process of play therapy with a child who has had major surgery or has suffered a traumatic accident. The children described were demonstrating hostile, regressive or withdrawn behaviours before play therapy was started. Even so, all of the children were able to play through what had happened to them; to initiate play sequences without direction; and to express their fears and concerns through play.

Barton discusses the effect of play therapy on a child who was

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70 Carol Hardgrove, "Emotional Innoculation: the Three R's of Preparation". Journal of the Association for the Care of Children in Hospitals V: (Spring 1977) p. 19.
demonstrating anxious and hostile behaviour after having a cardiac catherization. In her first play therapy session this five year old played spontaneously but with serious concentration. She only spoke to ask questions about how the equipment worked. Subsequently, she moved on to very aggressive play, acting out exactly what had happened to her. She used the syringe continuously, aggressively injecting the "mother" doll. As play sessions continued, her play became less aggressive even though she continued to play through hospital procedures. This progression of play is similar to the stages of play described by Moustakas as part of the therapeutic process. As play became more relaxed, this child became less rigid and fearful of treatments although she still cried and objected when she had painful procedures. Barton believes that the change of behaviour was not by chance but that:

Through play Kathy gained a clearer perception of what to expect during her hospital experience, and had an opportunity as well to play out her fears and hostility.

Barton also states that for Kathy, play also: ". . . served as an audio visual aid to clarify her perception of past and future hospital experiences."


73 Barton, op. cit., p. 164.

74 Barton, loc. cit.
Plank describes the play behaviour of a four year old girl who was having difficulty accepting the amputation of her leg. During play therapy sessions this girl became very interested in the surgery equipment and her play consisted of performing multiple operations on the doll's legs. Plank states:

Ruthie's operations were almost exclusively leg surgery. In addition to other procedures, all primarily on the legs, she frequently gave injections into the soles of the doll's feet, taped the doll's legs together and sometimes handcuffed the doll before performing the operation.

Again this little girl acted out her fears and hostility while she played through what had happened to her in hospital.

Petrillo cites one four year old girl who was severely traumatised and demonstrated regressive behaviour after experiencing severe burns. At this point in time the child was very withdrawn and did not respond to or communicate with the nurses. When Petrillo first encountered this girl she would not play. However after a week of companionship and story-telling with Petrillo she started to play through hospital procedures with the dolls and hospital equipment. In the course of this play this child began to express her feelings easily. Petrillo states:

Caroline became the "doer" instead of the helpless victim. In addition she identified with the rebelling

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75 Emma N. Plank, Working with Children in Hospital, (The Press of Case Western Reserve University, 1971).

76 Ibid., p. 31.

77 Madeline Petrillo, "Preventing Hospital Trauma in Pediatric Patients." American Journal of Nursing, LXVIII: (July 1968) pp. 1469-1473.
doll thereby expressing similar objections and feelings. 78

This child, like the previous two children described, was able to act out during play, all that had happened to her in hospital. Through play she was also able to express hostile and angry feelings. Petrillo also points out that play therapy provides opportunities to clarify the difference between fantasy and reality. She says that during play, when the children are asked why a particular procedure is necessary they frequently answer that: "... it is because of being bad". Petrillo believes that: "This gives the nurse an excellent opportunity to interject reality." 79

Petrillo and Plank, like Axline and Moustakas 80,81,82,83, believe that play therapy is more effective when there is a good relationship between the child and therapist. The child gains a sense of trust and becomes secure enough to express his true feelings. Hott also believes:

When the nurse participates in this make believe, she reassures the child that his play is valid and meaningful, gives him strength to cope with it, and

78 Petrillo, op. cit., p. 1470.

79 Petrillo, op. cit., p. 1472.

80 Petrillo, op. cit., p. 1470.

81 Plank, op. cit., p. 29.


83 Moustakas, op. cit., p. 10.
shows him that he has adult approval to go on striving for mastery in the play situation.\footnote{Jaqueline Hott, "Play P.R.N. in Pediatric Nursing". \textit{Nursing Forum}, IX: (March 1970) p. 295.}

Hott points out that during play the child can take command and control of situations.\footnote{Ibid., p. 303.} This is in contrast to the reality of his hospital situation where the child is constantly being directed. In play the child becomes a powerful person. Hardgrove believes that: "Playing 'procedures' after they occur helps the child regain his sense of self".\footnote{Carol Hardgrove, "Emotional Innoculation: the Three R's of Preparation". \textit{Journal of the Association for the Care of Children in Hospitals V}: (Spring 1977) p. 19.}

In summary, there is some clinical evidence in the articles cited that children do want and need to play through what has happened to them in hospital. Play therapy seems to be an effective medium through which a child can express and come to terms with aggressive feelings and fears. The use of dolls and hospital equipment appears to act as an audiovisual aid which facilitates learning about surgery and procedures. Play therapy also appears to provide natural opportunities to help the child clarify the difference between fantasy and reality. From the case studies discussed each child seems to act out similar themes in the course of his play. The play described also tended to be serious and intense at first, then aggressive and rough, and finally more positive attitudes began to enter into the play. These
stages are similar to those described by Moustakas. 87

Overall, play therapy after surgery would seem to be an effective method of helping pre-school children come to terms with what has happened to them. Hardgrove believes that: "Play after the fact is vital". She states:

Play is the child's avenue to understanding and integrating things that happen to him. As he "plays them out", he makes them his own and feels less the victim and more the victor. Such play also reveals dangerous misconceptions and pinpoints for the observer where the child needs a better perspective. 88

As Hardgrove points out, play therapy has potential both as an intervention and a diagnostic tool. Children may be able to utilize play therapy to act out and come to terms with the traumatic events of their own hospital experience. Through the feelings and beliefs that children may express in play, hospital staff may gain insight into each child's specific needs and fears.

THE CHILD WITH CONGENITAL HEART DISEASE AND HIS FAMILY

The parents of children with congenital heart disease frequently live with anxiety vacillating between hope for a cure and fear of surgery. For most people a malfunctioning heart gives rise to fears of disablement or possible death. Barnes reports that the parents of

88 Hardgrove, op. cit., p. 19.
a child with heart disease may experience many conflicting emotions. She states:

Often parents have great difficulty reaching a decision to consent to heart surgery. The surgery is viewed as life-threatening by the parent, who struggles with the dichotomy of wishing to give the child every chance to live a normal life, and the ever present fear of exposure to trauma. Naturally, the parent's greatest fear is that the child will not survive surgery.89

Barnes also states that professionals are often unaware of this fear. They have a tendency to label parents who are unwilling to let their child undergo surgery as "poor parents" who do not care about their child. Professional staff may not comprehend that the problem for these parents may be that they care too much. Barnes also cites evidence that parents may be so tense and fearful that they become over-protective of their child. The child may be denied activities within their limitations because parents are afraid of the condition becoming worse. Some parents may also be over-protective because they cannot rid themselves of guilt that the child's anomaly is, somehow, their fault.90 In the same article Barnes points out that parental anxieties may well be increased by confusing situations which occur during hospitalization of the child. She cites an incident that happened to one parent:

In the following year, the boy had had three catheterizations plus an admission for a fourth, which was unsuccessful. During that catheterization, the machine broke down. Mrs. Miller was called to the laboratory, got lost, and when questioned, said, "I thought my baby was dead" . . . The doctor apologized


90 Ibid., pp. 13-14.
for her unnecessary fright and said, "The nurse who took the message should have told you why you were called and shown you the way."91

This type of incident tends to demonstrate to parents that communication networks and team work are not effective. It also tends to make the parents feel that their child is not important to hospital personnel. This certainly decreases the parents' faith and trust in the personnel and, therefore, further increases their anxiety.92

Parents of children with heart disease probably do not react differently from other parents who perceive their child's illness as life-threatening. Freiberg listed the most frequently occurring reasons for mothers' anxiety during children's hospitalization. They are:

- lack of information about diagnosis;
- lack of information about procedures and treatments;
- fears about recovery of child from present illness;
- fears about the future health of child.93

Freiberg also listed the most frequently occurring comments from mothers about the nursing service. They are:

- not enough time spent with the patient;
- nurse sarcastic to mother or child.94

Freiberg also states in agreement with the literature:

91Barnes, op. cit., p. 15.
92Barnes, op. cit., p. 15.
94Ibid., p. 1271.
Young children are sensitive to anxiety in their parents and react to it with increased fear themselves.\textsuperscript{95}

These findings point out the need for a nursing intervention which can reduce parental anxiety or which can reduce the child's anxiety independent of the parent's behaviour.

Congenital heart disease has an emotional as well as a physical impact on the child. Glaser et al. points out that the effect of chronic disability has an anxiety-producing effect on the child.\textsuperscript{96} Linde et al. suggest that poor adjustment and anxiety in children with cardiac disease relate more highly to maternal anxiety than to a degree of incapacity.\textsuperscript{97} A study by Barnes et al. assessed the degree of anxiety suffered by each child by measuring levels of hydroxycortocosteroids throughout the child's hospitalization. High levels of hydroxycortocosteroids were observed throughout hospitalization with an increase before procedures and a decrease towards hospital discharge. This study concluded that it is common for children to be anxious and afraid before major surgery and procedures.\textsuperscript{98}

A study by Auer et al. gives some indication that it is difficult for children with congenital heart disease to adjust to their physical

\textsuperscript{95}Freiberg, op. cit., p. 1272.


condition and it is relatively common for these children to have emotional problems. All the children studied had been hospitalized several times. It is quite possible that the number of hospitalizations had as much impact on their emotional state as congenital heart disease. Most children having open heart surgery have experienced at least one hospitalization before their admission for open heart surgery. This, plus the fact that open heart surgery is major surgery requiring a stay of approximately two weeks in hospital, probably adds to the amount of stress these children have to deal with. Furthermore in the first few days after surgery the child has to undergo painful procedures.

Overall, pre-school children who are admitted for major heart surgery would seem to be particularly prone to suffer from stress and emotional upset during their hospitalization. There are a number of factors which may contribute to this: heart disease has serious implications for the child and his parents; fear of an unsuccessful outcome is possible; the child must undergo major surgery and painful frightening procedures; the length of hospital stay is fairly long. Finally, the child may have experienced previous hospitalization which he may not have been able to accept or come to terms with. This could result in even greater anxiety during hospitalization for heart surgery.

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In this review of literature, the evidence supporting the fact that pre-school children are particularly prone to psychological upset, due to hospitalization, is examined. The high probability that children with cardiac anomalies may suffer from adverse emotional reactions is also investigated. In the light of the literature reviewed, the assumption that pre-school children with cardiac anomalies will be particularly prone to emotional problems is well supported. Although no research study has been found to date that uses play therapy specifically as a stress reducing intervention for hospitalized children, several studies use play effectively as a method of preparing the child for surgery and procedures. However, the theories of play discussed and the clinical examples of play therapy cited, give some indication that play therapy could be an effective method of helping pre-school children cope with the stress of hospitalization. Children appear to act out and come to terms with the traumatic events of hospitalization during play therapy. Play therapy may therefore be a useful stress reducing intervention. Children also seem to express their own specific beliefs and fears during play therapy. By observing this play, it may be possible to gain insight into each child's perception of his hospitalization.
A descriptive study was designed to investigate the themes of children's play during the recovery period in hospital after major heart surgery. Simulated or real hospital equipment suitable for play therapy and representing most of the equipment that would be used for the child in the course of his hospitalization was collected. A variety of dolls representing children and adult figures were also included in the collection of play materials. A list of the complete play equipment is given in Appendix A.

The investigator met each family group selected for the study immediately after the child was admitted to hospital. The purpose of the study was explained to the family and they were asked to give permission for the child to take part in the study. The explanatory letter which was handed to the parents on the child's admission and the consent form is given in Appendix B and C.

Each child who took part in the study was visited by the investigator on admission day. Subsequent visits took place on the child's return to the ward from the Intensive Care Unit and then on every consecutive day until the child was discharged home. Play therapy with the hospital play materials commenced as soon as each individual child had recovered from surgery sufficiently to take an interest in active play. Until that time the investigator talked to the child, read stories or played simple games. Each child had at least five
play therapy sessions using hospital play materials, which lasted forty-five minutes to one hour. Each play therapy session was terminated when the child no longer actively played with the equipment.

Play therapy took the form advocated by Moustakas.¹ This form of play therapy utilizes equipment which strongly suggests the situation believed to be stressful or upsetting to the child. Moustakas states that in this type of play therapy children are able to make immediate use of the play equipment to express and explore tense and insecure attitudes. This approach to play therapy is very similar to that advocated by Axline. The major difference is that communication with the child is not curtailed to mirroring statements and reflecting back feelings.² It was considered that limiting the play therapist's responses to reflecting the child's statements could result in missed opportunities for clarifying or confirming statements made by the child during play. Furthermore, teaching opportunities which may occur naturally during play could also be lost. Moustakas states that although reflection of feelings is a useful technique it may easily be perceived by the child as a repetitious, unsympathetic and static response.³ In the form of play therapy used in this study, emphasis was placed on the relationship between the investigator and the child. That is, the investigator attempted to convey to each child a feeling of respect for


³Moustakas, op. cit., p. 2.
and acceptance of the child's actions and attitudes. During play each child chose the direction and content of play. Because of the nature of the equipment, the direction of play towards hospital activities was strongly suggested. All forms of play expression using the hospital equipment and dolls was accepted. Procedures such as temperatures, blood pressures and using the stethoscope could be practiced on the investigator or parents. The only constraint clearly defined and enforced was the use of "needles" or other painful or dangerous procedures on people. The investigator took part in the play as directed by each child and also used play as a means of communicating with the child. Verbal communication consisted of listening to each child and talking with him in a natural manner.  

SAMPLE SELECTION

The population selected for the study were five children between the ages of three and five years old who were admitted by the surgeon for major surgery on the heart or great vessels. Children whose mother tongue was English were selected.

COLLECTION OF DATA

The verbal and non verbal behaviour displayed by each child during their play therapy sessions were recorded either by audio tape or by process recordings.

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The investigator conducted an unstructured interview with each family unit to collect data on the child's play behaviour after hospital discharge. Information was also gathered about any new fears, anxieties or behavioural changes the child displayed after discharge from hospital. The topics discussed are listed in Appendix D.

IMPLEMENTATION

The investigator visited each child in his hospital room. Play sessions took place either in the child's own room or when possible in the ward play room. The child was given the suitcase containing all the play material and was allowed to use the equipment in any way he wished. If a child did not want to "play hospitals" he was asked to choose another activity. The investigator stayed with the child throughout the play session. Parents could join in if they wished. At the end of each session the investigator told the child when she would visit the next day.
CHAPTER IV

DISCUSSION AND INTERPRETATION OF THE DATA

INTRODUCTION

This study was undertaken to answer the following questions: Are common themes expressed in the play behaviour of hospitalized preschool children after major surgery? Does the quality and intensity of the play behaviour demonstrated by pre-school children follow a similar pattern? Will pre-school children use play therapy as a medium through which to express fears and concerns about their hospital experience? Do children tend to act out their perception of what has happened to them in hospital? To answer these questions play therapy was conducted with five pre-school children who had just undergone major surgery on the heart or great vessels. Four girls and one boy with an age range of three and one-half to five and one-quarter years took part in the study.

THE CHILDREN IN THE STUDY

Moira, four and one-half years old, had an atrial septal defect repair. She has an older brother and sister and one younger sister. Her mother and father, although they were concerned and anxious about Moira, were not able to visit each day. After initial shyness, Moira made friends easily and was an outgoing and quite independent child. From the first play therapy session Moira played enthusiastically and always continued for at least one hour. Moira had six play therapy sessions.
Shaun, four and one-quarter years old, had surgery to relieve a moderately severe stenosis of the aortic valve. His father was with him on admission and was able to visit for a time each day. His stepmother of one and one-half years, came to hospital only on Shaun's admission and discharge. He had a new six-month old brother. Most of the time Shaun was a sweet and compliant child but displayed loud physical resistance in response to all treatments and procedures. He also stubbornly refused most of his meals. He did not like to play "hospitals". Shaun had one play therapy session.

Lucy, three and one-half years old, had a repair of Tetrology of Fallot. She had four older siblings and enjoyed a special position as baby of the family. Her mother visited daily throughout her hospitalization and her father for the first half of her hospital stay. She had a rough post-operative course and had second surgery to relieve a cardiac tamponade. She was in the Intensive Care Unit for eight days. Despite the fact that she was still very stiff and sore and quite easily fatigued, Lucy played "hospitals" enthusiastically. Lucy had limited speech for her age before admission to hospital, but did not speak at all after her surgery. However, during play her body language and exclamations became expressive. Apart from during her play therapy sessions Lucy's behaviour was withdrawn and passive for most of her hospitalization. Lucy had five play therapy sessions.

Marian, five and one-quarter years old, had a second patch repair to relieve a recurrent co-arctation of aorta. She first had surgery at two years of age and said she remembered her hospitalization. Marian was very outgoing and friendly and gave the appearance of considerable composure for her age. She told the researcher that she was going to have her heart "made better". Her mother visited daily
throughout her hospitalization. As the oldest child in the study she seemed to understand why her father and sister could not travel from central British Columbia to see her. Marian played "hospitals" enthusiastically during her five play therapy sessions.

Judith, four and three-quarter years old, had an atrial septal defect repair. She had an older brother and a new baby brother. She was a friendly and verbal child, determined and outgoing. On return from the Intensive Care Unit she did go through a period of being quiet, tearful, negative and "whiney". Judith played "hospitals" with great concentration until her discharge home. She allowed her room-mate, who was eight years old, to join in the play but Judith very firmly directed the course of play. Judith's mother had a baby-sitter for the new baby and was able to visit Judith every day. Judith had five play therapy sessions.

OVERVIEW OF PLAY THERAPY SESSIONS

In summary the four girls took a very active role in all the play therapy sessions. Their play tended to follow the patterns described by Moustakas and David.\(^1\)\(^2\) To begin with, play was fairly passive. All the equipment was handled with great care and respect. The children were very serious in their approach to play and looked constantly at the researcher to assess her feelings about their play behaviour. This was especially true about intrusive treatments. As


the trust relationship with the researcher developed and the children deemed it safe to express their feelings they moved on to more aggressive play still concentrating mainly on needle play. The play then became more imaginative as they re-enacted all that had happened to them. This play was also aggressive to begin with. As the play therapy continued more tender feelings were expressed. At this time some play seemed to be directed towards fun and light relief.

The need to have an understanding adult involved in the play was demonstrated in various ways. Marian expressed this need very clearly. During one play session with her the researcher was passively watching Marian play. Marian finally turned to the researcher and putting her hands on her hips said in an exasperated tone: "Aren't you going to play today?" The researcher said: "I was having fun just watching you." "No!" said Marian, "you have to play too." The other children also demonstrated this need by involving the researcher in most of the play and by continually directing conversation and comments towards her. Even Lucy who did not talk, involved both her mother and the researcher by using them to hold equipment for her. She also demonstrated this need by gestures and exclamations.

During the play therapy sessions with the girls who took part in the study five recurring themes were expressed during their play. The themes were defined as follows:

I. Intrusive procedures.
II. Re-enactment of procedures: testing reality.
III. Autonomy: regaining control.
IV. Separation from home and family.
V. Nurturing activities.
The remainder of the analysis of the data will be discussed under these headings. Shaun, the fifth child who took part in the study did not demonstrate the play behaviour expressed by the other children. Although he did express some of the themes identified he did not do so through playing "hospitals". His interaction with the researcher will therefore be discussed in a separate paragraph.

INTRUSIVE PROCEDURES

Intrusive procedures with the emphasis on "needles" was by far the most common theme expressed in play. The play syringes were ignored. Moira was the only child who played with them and she used them only briefly during her first play therapy session. Judith, who was reported by her mother to be terrified of needles, found the real syringes during her first play therapy session and immediately asked if I had any "really" needles. All the children demanded some kind of fluid to inject and they also wanted to fill the syringe by themselves from a real rubber capped vial. The injection procedure was played through accurately; cleaning the site before and after the injection and putting a band-aid on afterwards.

From the second play session Moira's needle play was very aggressive. She mainly used Rabbit and injected his head, feet and eyes. She liked to put the needle right through the toy. When asked why Rabbit had so many needles she said: "he's been bad - he's a bad bunny". This statement opened the way for a discussion on why children in hospital had needles. Moira made no comment at the time but a few days later said to Raggedy Ann: "you have to have a needle now - this is your medicine you know." At this time she also acknowledged that
needles hurt and accompanied the injection with cries of pain from Raggedy Ann.

Lucy, although she was still very stiff and sore from surgery and had difficulty moving her arms, immediately took the real syringe from the toy case. Lucy did not talk but made many expressive sounds. She gave a long "ah!", turned the syringe carefully in her hands and moved the barrel in and out. She then pointed to the tip of the syringe and said "eh!". The researcher showed her a real needle and she grabbed it. She couldn't fix the needle to the syringe so she handed it to her mother. Her mother then suggested that she give Raggedy Ann a needle but Lucy ignored her and chose Rabbit. With great care and concentration she gave Rabbit a needle in his leg. When she had finished she looked around searching for something. When offered a band-aid she took it with a grunt of satisfaction, and with her mother's help, found the injection hole and put the band-aid on. Lucy then completed the task by directing her mother to draw a "happy-face" on the band-aid.

Lucy spent most of her play therapy sessions doing intrusive procedures. She completely mastered the skill of giving injections and also played constantly with the intravenous equipment. Again the intravenous needle had to go into the doll's arm and the fluid from the intravenous bottle had to drip. Her mother asked her why Raggedy Ann was having an "I.V.". She shook her head. The researcher took this opportunity to explain how food and medicine goes into a vein. With head held down, Lucy listened impassively. The reason for "needles" was also explained, but did not elicit a response from Lucy, despite her mother's confirmation of the statement.

Lucy was also fascinated by all the tubes in the play kit. She
was in the Intensive Care Unit much longer than the other children and had more intrusive procedures. She placed all the catheters and drainage tubes in the correct place, always turning to the researcher for confirmation that this was correct. When she used the nasal catheter for suction she screwed up her face and turned her head away. The bladder catheter was accompanied by exclamations of pain. The researcher explained the purpose of each catheter and received a glare from Lucy.

Lucy's play was generally very intense and aggressive. However, during the last two play sessions she discovered syringes made good squirting toys. For the first time since her surgery Lucy laughed. She started with a giggle and then to a chuckle and finally gave a great big happy laugh.

Marian, the oldest of the children, was least aggressive when playing "needles". She always accompanied the play with explanations to the dolls: "this will hurt now . . . you lie still . . . it will soon be finished . . . this is your medicine to make you better." Marian liked to do everything correctly. On one occasion she forgot to clean the skin. She said: "Oh dear - should clean it first." She was the one child who gave oral medicines. This was possibly because she regularly took medication at home. Again Marian gave the medicine to the doll with great tenderness and accompanied the medication with an explanation.

Judith, like Moira, was most aggressive with her needle play. She also played frequently with the intravenous set and put the needle in the doll's arm with a sharp jab. She then tied the doll's arms to the bed and in an angry voice, told her to be still. At this point
some discussion took place between Judith and the researcher about
the purpose of intravenous fluids. Judith always listened to explan-
ations with great concentration and frequently asked further questions.
She later explained to the doll: "You have to have this 'cause you
can't drink yet." She continued to tie the doll down, but more gently
than before. During her last play therapy session, Judith became much
more gentle in all her play. When asked why children had to have
needles she demonstrated her understanding of the researcher's explan-
ation by saying: "It is medicine you know . . . if you don't have it
you die - then you get very sick."

RE-ENACTMENT OF PROCEDURES: TESTING REALITY

Each of the girls taking part in the study played through pro-
cedures that had happened to them. They acted out "operations",
"anaesthetics", "blood pressures", "dressings", "removing tubes" and
"temperatures". During this play the children interacted constantly
with the researcher seeking confirmation for the accuracy of what they
were doing. Overall this play tended to be slightly less aggressive
than intrusive play and major procedures like "operations" were done
with total concentration.

Moira was aggressive and rough during her first play oper-
ation. She removed Rabbit's eye with a look of gleeful satisfaction
on her face. Her reason was that Rabbit's eye was broken and had to
come out. She listened when the researcher said that doctors could
mend broken eyes and that they didn't have to come out. Moira said
firmly: "this one come out". During the following play session Moira
roughly removed Rabbit's eye again. However, during a later play
session, after she had gently removed Raggedy Ann's chest sutures and had told her that she was all mended and ready to go home, Moira operated again on Rabbit and put his eye back. She said: "she better now - her eye mended - she going home." During other procedures Moira would look at the researcher and say: "that right?" This kind of statement facilitated a free flow of comments about the procedures.

Lucy was not interested in doing an operation. She liked to remove the chest tube and always accompanied this procedure with loud cries of: "ouchy! ouchy!". The hole was always covered carefully with a band-aid. The researcher did not attempt to give a reason for the chest tube but told Lucy that Raggedy Ann was definitely getting better now her chest tube had been taken out. Lucy would nod enthusiastically in agreement. Raggedy Ann had sutures in her wrist in the same area as Lucy. When Lucy discovered them she compared them with her own wrist. She then looked at Raggedy Ann's chest and compared the doll's wound with her own. She pointed out this interesting discovery to her mother and to the researcher. During her last play session Lucy removed Raggedy Ann's sutures. The researcher accompanied the procedure with an explanation that Raggedy Ann was all better now, everything was mended. When the sutures were out the doll was dressed in her outdoor clothes and the researcher said: "See, Raggedy Ann has had her stitches out and now she is ready to go home tomorrow." Lucy spoke for the first time; clear as a bell she exclaimed: "Me too! me too!"

Marian liked to play operations. She was always very gentle with Raggedy Ann and always operated on the chest. She took great care with the anaesthetic confirming with the researcher that her actions
were correct. Marian: Raggedy Ann has to go to sleep so it won't hurt eh"? Researcher: "Yes, but it is a special sleep not like sleep at night". Marian pointing to the oxygen mask: "Special medicine in here huh?" On one occasion Marian started the operation to mend Raggedy Ann's heart without giving the anaesthetic. She looked very shame-faced and said: "Oh-oh! have to start again."

Judith worked her way through all the procedures and constantly asked questions about why things were done. Judith: "What the pumper thing (blood pressure cuff) for?" Researcher: "That is to make sure your heart is working right". Judith: "What the stetha thing (stethoscope) for?" Researcher: "That is to listen to your heart to hear how good it is beating. Do you want to listen to your heart?" Judith: "No! I listen to your heart." Judith showed a definite preference to practice blood pressures and temperatures on people. Judith also liked doing dressings. She carefully watched the researcher check the chest wound to confirm that it was properly healed. Judith then consistently did this and always made the same comment as the researcher: "Yes, that looks good, definitely completely better."

AUTONOMY: GAINING CONTROL

The children controlled the pattern and content of all the play therapy sessions; however they further demonstrated their need to take control of situations by specific actions during play. During the play sessions the children would manipulate circumstances so that they became the authority figure and the doll the helpless patient. What they said was how it would be.

Moira had just spent 20 minutes giving Rabbit "needles". It had
been a rough and aggressive session, Rabbit was soggy with water and plastered with band-aids. Researcher: "Poor old Rabbit, he has had a lot of needles. I bet that really hurt." Moira: "No it don't, she got to have him medicine." Then Moira said to Rabbit shaking her finger at him: "I say you gotta have the needles - so you gotta to, see!" Moira made it clear she was the nurse.

Lucy directed play from the first session even though she was easily fatigued and so stiff and sore it was hard for her to handle the equipment. Also, as the youngest child in the group, she was not as manually dextrous as the other children. Despite this she preferred to manipulate the equipment by herself. She couldn't open the intravenous set clamp on her own so she allowed the researcher to assist but insisted that her hand was also on the clamp. She always chose the doll and the equipment and with the aid of exclamations and body language, made her intentions clear. When her mother asked her if she was the doctor, she shook her head. When asked if she was the nurse she nodded and smiled.

Marian directed all the play and used the researcher as an assistant. The dolls were organized throughout the play session. Marian was mainly very nice to them but was always firm. On giving needles she would say: "Now you are going to have another needle... now you have to lie still and it will soon be over... it going to hurt a bit but you got to have it." Marian, like Moira and Lucy, was the nurse. They all insisted on wearing the play nurse cap and two play watches. Before they started to play they would dress formally for the part.

Judith, always direct in her comments, said to her eight year old room-mate, when she tried to take some equipment: "you go away,
this my things. You can't do needles, I do needles." Judith was usually the nurse but when she did operations she was the doctor. Judith's need for autonomy was very strong. After she had practiced with the stethoscope, blood pressure cuff and thermometer, on the dolls, she felt ready to do her own vital signs and refused to let the nurses take them. One nurse handled this well by suggesting that Judith and she take each other's vital signs.

SEPARATION FROM HOME AND FAMILY

This theme emerged in the children's play from time to time. It was not voiced strongly by any of the children and was frequently associated with nurturing activities. There seemed to be a direct relationship between the frequency of parental visits and the frequency of separation themes expressed in each child's play.

Moira's parents were unable to visit except on isolated evenings. She expressed her worries during play with Rabbit. Moira: "You have been a bad boy today so your mummy can't come in." Researcher: "Perhaps his mummy lives a long way away and can't come every day. I think she has to work in the evening". Moira listened but didn't comment. Later she said directly to the researcher, "I want my Mummy and Daddy to come." This provided an opportunity to discuss why Moira's parents could not visit often. After this Moira would explain to Rabbit or Raggedy Ann in a sad voice: "Mummy will come soon - Daddy will drive her in the car - Bobby and Julie and Nancy will come too - they will all come to visit."

Lucy did not express this theme in play. Her mother was with her all day and had also been allowed to visit Lucy in Intensive Care. Lucy had many comfort articles from home including pictures of her brothers
and sisters. Her mother constantly talked to her about the family and what they would all do together when they flew home again.

Marian was able to speak to the researcher about her sister and father at home. Her mother visited every day. Marian occasionally would tell Raggedy Ann: "You go to sleep now, Mummy will come in the morning after breakfast."

Judith's mother also visited every day despite the fact that she had a new three month old baby at home. Judith did not display any jealousy or anxiety about her new brother. On one occasion, referring to her mother, she said to Raggedy Ann: "she's only gone for a smoke, you know, she coming back soon."

NURTURING ACTIVITIES

All the children moved on from aggressive play to occasional nurturing activities during their final play sessions. Activities classed as nurturing were play behaviours that demonstrated tender concern for the dolls.

Moira washed Raggedy Ann to make her comfortable and patted her when she tucked her in bed. Lucy patted Rabbit and Raggedy Ann and gave them drinks of juice. Marian was the most considerate nurse. She washed, fed and cuddled all the dolls. She also started this play during her third play therapy session. Judith was more rough. She demanded the dolls eat their dinner telling them that this would make them well more quickly. However when she put them to bed, she tucked them in very gently and spoke to them in a soft and loving way.

THE CHILD WHO DID NOT WANT TO PLAY HOSPITALS

Shaun, the only boy taking part in the study, did not express
himself through the medium of play therapy. It seems unlikely that this was due to sex difference. The literature does not support this idea. Also, during a previous pilot study, the researcher observed a four year old boy demonstrate the same play behaviour as the girls in this study.

Shaun was the one child taking part in the study who had an unstable home situation during his first four years. His mother deserted him when he was two years old. His father formed a common-law relationship one and one-half years ago and Shaun had a six month old step-brother.

On first meeting Shaun was sweet and affectionate and delighted to hear that the researcher was going to play with him. The next meeting took place when Shaun returned to the ward after surgery. He was dyspneic and lay quietly in bed with his oxygen mask on. When asked if he would like a story he smiled and nodded. He chose one of his own books and smiled at all the funny repetitive phrases. On the second visit Shaun was still tired, apathetic and rather withdrawn. He refused a story about hospitals and chose a family story about a "daddy" cooking supper. Conversation about Shaun's home was initiated. When asked if his daddy cooked supper, he laughed for the first time and said: "Only when Daddy is mad with Mummy."

Shaun was first shown the play equipment on the third visit. He opened the case and his facial expression changed to a worried look. He politely pushed the toys away and said in a weepy voice that he didn't want to play now. Shaun was happy to talk about his father and the fun they had together. The researcher took the opportunity to talk about Shaun's return home. During his hospitalization Shaun was negative and actively obstructive about all procedures. He loathed
rectal temperatures and in conversation with the researcher completely
denied that he had his temperature taken that way. He also refused
his food although, according to his father, this was a long standing
behaviour. Shaun suffered urinary retention post-operatively and had
to be catheterized. He was also incontinent of urine on several
occasions. During one unsuccessful play therapy session Shaun threw
the catheter to one side. The researcher attempted to explain the use
of catheters but Shaun turned his head away and refused to listen.

On the fourth visit Shaun still found the play equipment too
threatening to touch so the researcher decided to read a hospital
story book. Shaun listened to part of the story then refused any more.
When he was playing with the tape recorder he heard the story again
with his comments. He was greatly intrigued to hear his voice. Shaun
then repeated the story with the aid of the tape, this time relating well
to the story book boy. However Shaun still would not continue to the
part of the story where an operation was performed.

During the next visit Shaun, with his father's encouragement,
gave a very half-hearted injection to Rabbit. Shaun then asked his
father to give a "needle" and chose the "mother" doll. He asked for
the needle to be given in the stomach. Shaun initially laughed at
this but then grew anxious, pushed the hospital toys away and picked
up a toy car and played aimlessly with it. Again he refused to touch
the play equipment.

On the next visit Shaun refused to open the suitcase and did
not want to talk to the researcher. His interest was aroused only when
a game of balloon handball was suggested. He then consented to be
friends with the researcher once more and asked her to come back and
play the next day.

Shaun consented to play with Raggedy Andy on the eighth visit. He had just had his chest wound cleaned and was still very upset. He was immediately intrigued to find that Raggedy Andy had a chest wound just like his. He responded to the suggestion that he could do the doll’s dressing. For the first time Shaun became involved in the play and was able to talk about operations. He removed Raggedy Andy's stitches with great concentration and asked questions about the sutures. When he had finished the dressing he gave a sigh, then looked at his father and smiled. Raggedy Andy was then dressed in outdoor clothes and the researcher pronounced him ready to go home. Shaun however, still refused to give needles although he did pick up the play equipment and examined each article.

On the last visit Shaun had already had his sutures out and knew he was going home. He could hardly contain his excitement. He talked about his dressing and commented that it was just like Raggedy Andy’s. He then announced that he was going home too. The nurse reported that, although Shaun had cried throughout the procedure, he lay still for the first time. In the course of conversation with the researcher Shaun picked up the play thermometer and said: "I had this in my bum-bum". He then laughed in a rather embarrassed way. The researcher agreed with Shaun that it was a strange place to put a thermometer. Some conversation then took place on why temperatures were taken rectally when you were sick. Shaun's response was somewhat incredulous but he seemed to accept the explanation. He then took Raggedy Andy's trousers off and put the thermometer between the doll's legs. Again as he played through this procedure, he giggled and put his hand over his face. As Shaun now seemed ready to listen to an explanation about
the reasons for his hospitalization the researcher endeavoured once more to explain this to Shaun. For the first time Shaun did not turn his head away and seemed to listen to the information.

POST HOSPITAL BEHAVIOUR

All four girls who took part in the study continued to play "hospitals" after they returned home. "Needles" continued to be an important theme in their play but play syringes seemed to be satisfactory. In a few weeks hospital play diminished and other social play took over.

Lucy was reported to have four nightmares in the first two weeks. Lucy and Judith both got up at night to join their parents in bed. Moira and Marian were reported to have no sleep disturbances.

Marian at five and one-quarter years was reported to have been well since discharge and to have improved in her scholastic performance at school. She talked in a happy way about her friends at the hospital.

Moira was reported as active and inclined to be more dominant in her interactions with her brothers and sisters.

Lucy was reported as active and rather aggressive. For a few days she was reluctant to leave her mother but quickly became more independent. Her pre-hospital speech pattern returned and she increased her vocabulary. She did not like to go past the local hospital. When she returned to Vancouver seven weeks later for an outpatient visit, she was quite at ease with the doctors. She wanted to explore the outpatient department on her own and to play with the toys provided.

Judith's mother reported that her daughter had changed from a quiet girl to an aggressive child. Judith did respond to the normal discipline used in the home but constantly tried her mother's patience
by doing things that were not allowed. The researcher found Judith as
friendly and verbal as ever. When asked what had happened to her in
hospital Judith announced that: "God mended my heart."

Shaun was reported as having nightmares for a few weeks. He
also had a couple of bed-wetting incidents. His father reported a
few temper tantrums. When Shaun returned for a checkup five months
after surgery he seemed quite at ease in the doctor's office. He played
quietly with some toy cars. He looked well and had grown over one
inch. Shaun greeted the researcher as an old friend. His play pattern
at home did not relate to hospitals. When asked why he had been in
hospital Shaun shook his head. The researcher said: "Doctor mended
your heart, didn't he? Now you can play all day with your
friends instead of having to sleep in the afternoon." Shaun opened
his eyes wide, smiled and said: "Yep". He then lifted up his sweater
to show his chest scar, then pushing out his chest like a miniature
Tarzan, banged it with his fists.

DISCUSSION OF FINDINGS

Four out of the five pre-school children who took part in this
study were able to actively participate in play therapy. The fifth
child, the only boy in the study, partially participated in play
therapy on one occasion only. This took place during the second last
visit with the researcher. During the final visit his examination of
the play equipment and the thermometer play was rather like the other
children's play behaviour during their first play therapy session.

In relation to the first question posed in this study the girls
clearly expressed five common themes in the course of play therapy.
They were: intrusive procedures; re-enactment of procedures and testing
reality; autonomy and gaining control; separation from home and family; and finally, nurturing activities. Each of these themes recurred with differing frequencies throughout children's play therapy sessions.

All the intrusive treatments, most particularly giving "needles" was by far the most frequent play behaviour. Each child gave "needles" many times during each play therapy session. Other intrusive procedures that each child had, such as intravenous therapy or rectal temperature taking, also appeared frequently in that particular child's play.

The next most frequent theme expressed in the play of these children was the re-enactment of procedures. Moira, Marian and Judith all played "operations" with great enthusiasm. Marian always operated on the chest; Judith operated on the chest and once in the doll's head; Moira operated once on the chest, the other operations were on Rabbit's eye. Lucy removed Raggedy Ann's chest tube and sutures. The children all started re-enacting procedures from the second play therapy session and included at least one procedure during each subsequent play therapy session.

The theme of autonomy and gaining control was apparent in many actions and attitudes that the children demonstrated in their play behaviour. Moira and Judith expressed the need to be in control more aggressively than the other two children. However, the other two children also expressed this need strongly in the course of their play. None of the children had any difficulty in deciding what to play next and always clearly directed the researcher or parent on how they were to take part in the play. This theme ran through all the play therapy sessions.

The theme of separation appeared less frequently than any of the
other themes, Lucy was the one child who did not seem to express this theme at any time during play. However her mother stayed with her more than any of the other parents and took part in all the play therapy sessions. Lucy also enjoyed a lot of cuddling and touching with her mother. Moira, the only child who did not have parental visits every day, expressed this theme at some point during every play therapy session. The other two girls expressed this theme in a few play therapy sessions but always in a positive way to comfort a doll.

The final theme, nurturing activities, appeared in the play behaviour of the children during later play therapy sessions only. This theme was expressed in the children's play when aggressive play was beginning to diminish. As nurturing activities were expressed more frequently, needle play tended to be less frequent and less aggressive. Also, the sites chosen for injections were similar to those used in reality.

In relation to the second question posed in this study; the quality and intensity of the children's play behaviour did seem to follow a pattern. The play was quiet, intense and serious to begin with. Play then became aggressive and intrusive. Next, play became more imaginative as several procedures were acted out. Aggression then diminished and more positive tender feelings were expressed. At this point play also became less intense and occasionally humour would enter into the play behaviour. This pattern of play behaviour seems to suggest that the therapeutic process, described by Moustakas, is taking place.¹ That is, by moving through the stages of play the children,

as Axline postulated, "play out" feelings and problems just as adults "talk out" their difficulties.  

In relation to the third question posed in this study, the first four themes expressed in the children's play seem to reflect some of their major fears and concerns about their hospital experience. These themes are: intrusive procedures; re-enactment of procedures; autonomy; and separation from home and family.

The frequency with which needle play and intrusive play occurred demonstrates how deeply the children are impressed by this type of procedure. Two of the children, Moira and Judith, seemed to connect needle play with punishment. Lucy, who had so many intrusive treatments, spent almost her entire play therapy sessions doing intrusive procedures.

Each child seemed to have a need to re-enact procedures to gain a better understanding of what had happened to her in hospital. The children constantly sought confirmation from the researcher that their actions were correct. They made comments about what they were doing but the comments were often phrased as an enquiry. The child would continue playing out the procedure after they received confirmation or clarification from the researcher. Even Lucy who could not verbalize questions, would frequently give an interrogatory "eh!" as she re-enacted procedures and nod happily when she got it right.

The theme of autonomy and loss of control entered into the children's play behaviour. The children played the part of an

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authority figure, usually the nurse. During play adults were directed by the children; dolls, who were the patients, had to do what they were told. The frequency with which this theme entered play probably reflects each child's concern with loss of control. In agreement with Petrillo, each child made use of the opportunity during play to become the "doer" rather than the victim.  

Sadness because of separation from parents and family, was expressed during play by Moira who did not have regular parental visits. During play she voiced her belief to Rabbit that, bad children cannot have parents visit. Marian and Judith felt the need to reassure their dolls that parents would return. Lucy did not express this concern during play. Her mother took part in every play therapy session and was with her each day from breakfast until bedtime.

In conclusion, it appears that each child who took part in play therapy was able to express some individual fears and concerns about his hospital experience. The greater the child's fear and concern about an event, the more frequently this event appeared in the child's play.

In relation to the fourth question posed in this study, the children did tend to act out their perceptions of what had happened to them in hospital. In the course of play therapy each child acted through specific procedures, so play behaviour was often a factual account of each child's hospital experience. Lucy experienced many more intrusive procedures than the other children and had to endure all

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3 Madeline Petrillo, "Preventing Hospital Trauma in Pediatric Patients." American Journal of Nursing, LXVIII: (July 1968) p. 1470.
of these procedures longer than the other children. She insisted that the intravenous infusion ran into the doll's arm throughout each play therapy session. She also inserted naso-gastric tubes for suctioning and always inserted the foley catheter between the doll's legs. Lucy, Moira and Shaun all put rectal thermometers in the dolls. Judith and Marian did not have their temperatures taken rectally. In play, they placed the thermometer in the doll's axilla. Lucy was the only child who played with the chest tube. She had her own chest tube in much longer than the other children and seemed to remember very clearly when it was removed. Marian, who took oral medication at home and continued to take the same medication in hospital, gave the dolls pills. Judith always tied the doll down when she started an intravenous infusion. On checking with the nurses the researcher discovered Judith had fought against this procedure and had both arms restrained.

Shaun, the boy who did not want to play "hospitals" seemed to be so overwhelmed by his hospitalization that the play therapy equipment was frightening to him. After eight days on the ward, when a more trusting relationship had developed with the researcher, Shaun was able to identify with Raggedy Andy's chest wound. Nine days after his return to the ward, when he knew he was really going home, Shaun was finally able to talk about having his temperature taken rectally. At this time too, he seemed to be receptive to listening to an explanation about his surgery. At this point Shaun may have been able to take part in play therapy. Shaun was the only child in the study who had suffered the loss of his mother when he was two years old. He refused to talk about his step-mother. From his behaviour in hospital it would seem that his level of anxiety was greater than that of the
other children in the study. The reasons for his high anxiety and his inability to play hospitals was not investigated. However, Winnicott states: "There is a degree of anxiety that is unbearable and this destroys playing". This may have been a factor which contributed to Shaun's inability to take part in this type of play therapy.

The data collected on the children's post-hospital behaviour was insufficient to reach any conclusions as to the effect of play therapy on the degree of post-hospital psychological upset suffered by the children.

In summary the data collected on the play behaviour expressed by the four girls in the study does indicate five common themes: intrusive procedures; re-enactment of procedures; autonomy; separation; and nurturing activities. The data also suggests that play may follow a pattern from aggressive play to more gentle play and from intense play to more relaxed play. Some play behaviours noted in the course of play therapy suggest that these children did express some individual fears and concerns about their hospital experience. The play behaviours observed also suggest that these children tended to act through their perception of what had happened to them. One child, the only boy in the study, did not want to play "hospitals". The reasons for this child's refusal to take part in play therapy are unclear.

LIMITATIONS OF THE STUDY

The recognized limitations of the study were:

1. The themes identified in play may only be common to children having major heart surgery.

2. Girls only in this study participated actively in play therapy.

3. One boy only took part in the study.

4. The reasons why the boy who took part in the study did not want to participate in play therapy, was not investigated.

5. The total sample of children was very small.
CHAPTER V

CONCLUSIONS AND IMPLICATIONS FOR NURSING PRACTICE AND RESEARCH

CONCLUSIONS

This descriptive study found that the pre-school children expressed common themes in their play behaviour after major heart surgery. The themes identified in the play behaviour of the children studied have also been discussed by various writers. Florence Erickson has described children's fear of intrusive procedures.¹ Erik Erikson has described pre-schoolers preoccupation with this modality of behaviour.² Petrillo, Hott, and Barton have all described children's need to re-enact procedures and operations.³ ⁴ ⁵ Woodward and Jackson state that hospitalized children generally feel that they have little control over

¹Florence Erickson, "Reactions of Children to Hospital Experience". Nursing Outlook, VI: (September 1958) p. 501.


³Madeline Petrillo, "Preventing Hospital Trauma in Pediatric Patients." American Journal of Nursing, LXVIII: (July 1968) p. 1470.


⁵Pauline Barton, "Play as a Tool of Nursing". Nursing Outlook, X: (March 1962) pp. 162-164.
their environment. The children in this study repeatedly demonstrated their need to control situations in the course of their play. Children's concern with separation from home and family has been described by Robertson and Bowlby. This theme occurred most frequently in the play of the one child who did not have parental visiting every day. During later play therapy sessions each child began to express the theme of nurturing in their play behaviour. These activities demonstrated tenderness and concern for the dolls and replaced rough and aggressive behaviours. Moustakas suggests that the therapeutic process, which takes place during play therapy, follows a regular pattern. In the final stages of this process positive feelings which are typical of nurturing activities, emerge.

The quality and intensity of the play behaviour demonstrated by the children followed a pattern from intense to more relaxed and from aggressive to more positive tender feelings. This pattern of play is similar to that described by Moustakas.

The children in this study did express some fears and concerns about their hospital experience. These fears and concerns were part

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10 Ibid., pp. 7-9.
of the first four themes identified. Linn describes similar concerns and fears expressed by hospitalized children in the course of puppet therapy. She states that injections are the most common play behaviour and that children frequently focus their anger on "needles". Linn also identifies loss of autonomy and separation as major concerns for hospitalized children.¹¹

Analysis of the children's play behaviour did demonstrate that they tend to act out specific procedures that have happened to them. This is in agreement with Petrillo and Plank who both cite case studies in which the children act out their perception of their own surgery and treatments.¹²,¹³

In summary this descriptive study did gather further information about the nature and content of post-surgical play behaviour in the pre-school child. The data collected did support the questions asked. The information collected on post-surgical play behaviour is in agreement with other writers on the subject.

IMPLICATIONS FOR NURSING PRACTICE

Play therapy would seem to be a useful tool for nursing practice. Observation of children's play behaviour during play therapy provides insight into each child's fears and concerns. As children tend to act out their perception of what has happened to them in hospital a child's


¹³Emma N. Plank, Working with Children in Hospital, (The Press of Case Western Reserve University, 1971) p. 31.
misconception of a situation may be identified. In this way play therapy may serve as a diagnostic tool to indicate what information or support a child may need to help him deal with his hospitalization. Play therapy facilitates the communication process between the nurse and the child. A pre-school child can express feelings in play that he cannot express in words. Again this aspect of play therapy assists the nurse in gaining insight into the child's needs.

In the course of play therapy a child can move through the stages of the therapeutic process described by Moustakas.\(^{14}\) That is, as play therapy continues, a child may begin to demonstrate tender concern for the dolls rather than aggression and anger. This behaviour may indicate that a child is able to come to terms with all the unpleasant and painful procedures he has had to bear in the course of his hospitalization. In this way play therapy may serve as a therapeutic nursing intervention.

Play has been used as a teaching tool in the preparation of children for surgery. However, in the course of play therapy further teaching can take place. Previous surgery and procedures can be clarified and procedures which have yet to take place can be acted through. By helping each child understand what is happening to him, play therapy may also help reduce a child's anxiety. Also, when a child has some understanding of the "why" and "how" of a procedure he is much more likely to be co-operative.

During the course of play therapy the nurse responds to the child's feelings and accepts him as he is. Parents may then perceive

\(^{14}\)Moustakas, op. cit., p. 8.
Play therapy as one way in which the nurse demonstrates concern for their child's welfare. This may help parents establish a relationship of trust with the nursing staff.

Play therapy would appear to be a useful technique for nursing students to learn. It could help them form a friendly relationship with their young patients. As nursing students take part in play therapy they may sharpen their skills in observing children's behaviour. From their observations the students may establish a data base from which to base future nursing interventions.

In conclusion play therapy is a useful technique for nursing practice and for nursing education. It has potential as a diagnostic and communication tool and as a therapeutic nursing intervention. Play therapy may indirectly help parents establish a trusting relationship with nursing staff. Nursing students may find play therapy a useful aid to help them gain more information about the children under their care.

INDICATIONS FOR FURTHER RESEARCH

From this descriptive study there is some indication that play therapy helps to reduce the stress of hospitalization for the preschool child. Further study is needed to investigate the incidence of upset behaviour in hospital and of post hospital upset in children who have play therapy compared to children who do not have play therapy. Although clinical observations suggest that play therapy reduces stress in the hospitalized child this hypothesis is yet to be tested.

This study did not demonstrate that boys express similar post-surgery play behaviour to girls. A further study with a sample
population including a number of boys would provide further information on the pattern and content of their play.

Finally, this study did not pursue the question of why some children may not want to take part in play therapy. It would be useful to know if an inability to act out hospital experiences in play is a reliable indication of extreme anxiety and stress in a child. Information from such a study may help nurses identify children who are emotionally at risk and who require special intervention to help them deal with their hospital experience.
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APPENDIX A

PLAY THERAPY EQUIPMENT

DOLLS

16" Raggedy Ann  Both with outdoor clothes and  
16" Raggedy Andy hospital gowns

18" "Rabbit" type stuffed toy with long arms and legs and dressed in overalls

4 "Barbie" and "Ken" type dolls 12" high
(The dolls were dressed to represent: a nurse, a doctor, a father, and a mother.)

REAL HOSPITAL EQUIPMENT

Stethoscope
Blood pressure cuff
I.V. bottle, tubing, needle and stand
Syringes, 3cc and 5cc
Needles with blunt ends
Rubber capped medicine bottles filled with water
Complete dressing set
Lotion bottles filled with water
Masks, caps, gloves
Oxygen mask
Foley suction catheter
Chest tube
Medicine cups
Tongue depressors
Alcohol swabs
Band-aids, dressings, bandages
PLAY HOSPITAL EQUIPMENT

Bed and bedding

Syringes

Blood pressure cuff

Stethoscopes

Selection of play instruments: hammers, forceps, scissors, scalpels, probes, head mirror, dental mirror

Thermometers

Receivers, trays, bottles

Xray machine

Nurse's cap

Nurse's watch
Dear ______________________

I am trying to develop better ways of helping children understand their hospital experience. I hope to gain information from the parents and children to aid in determining which methods will best help the child and his family cope with the hospital experience.

During the period ___________ is in hospital I would like to ask your permission to visit ___________ each day for thirty minutes. This time would be used to play with ___________. Activities such as reading stories, playing games and playing with toys and play hospital equipment will take place.

You have my assurance that any information that you give me will be kept totally confidential and anonymous. You will also have the right to withdraw from this study at any time. If you do so, any information you have given to me will be destroyed. I would also like to assure you that this study will not interfere with the effectiveness of medical and nursing care given to ______________________.

The decision to take part in the study is entirely yours.

Thank you very much for your help.

Yours sincerely,

Marjory Ralston, R.N., B.S.N.
APPENDIX C

CONSENT FORM

I have read and understand the enclosed letter explaining the proposed study to help children better understand their hospitalization.

I hereby give my permission for ________________ and myself to take part in this study.

Signed ________________

Relationship ________________
APPENDIX D

Interview with parents about the child's behaviour after hospital discharge.

The format of the interview was unstructured.

Topics Discussed

Does your child play every day?
  (a) What games does he play most often?
  (b) Does he play Doctors or Hospitals?
  (c) What aspects of his hospital experience is acted out in play?

What situations or events make the child afraid?
  (a) Being left alone?
  (b) Being away from parents?
  (c) Any new fears?

Changes in behaviour or continued behaviours such as:
  (a) temper tantrums
  (b) jealousy
  (c) tics or mannerisms
  (d) extreme shyness
  (e) disturbed sleep patterns, nightmares
  (f) changes in toilet habits, bed wetting
  (g) seeking parents' attention

Any changes in the child's behaviour that the parents may have noted.