

BODY IMAGE PERCEPTIONS OF SCHOOL AGE LEUKEMIC CHILDREN

---

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF SCIENCE

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

COLLEGE OF NURSING

BY

DELORES JO CHUPIK, R.N., B.S.N.

---

DENTON, TEXAS

AUGUST 1977

The Graduate School  
Texas Woman's University  
Denton, Texas

\_\_\_\_\_ 19\_\_\_\_

We hereby recommend that the \_\_\_\_\_ thesis \_\_\_\_\_ prepared under  
our supervision by Delores Chupik  
entitled "Body Image Perceptions of School-Age Leukemic  
Children"

\_\_\_\_\_ be accepted as fulfilling this part of the requirements for the Degree of  
Master of Science

Committee:

Mona M. Counts  
Chairman  
Robert S. Myers  
Barbara Bindard

Accepted:

Phyllis Bridges  
Dean of The Graduate School

DEDICATION

To Stacie Tolbert and  
Michael Heger

## ACKNOWLEDGEMENTS

Many individuals were involved in helping make this study possible. The author gratefully acknowledges their assistance and guidance. Thanks goes to the personnel at the teaching hospital and the personnel in the public school system who gave of their time and assistance.

A special thanks is extended to my committee members:

Mona Counts, R.N., Ph.D., Chairman  
Robert E. Myers, M.D.  
Barbara Giordano, R.N., M.S.

who gave me their time, assistance, support, and encouragement throughout the duration of this study.

My warmest and sincerest appreciation goes to Juanita Malina, for her support and excellent work.

Delores Chupik

## TABLE OF CONTENTS

Dedication. . . . .	iii
Acknowledgements. . . . .	iv
Table of Contents . . . . .	v
List of Tables. . . . .	vii

### CHAPTER

I	Introduction . . . . .	1
	Statement of the Problem . . . . .	4
	Statement of the Purposes. . . . .	4
	Background and Significance. . . . .	4
	Definition of Terms. . . . .	9
	Limitations . . . . .	10
	Delimitations. . . . .	10
	Assumption . . . . .	11
	Summary. . . . .	11
II	REVIEW OF LITERATURE	
	Introduction . . . . .	13
	Body Image As A Concept. . . . .	14
	School Age Child's Perceptions of Body Image. . . . .	18
	Disturbances of Body Image . . . . .	21
	Perception . . . . .	24
	Projection . . . . .	25
	Drawing. . . . .	26
	Human Figure Drawings and "The Draw- A-Person Test" . . . . .	27
	Emotional Indicator Checklist. . . . .	33
III	PROCEDURE FOR COLLECTION AND TREATMENT OF DATA. . . . .	38
	Introduction . . . . .	38
	Type of Study . . . . .	38
	Setting. . . . .	39
	Population . . . . .	39
	Methodology . . . . .	40
	Tool . . . . .	42
	Data Collection. . . . .	46
	Treatment of Data. . . . .	48
	Emotional Indicator Checklist. . . . .	50
	Summary . . . . .	51

## TABLE OF CONTENTS (continued)

	Page
IV ANALYSIS OF DATA . . . . .	52
Introduction . . . . .	52
Data Collection . . . . .	53
Demographic Data . . . . .	55
Statistical Analysis . . . . .	59
Summary . . . . .	64
V SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS . . . . .	66
Summary . . . . .	66
Conclusions . . . . .	68
Implications . . . . .	69
Recommendations . . . . .	71
 BIBLIOGRAPHY. . . . .	 73
 APPENDICES	
A PERMISSION FOR THE STUDY . . . . .	85
B EMOTIONAL INDICATORS CHECKLIST . . . . .	94
C DRAWING CRITERIA ACCORDING TO AGE AND SEX . . . . .	97

## LIST OF TABLES

	Page
1. Age Group and Sex of Participants . . . . .	55
2. Participants by Groups and Ethnic Background . . . .	56
3. Participants by Group and Religious Preference. . . .	57
4. Ordinal Position in the Family by Groups. . . . .	58
5. Length of Time Elapsed Since Diagnosis of Leukemia (ALL) . . . . .	59
6. t-Test Comparison of Mean Scores for Group A and Group B . . . . .	60
7. t-Test Comparison of Length of Time Elapsed Since Diagnosis of Leukemia for Group A as Compared to Group B . . . . .	61
8. t-Test Correlation of Mean Scores With Age of Participants . . . . .	62
9. Comparison of Emotional Indicators By Age Group . .	63

## CHAPTER I

### INTRODUCTION

Due to modern advances in medicine, leukemia is being treated, and children's lives are being prolonged. The leukemic child undergoes various treatments and lives through exacerbations and remissions of the disease process. In comparison to his classmates and friends, he may realize that he is different. His physical appearance may be different than that of his peers. The child may become isolated in his own neighborhood and even within his own family as his disfigurement may bring attention to his body. The parent-child relationship may also undergo changes with the occurrence of the illness in the child. Parents may become overly protective and indulgent and may even deny the child's illness. The child may become increasingly dependent and more demanding of the parent's attention. This may cause severe emotional stresses to occur. Emotional stress may be evidenced in the way that a child perceives his own body which may be revealed in his drawings of the human figure.

One of the main concerns of art has always been the human body. Human beings are inclined to think that the



human body is familiar to them, and they have a clear picture of their own bodies and of the bodies of others. According to schools of psychology, the child, from the beginning, has a clear-cut knowledge and experience of his own body and sees the world in comparison to his own body (Bender 1952, p. 303). However, the writings of Paul Schilder (1942) and the experience of others with the graphic and plastic art of children clearly show that the child has to gain knowledge of his own body in the same way that he learns to know the world (Bender 1952, p. 303).

Through gradual constructive processes, children build up knowledge of their own bodies as the body image. In no way is this body image an experience which is stabilized (Bender 1952, p. 303). It undergoes continuous change. There would be no need for mirrors if human beings were able to have a clear conception of their bodies. By their continuous contact with the outer world, persons learn about their bodies. Human beings have to observe themselves as well as observing the bodies of others. The body image changes its shape continually, by the processes of building, of dissolving, of remodeling, and of reconstructing. One has to gain this knowledge by continuous effort as one is never sure of his body image (Bender 1952, p. 303).

The school age child is beginning to develop an increased sense of reality. However, he still has fantasies and fears. In middle childhood he has a well-established body image and a minimum understanding of his bodily function. Perceptions are also part of his internal makeup.

A child's self-perceptions are derived primarily from his parents' attitudes and reactions toward him until he goes to school. At this time, his teacher and his peer group remarks and reactions influence his self-perception. Because he is changing physically, emotionally, and socially, the child's body image and self-concept are reinforced or weakened through the school experience. At school, the child compares himself with and is compared by, his peers in motor, cognitive, language, and social skills. Negative perceptions from his peers toward him cause him to perceive himself as inferior.

As noted, various factors influence one's perception of the human body. Man has always been interested, it appears, in his own body. He always seems to want to know more about himself. However, very little is known regarding the child's concept of his body image (Anderson 1976, p. 259). The leukemic child, due to chemotherapy and other treatment modalities, undergoes many more body changes than the normal child (Anderson 1976, p. 259). For this reason, this study was done.

### Statement of the Problem

The problem explored in this study was: Does leukemia by type or length of illness influence school age children's body perceptions?

### Statement of the Purposes

The purposes of this study were:

1. To assess the leukemic child's perceptions of his body image
2. To assess the normal child's perceptions of his body image
3. To compare the leukemic child's perception of body image with the normal child's perception of body image
4. To correlate the length of illness with body image perceptions
5. To determine whether the type of leukemia affects the body image

### Background and Significance

Research which would describe and document the responses of ill individuals to their body changes could contribute much to the nursing literature. As previously stated, there is a lack of knowledge concerning the child's percep-

tions of the changes that occur in his body due to cancer therapy.

There is a need to know at what stages these changes become manifest, how long they persist, and how they affect the patient, his family, and his peers. Data derived from such research would be an invaluable asset for health care professionals in preparing patients to understand their illness and its treatment (Anderson 1976, p. 259).

Body image is described as a self-awareness, self-concept, body-ego, and body schemata with slightly different, but overlapping, connotations (Schonfeld 1963, p. 845).

A young child is just beginning to form this concept of a body image. This is true since the body image is a condensed representation of the individuals' current and past experiences of his own body, both real and fantasized. It includes the conscious as well as the unconscious aspects. Anything that makes him different from others influences his body image perception. The best example of this is alopecia due to chemotherapeutic drugs. He does not fully understand why he is bald, and, most of all, why he has to be sick.

As the child gets older he is increasingly able to respond to himself as he changes with his disease. The little girl may watch with bitterness and disgust as she sees herself slowly wither away in her mirror reflection over the months. The little boy may hate himself for those leukemic purpuric spots he sees (Easson 1970, p. 8).

"Schilder suggests various social factors influencing the body image concept including curiosity, expression of emotion,

social relations, and duty ethnics" (Ritchie 1973, p. 144). The development of body image, according to Schilder, is continuous, active, and affected by physiological, psychological, and sociological factors. These factors are classified according to Schonfeld (1973, p. 145) as follows:

- (1) The actual sensory experience of the individual in regard to his body through the integration from earliest infancy of multiple perceptions, particularly visual and tactile; the actual subjective perception of the body, both as to appearance and ability to function
- (2) The internalized psychological factors arising from the individual's personal and emotional experiences
- (3) The sociological factors, namely how his parents and society react to the individual and his interpretation of their reactions
- (4) Attitudes toward the body derived from the individual's experiences, perceptions, comparisons, and identifications with the bodies of other persons

As stated in the above (3), the family's perception is also important.

First, they may reflect the patient's perceptions, and second, they may be influencing the patient's perceptions. Inaccurate perceptions may harm the patient psychologically which, in turn, may affect his physical health. Inaccurate perceptions also make it difficult for the nurse to deal honestly with the patient and help him deal with his own problems (Miller 1974, 1468).

Sensations and perceptions . . . have to be collected and stored in the mental apparatus in the form of memory traces before the individual can act on experience and foresight, i.e., act in a manner adapted to reality conditions. Sensations arising

from the inner world have to be distinguished from perceptions aroused by external stimuli, i.e., reality has to be tested and separated from the products of fantasy before wish fulfillment by means of hallucinations is abandoned in favor of purposeful action (Freud 1965, p. 172).

"Denial interferes with accuracy in the perception of the outer world by excluding the unpleasurable" (Freud 1965, p. 104).

In every perception some sense modality is involved, and while there remain many problems of just how this receptor process operates, we are more concerned with the manner in which the internal or meaningful elements in perception come into play. The crucial fact is that there is a creative and elaborative process involved between the sensation itself and the discriminatory response or actual perceiving. Furthermore, in this whole operation, the place of what is learned in the social-cultural context is fundamental. As G.T.W. Patrick once aptly put it, 'We see things, not as they are, but as we are' (Young 1952, p. 99).

Perception, in short, includes traits, attitudes, values, and frames of reference. It is through perception that we come into contact with the outside environment.

Bergmann-Koenitzer demonstrated that during one stage in object representation the human form is emphasized. . . . The object representative stage, as it occurs in children and as we have been able to observe it, may be summarized in the following stages:

- (1) Form as produced by motor impulses.
- (2) Form as reproduced as seen or in imitation of other children.
- (3) Form which is projected from the body image or postural model of the body and its manifold sensory and conceptual experiences.

- (4) Form as an expression of fantasy, and of emotional and social problems (Bender 1952, p. 223).

When the child draws the human form, it is essentially a projection of his body image and its problems; it is a self portrait. It is not surprising, (as an example), that the schizophrenic child with his body-image problems, motility and perceptual disturbances, uncertainty as to his identity and his drive for action, finds ready expression for his problems in drawing the human form. The techniques that are used have a wide range even in the same child. The most primitive use of vertical movement with graduated variations may be the sole form used to draw a human figure, but it expresses just that whirling motility, impulse to actions, fluid ego boundary, and uncertain center of gravity which represents the schizophrenic child and his problems (Bender 1952, p. 89).

Leukemic children face the inevitability of their own death. Jackson (1968, p. 178) found that children reveal their fear of death through painting and play as: (1) the child's level of understanding can shift; (2) altered body image, negative comments by others, and immobility may contribute to the child's fear of death; (3) in the latency period, bedrest may reactivate the struggle between dependency and independence; (4) projection techniques, play observations, and play interviews determine the child's fears and needs.

It has been stated that the body image and perceptions of the child appear to be influenced by many factors and do continuously change. Whether the diagnosis of a terminal illness, the treatments, or the nearness of

approaching death affect the body image and the perceptions is unknown. It is for these reasons that the body image and perceptions of school age children were studied.

### Definition of Terms

The following are definitions for the purpose of this study:

1. Perception - immediate or intuitive cognition or judgment and an interpretation of a sensation in terms of association based upon past experiences, such as learnings or memories
2. Body Image - the way our body appears to ourselves
3. Leukemia - a disorder of the white blood cells, also called leukocytes. There is an uncontrolled proliferation of leukocytes and their precursors
  - a. Acute lymphocytic (Lymphoblastic) leukemia - involves the lymphocytes which are white blood cells formed in lymphatic tissue
  - b. Acute myelocytic (Myelogenous, Granulocytic) leukemia - involves the granulocytes which are white blood cells formed in the bone marrow
  - c. Chronic myelogenous leukemia - involves the myelocytes which are large cells in the red bone marrow, from which leukocytes are derived



### Limitations

Variables that may have influenced the results which were not controlled:

1. Collection of data from one geographical area
2. Participant's stage of the disease process
3. Previous psychological counseling or intervention
4. Family's perceptions of the child
5. Psychosocial and economical status of the family
6. Relatively small sample size

### Delimitations

Variables that could have influenced the results but were controlled:

1. All participants were able to see and draw with a pencil
2. Only participants between the ages of 5 and 9 were asked to participate
3. No participant admitted to any other chronic illness
4. All control participants were matched to experimental group participants by:

- a. Age
- b. Sex
- c. Ethnic origin
- d. Religion
- e. Ordinal position in the family

#### Assumption

All participants drew themselves as they perceived their body.

#### Summary

This study was undertaken to reveal how the leukemic child perceives his body in relation to his length of illness and his type of leukemia. The purposes of this research study were to assess the leukemic child's body image along with the body image of a normal child, to determine if there was a consistent pattern in their body image perceptions, to determine whether the type of leukemia affects the body image, and to correlate the length of illness with the body image perceptions.

At the present time no nursing research has been conducted to identify the body image perceptions of leukemic children. Knowledge of such perceptions may enable the nurse and other health care professionals to assist patients

in understanding their illness and its treatment.

The following chapter, Chapter II, is an extensive review of body image perceptions of school age children. Chapter III presents the methodology undertaken for this study. After the analysis of data, Chapter IV, the summary, conclusions, implications, and recommendations are presented for this study in Chapter V.

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

"It is well known that illness alters body image to some degree" (Juenker 1971, p. 135). The child with leukemia often undergoes physically disfiguring treatment which causes many bodily changes. How does radiotherapy, chemotherapy, and/or immunotherapy and possibly surgery, in some cases, affect a school age child's body image? The purpose of this review of literature was to examine body image perceptions. This review of body image as it relates to the school age child begins with the concept of body image. Next, emphasis is on the school age child's perceptions of body image. Disturbance of body image is discussed, followed by perception and projection of body image. Human figure drawings, specifically the "Draw-A-Person Test," and the "Emotional Indicator Checklist" are the closing topics discussed in this chapter.

Body Image As A Concept

Schilder has defined body image as "the image of our body which we form in our mind--the way in which our body appears to ourselves" (Schonfeld 1963, p. 845). Multiple factors that one's concept of body image evolves from are: biological configuration, physiological function, developmental maturation, and social reinforcement. Body image is a unified pattern for organizing sensory input. Previous emotional experiences influence the individual's observations and interpretations because it is the personality which experiences the perceptions and creates the concepts which make up the body image. Therefore, body image is a tridimensional unity (inter-personal, environmental, and temporal). This dynamic process of establishing and maintaining and defending the individual's private world may be viewed as the personality (Frank 1948, p. 15).

Personality components that must be evaluated are the individual's concept of his own importance, his aspirations for self-enhancement, the sources from which he desires status; the degree of independence characterizing his relationship with others, his method of assimilating new values, his concepts of his own capacity for doing things for himself, his self-esteem and feelings of security, his ability to withstand frustration, his ability to judge himself realistically, his need for pleasurable and immediate gratification, his sense of moral obligation and responsibility, and the type of defenses he uses when his security or self-esteem are threatened (Schonfeld 1963, p. 848).

The demands, needs, and the capacities of the child determine the sequence of these components.

The body image concept includes an individual's personal or psychological investment in his body and its parts and a sociological meaning for both the individual and society.

The second primary source of information on body image has come from psychoanalysis. The observations of psychiatrists and psychoanalysts are based on studies of precepts, thoughts, and feelings toward the body, as well as personality reactions to disruptions of the body-image (Kolb 1959, p. 751).

Wilhelm Reich (1949) who assigned importance to body-image ideas throughout his work, has assiduously noted a complex interaction between the individual's personality conflicts, the individual's expressions of these conflicts in patterns of muscle tonus, and the repercussions of these tonus patterns upon the individual's way of experiencing himself and others. He has expressed the view that certain kinds of conflicts result in the individual's 'armoring' himself and trying to model his body after something with hard rigid surfaces. In his published work he cites many clinical examples of patients whom he describes as manifesting such armoring phenomena. More recently, in the extreme and rather disorganized extensions of his theories, he has built a whole system of psychotherapy which has as one of its major aims the loosening and dissolving of 'body armor' (Fisher 1968, p. 49).

In the child, these armoring phenomena are just beginning to develop.

The child's self concept includes two categories of self-image: (1) physical self-images--sensation and mobility; general appearance; sexual appropriateness; observations of himself and others observations of him, and (2) psychological self-images--thoughts, feelings, and emotions; attitudes toward his body and his interest in it; and qualities and abilities.

The development of the self-concept can develop haphazardly and contain many misconceptions. The parental attitudes and experiences the child has with his parents can cause him to be conceived as good or bad, pleasing or repulsive, clean or dirty, and loved or disliked.

Derogatory attitudes with overcompensatory mechanisms frequently develop to obscure either actual or fantasized body defects when the child feels, or is made to feel, that his body fails to meet the expectations of those about him. Where families tend to exploit the significance of body functioning and appearance, over-evaluation and reliance upon security through bodily beauty or activity inevitably follow (Kolb 1959, p. 753).

Even as the child grows older and development and changes occur, his self-concepts are likely to be colored by mirror images formed earlier.

To achieve realistic self-concept, the child must be able to be psychologically independent of those on whom he has depended for security; he must be able to think of himself as an individual, free from the influence of the attitudes of others. If his concept of self is unrealistically favorable, however,

he 'sets up defenses to preserve his present idea of himself. He rationalizes. He resists the impact of thoughts that would make it necessary for him to re-examine his self-concept' (Hurlock 1964, p. 526).

In addition to knowledge about his own body, the growing child perceives the bodies of others, compares himself to them and identifies with them. He learns to have certain attitudes toward his body and body functions. Such attitudes and affects generally are related to the individual's sex and are acquired through the process of socialization. Parental attitudes will strongly influence what the child perceives as 'good, clean, loved, and pleasing' about his body and body parts, and what he views as 'bad, dirty, disliked, or repulsive.' During the developmental process a value is attached to the body as a whole. However, the psychic investment in some parts of the body appears to be greater than in others, and this differential evaluation appears to be related to the meaning which these particular parts have in the life of the individual (Luckman 1974, pp. 82-83).

The body image concept is based on present and past perceptions of one's own body. The body image concept does not remain fixed and stable. Body image is constantly undergoing change even though it apparently follows an orderly maturational process. As the experiences change, body image is undergoing reorganization and elaboration. The age of the individual also has an effect on the body image perceptions.



### School Age Child's Perceptions of Body Image

The concept of body image begins in infancy and continues throughout the individual's lifetime. In the infant touch and pain contribute to his "feeling of his body." He begins with the use of both hands and arms. The next stage is the mirror image. The baby may shriek when he first views himself in a mirror. As the child grows older, language becomes part of his body image. The toddler learns to control his body functions. The preschooler discovers sexual differences. It is during this age that the body image develops. In this age period body image is basic to identity formation. His body image is changing as he develops mental pictures which adjust in response to life experiences. The manner in which they are cared for physically also influence the preschooler's mental self-image. Play constructions are also an aspect of body image.

School age children, unlike toddlers, are free to explore, to question, and to experiment on their own terms if adults have provided safe means for them to accomplish their goals. Identifying characteristics are noted in each year's development.

The six-year-old child is involved in the discovering of his self and his world. He is characterized as egocentric, outgoing, active, charming, opinionated, and boisterous.

Quiet and reflective describe the seven-year-old. With a growing self-awareness, he is interested in consolidating experiences into a meaningful whole. A sensitivity of their actions and actions of others toward them is beginning to develop. There is a reluctance to expose himself to failure or to self-effacing situations. He does not like to be touched or touch others. The seven-year-old is characteristically shy or ashamed of his body and of the bodily changes that are occurring.

The eight-year-old is expansive, active, gregarious, and eager to learn "why and wherefore" about the world about him. He is curious about everything and everyone, particularly in the adult world.

An increased awareness of sexuality and of appropriate sex-role behavior occurs in the nine-year-old. Nine-year-olds are more inner- and self-directed. A greater refinement in behavior is developed and conspicuous strides toward maturity occur. Group activities and activities that develop individual abilities interest him. He is able to recognize his own faults and weaknesses and is able to accept the blame for his actions.

It should be noted that "attitudes of certain cultures toward bodily beauty, size, and other features also become part of the child's composite body image" (Bender 1963, p. 434). Clothing, cosmetics, hats, masks, etc., can

influence the attitudes about the body as they become part of the body structure and take on symbolic meanings in some instances. The amount of interest that a child has in regard to his body will vary for each individual.

Because punishment for a child often consists of pain through spanking, or of restrictions, which may resemble bed rest, it is easy for a child to interpret an illness that includes pain and activity restrictions as punishment for something he has done or thought (Pillitteri 1977, p. 340).

All health personnel should take this concept into consideration when caring for the ill child.

It is important that the nurse knows how the body image concept evolves in childhood and how important such a concept is to a child to understand the impact of change in body image. "Illness, surgery, and accidents can distort the body image and make necessary its reorganization" (Luckmann 1974, p. 82). "Leukemic children between five and nine greatest fears were those of procedures of mutilization" (Bright 1967, p. 41).

Nonsurgical treatment procedures can cause changes in body image. Not having the time to internalize the changes in his body and the frequent attention given to them by others causes a painful distortion of body image to the child. Treatments are viewed as purposely intrusive acts by the child. Such treatments are intubation, enemas, rectal temperatures, spinal taps, and forcible administration of medicine. Side effects of medications can cause changes in secondary sex characteristics or the development of facial changes such as moon face; or changes may occur in skin color as a result of radiation (Luckmann 1974, p. 84).

It is not uncommon for a child to be referred to as "fatty" due to weight gain and Cushnoid effects of steroids. School age children are especially prone to be cruel to each other and make jokes.

One study found:

Loss of hair due to radiation and chemotherapy was a much more traumatic aspect of treatment to both the child and the parent than was initially realized by the staff. During periods of baldness, the child wanted to stay home and socialize less, even with close friends. It was particularly distressing when playmates at school would pull off a wig to tease the patient. Embarrassment was much less if the child made no attempt to hide that he was wearing a wig (Heffron 1973, p. 833).

It should be noted that the possession of a wig is comforting to the bald child and also gives him security (Barckley 1975, p. 25) as hair loss is a very dramatic side effect to the child (Steele 1971, p. 575).

Other studies have been conducted to examine the child's body image due to various body changes. Some of these will be discussed in Chapter III. Following is a discussion of body image disturbances.

### Disturbances of Body Image

A 16th Century surgeon, Ambroise Pare, wrote the first account of body image disturbance (Kolb 1959, p. 749). Observations of the affected individual's failure to perceive

his body and its parts and adapt to them as they actually exist is the concept from which body image disturbances are derived.

At the present time, body-image disturbances may be classified as consequent to the following categories of illness:

- (1) disorders following neurologic diseases and affecting any part of the sensory or motor system connected with movement and posture, whether involving the peripheral or the central nervous system;
- (2) disorders occurring with changes in the body structure as an expression of acquired or induced toxic or metabolic disorder;
- (3) disorders consequent to progressive deformities, occurring either late or early in life and caused by other somatic diseases;
- (4) disorders after acute dismemberment; and
- (5) disorders of personality development, including the psychoses, psychoneuroses, and psychopathic states (Kolb 1959, p. 750).

Bodily defects which may occur should not produce gross body image changes or psychological disturbances in most instances if there is a realistic appraisal and acceptance of the body by the child and his parents. Other assets can be strengthened and developed if there is a healthy family attitude.

Observations of family life indicate that the deformed child does not receive the same treatment as the other children of the family. The afflicted child is usually treated either with greater consideration or with less approval and warmth, and sometimes even with outright hostility (Kolb 1959, p. 756).

Some investigators have indicated that children who develop body image disturbances following an injury or other deformity are those whose personality and environment contributed to a distorted or to an unrealistically 'ideal' body image prior to the onset of the condition. Denial or minimizing of a disfigurement or deformity either by the child or his parents can result in a body image unrelated to actual body structure (Bender 1963, p. 434).

If families and society reject these persons, unhealthy attitudes and behavior will develop in them in relation to their bodies. With children, this can lead to avoidance of everyone, especially other children who are apt to ridicule and jeer them.

Body image disturbances undoubtedly occur in every illness or body abnormality. The severity and prognosis of the psychological disturbance in physical illness depend much on the attitudes and management of the child's problems by persons caring for him . . . (Bender 1963, p. 438).

Attitudes can be elicited through perceptions which is the next topic discussed.

Perception

Perception is defined as an immediate or intuitive cognition or judgment and an interpretation of a sensation in terms of association based upon past experiences, such as learnings or memories (Palmer 1965, p. 100).

Perceptions are structured not only with respect to the limiting stimulus conditions, but also with regard to the possibilities of reward, need of fulfillment, attitudinal orientation, potential anxiety, symbolic value, and release from tension, to mention just a few (Young 1952, p. 101).

Perceptions bring us into contact with the outside environment and enable us to perceive certain internal bodily changes.

One function of perception is that of providing the cues in the drive-cue-response-reward sequence. That is, while most behavior is set in motion by some motive, the cue-response connection. . . depends on the discrimination which determines perception. Since previous learning builds up the foundation for such discrimination, the analysis of perception requires that we take the persistence and inner elaboration of learning into account. . . . This inner phase involves memory effects, ideas, attitudes, traits, and value systems. In short, it has both cognitive or knowing and attitudinal or reaction-tendency features (Young 1952, p. 98).

A trend toward structure and order marks the development of perception. Gradually moving from perceptions of mass-variety, doubtless often blurred and chaotic, the infant and child gradually move to perceptions which are more differentiated and, in time, integrated.

A similar shift from indistinctiveness and lack of definition to discrimination, generalization, and integration takes place with adults when presented with stimuli of undefined or unordered sort. In such a situation the individual does not know what he sees or hears. There occurs a kind of compromise between the external objective stimuli and the subjective elements; that is, between what is present by way of stimulation and what the organism is prepared or attempting to perceive. Ambiguous situations tend, in time, to become organized in line with some motive, past experience, or element in the situation (Young 1952, p. 101).

What is perceived can be demonstrated through the use of projection.

### Projection

Machover states that "the drawing of a person in involving a projection of the body image, provides a natural vehicle for the expression of one's body needs and conflicts (Machover 1949, p. 5).

It has been observed that structural and formal aspects of a drawing such as size, line, and placement, are less subject to variability than content, such as body details, clothing, and accessories (Machover 1949, p. 6).

Projective testing has been found to come nearer to sampling the whole personality especially if a rich and informative set of responses are obtained from the subject. Abnormality and normality cannot be differentiated by any projective method unless there is a reference to time, place, and circumstances which would influence the judgements that the test derives.



In a significant proportion of cases, drawings do permit accurate judgements covering the subject's emotional and psychosexual maturity, his anxiety, guilt, aggression, and a host of other traits (Machover 1949, p. 23).

Projective tests may be the most important indices of personality integration in cases (a) where significant facets of health or disorder are amenable to projective measurement, and (b) where a wide and revealing set of projective responses are obtainable. Fulfillment of both of these conditions is important and should not be taken for granted (Thorne 1955, pp. 193-194).

To fulfill these conditions, the drawings of the leukemic children and normal children as they viewed themselves at the time of drawing were obtained and utilized as a projective measurement.

### Drawing

To the preschooler, the basic identity formation is learning about his body--where it begins and ends, what it looks like, and what it can do. The way he talks, draws pictures, and plays reflects the concept of his body.

The 3-year-old draws a man consisting of one circle, sometimes with an appendage, a crude representation of the face, and no differentiation of parts. The 4-year-old draws a man with a circle for a face and head, facial features of two eyes and perhaps a mouth, two appendages, and occasionally wisps of hair or feet. Often the 4-year-old has not really formulated a mental representation of the lower parts of his body. The 5-year-old draws an unmistakable person. There is a circle face with a nose, mouth, eyes, and hair; there is a body with arms and

legs. Articles of clothing, fingers, and feet may be added. The width of the person is usually about one-half the length (Murray 1975, p. 113). . . . The trunk appears at age five. The 6-year-old draws a man with hands, neck, clothing, and six identifiable parts. He can also distinguish between attractive and ugly pictures of faces. The seven-year-old tells parts missing from pictures of incomplete men. An increase in awareness of sexual differences is noted by the eight-year-old. Questions are asked concerning the mother's body and marriage and reproduction. The 9-year-old has more interest in his body and its functions. He becomes self-conscious about exposing his body to anyone. If earlier questions were answered satisfactorily, he asks fewer questions about sexual matters (Murray 1975, p. 149).

A projection of body image, figure drawings, are believed to be an expression of the child's knowledge of his body. Projection of attitudes toward a significant person or denial of existing deformities or preoccupations or anxieties concerning specific body parts may be revealed in figure drawings. As the child develops, his drawing of the human figure increases in complexity and accuracy and is an expression of his mental picture of his own body at the particular time he is drawing.

#### Human Figure Drawings and "The Draw-A-Person Test"

The advantages of drawing are:

- (1) the ease and speed with which they are done,
- (2) the provision of a record which may be kept for comparison,
- (3) the willingness of most children to draw, and
- (4) the easy estimation of drawing age (Bakwin and Morris 1966, p. 259)

Drawings, although their validity as indicators of conflict and defensiveness has not gone unchallenged have also been considered to be a more familiar, less threatening and better developed skill than verbal expression in children (Centers 1963, p. 159).

Since there is no questioning, the child "says" what he feels on paper. To express himself in drawing, a child does not need to be an artist. He draws as he conceives himself as influenced by his feelings, his relation to the people about him, his reaction to situations, and parental attitudes toward him. His body concept varies according to his developmental level and is constantly modified by experience (Bakwin and Morris 1966, p. 258).

The 'Draw-A-Person Test' is a projective technique. The essential feature of a projective technique is that it evokes from the subject what is, in various ways, expressive of his private world and personality process (Frank 1948, p. 47).

Many projective techniques involve projection of body-image or self-image. Its purest form is the figure drawing.

Bender relates that when a child uses creative media he draws what he sees and know about the object. . . (Nahigian 1973, p. 138).

The subject may see himself as weak and feminine and draw a figure which shows this very clearly. He may separate the head from the body by drawing an unusually long neck, indicating his fear of his instinctual impulses. He may draw a very small or a very large figure; the body line may be thin, weak, and wavering, or sharp, strong, and assertive. Content is of significance. . . (Bellak 1954, p. 31).

Many authors and researchers have utilized human figure drawings and the DAPT in their studies. The following speaks about some of these studies.

Utilizing Machover's Draw-A-Person Test with 50 crippled and 50 non-crippled children, Wysocki and Whitney (1965, p. 499) confirmed the following assumptions in the personality assessment of crippled children. They are:

(1) crippled children tend to express more aggression in their drawings than non-crippled children; (2) among the crippled children, the intensity of aggression differs according to different areas of insult; and (3) among the crippled children, the area of insult is indicated in some way.

Lebovits and Lakin (1957, p. 522) in their study of paralytic poliomyelitis found no differences in body image per se. However, certain body parts tended to arouse greater concern with the polio patient. These were the chest, abdomen, spinal cord, and hands.

The meaning of human figure drawings was also studied by Kamarro with 45 institutionalized schizophrenic women as subjects. The findings were "interpreted as supporting the hypothesis that human figure drawings do represent the drawer's perception of himself" (Kamarro 1969, p. 430).

Another study using the DAPT was done by Jernigan (1970, pp. 503-506), "Judging Whether a Patient is White or Black by His Draw-A-Person Test" which reported a little bit greater than chance for accuracy.

However, successful identification was not remarkable and the results are comparable to those reported by Apfeldorf and Smith (1966) . . . . The adult sample used in this study did not project self-concept (or racial concepts) in sufficient strength to add measurably to research evidence in support of the body image hypothesis. It may be that adult psychiatric patients do not project racial attitudes in the DAP in sufficient quantity to be readily identifiable because they have more pressing problems to express (Jernigan 1970, p. 505).

Other authors have also utilized the DAPT in their studies. Swensen and Newton (1955, pp. 417-419) studied 163 grade school students from the first to eighth grade and 22 college students and found that:

. . . girls tend to differentiate between the sexes significantly better than boys. About age 13, the boys' sexual differentiation catches up with that of girls, and beyond age 13 there is apparently no significant difference between male and females in sexual differentiation on the DAPT.

Kotkov and Goodman have followed their study on "The Draw-A-Person Tests of Obese Women" (1953) with "Prediction of Trait Ranks from Draw-A-Person Measurements of Obese and Non-Obese Women" (1953) only to conclude that

. . . on the basis of their experimental design, they were unable to equate a specific personality trait with a specific Draw-A-Person measure, e.g., the degree of overcompensatory activity with the degree of extension (1953, p. 366).

Handler and McIntosh reported that projective testing was generally more efficient than the other methods examined in their study of "Predicting Aggression and Withdrawal in Children with the Draw-A-Person and Bender-Gestalt" (1971, pp. 331-335).

"Upper Left Hand Placement of Human Figure Drawings as an Indicator of Anxiety" by Johnson (1971, pp. 336-337) reported that upper left hand placement is a valid indicator for anxiety in human figure drawings of college students.

In Centers' study of "A Comparison of the Body Image of Amputee and Non-Amputee Children as Revealed in Figure Drawings" (1963, p. 160),

. . . only for the self-portrait were the judges able to distinguish figure drawings of amputee children from those of non-amputee children successfully.

Handicapped persons omit or emphasize the affected part of the body more often than do normal people . . . (Bakwin and Morris 1966, p. 258).

"Human Figure Drawings by Children with Duchenne's Muscular Dystrophy" by Pope-Grattan, Burnett, and Wolfe (1976, p. 168) utilized HFD's according to eleven emotional indicators. Four personality traits were identified when the drawings were used as a projective tool. They were

physical inadequacy, immaturity, body anxiety, and insecurity. Further study was also recommended.

Craddick's "The Self-Image in the Draw-A-Person Test and Self-Portrait Drawings" supports Machover's body image hypothesis. It

. . . was investigated by comparing the first figure drawn on the DAP with a later drawing of a self-portrait, assuming that the self-portrait was a representation of the body image as perceived by the drawer. Both drawings were significantly related in terms of size, same-sex as S on the DAP, and placement on the page (Craddick 1963, p. 290).

The DAPT has also been utilized by other authors in their studies: "Body-Concept Disturbances of Patients with Hemiplegia" (Shontz 1956, pp. 293-295); "Human Figure Drawings by Younger and Older Adults" (Lorge, Tuckman, and Dunn 1958, pp. 54-56); "Self-Perception and the Draw-A-Person Test" (Ludwig 1969, pp. 257-261) and many more.

. . . the distribution of body types drawn was closely similar to the distribution of actual body types. In the common meaning of projections as applied to clinical tests, figure drawings are thus seen to reflect certain concrete aspects of the person drawing the figure. The psychological implications of the parallelism between body type and body type drawn are not entirely clear. The parallelism may indicate that individuals when given free rein to draw a figure, draw one they are most familiar with, their own. The findings also tend to support the hypothesis that the figure drawing represents, at least in part, a projection of the body image (Berman and Laffal 1953, p. 370).

These studies can be best summarized as Swensen (1957, p. 463) summarized his study, "Empirical Evaluations of Human Figure Drawings."

- (1) Machover's hypotheses concerning the DAP has seldom been supported by the research reported in the literature in the last eight years (1949-1957)
- (2) It is suggested that the opinion of clinicians is that the DAP is of value as a clinical instrument despite the lack of experimental evidence to support this judgment, is due to the fact that the DAP, in a few cases which impress the individual clinician, does provide an indication of the nature of the individual client's problems.
- (3) Some evidence supports the use of the DAP as a rough screening device, and as a gross indicator of 'level of adjustment.'
- (4) Approaches to future research are suggested.

As number four suggests, human figure drawings of the individual were obtained for this study. These drawings were rated according to the Emotional Indicator Checklist which is described below.

#### Emotional Indicator Checklist

Thirty items were derived from the literature, research, and clinical experience of Elizabeth M. Koppitz.

The reliability for scoring these items had been established when another psychologist (Dr. Mary T. Wilson) and the writer (Koppitz) scored the HFDs of 25 children independently of each other and found a 95% agreement on all items scored. Chi-squares were computed comparing the number of Ss in Group A and B who showed each given drawing items on their Human Figure Drawings. In addition, a comparison was made of the number of Ss in the two groups who showed one or more indicators on their drawing protocols (Koppitz 1966, pp. 313-334).



Chi-square values for four items (poor integration; shading of body and/or limbs; slanting figure; and tiny figure) were significant at the .01 level; four items (big figure; short arms; cut off hand; and omission of neck) were significant at the .05 level; and four items (shading of hands and/or neck, asymmetry of limbs; transparencies; and big hands) were significant at the .10 level. Some of the emotional indicators occurred so rarely on the HFDs that statistical analysis was not possible or meaningful (Koppitz 1966, p. 314).

On the HFD the absence of emotional indicators seemed to reveal the absence of serious emotional problems in the child. One indicator, teeth, appeared to be inconclusive and not necessarily a sign of psychopathology or emotional disturbances. This study on the HFD of five to twelve year old children suggested that two or more indicators were a sign of emotional problems and unsatisfactory interpersonal relationships.

The following is an item analysis according to Koppitz (1968) unless otherwise indicated.

1. Poor integration - overtly aggressive children;  
brain injured children
2. Shading - manifest of anxiety
3. Shading of entire face - disturbed and poor self-concept
4. Shading of body and limbs - up to 7 F and 8 M is common; anxiety
5. Shading hands and/or neck over 7 and 8 - anxiety

6. Gross asymmetry of limbs - poor coordination and impulsiveness
7. Figure slanting by 15° or more - general instability and lack of balance
8. \*Tiny figure - extreme insecurity, withdrawal and degression
9. \*Big figure 9" or more in height - over age 8, aggressive, expansiveness, immaturity and poor inner control
10. Transparencies - questionable, common (Urban 1963, p. 15)
11. Tiny head - intellectual inadequacy characterized by being large (Machover, Urban)
12. Crossed eyes - rebellion and anger or out of focus
13. Teeth - sign of aggressiveness, oral aggression, biting sarcasm, a sardonic view of life, superciliousness or other weaknesses which must be compensated (Machover)
14. \*\*Short arms - tendency to withdraw
15. \*\*long arms - reach out to others
16. Arms clinging to side of body - questionable indicator
17. Big hands - aggressive
18. Hands cut off - inadequacy or guilt over failure to act correctly (guilt feelings for stealing)

19. Legs pressed together - tenseness; rigid attempt to control or sexual impulse
20. Genitals - serious psychopathology
21. Monsters or grotesque figures - intense inadequacy and very poor self-concept. Perceives self as being different
22. Omission of eyes - socially isolated
23. Omission of nose - withdrawal anxiety or masturbation guilt
24. Omission of mouth - anxiety, insecurity and withdrawal, refusal to communicate; increased anxiety or fear, anxiety, perfectionism and depression
25. Omission of the body - developmental lag or emotional anxiety
26. Omission of both arms - anxiety and guilt over socially unacceptable behavior
27. Omission of both legs - conflict in this area; intense anxiety and insecurity
28. Omission of feet - over 7 F, over 9 M; insecurity helplessness

\* The worship of size is at a fever pitch in Western society; a young child may absorb this worshipping attitude and literally apply it to his own body before he is able to make sensible discriminations between his body and what goes on 'out there.' The equation that children are likely to make between size and importance has been illustrated in studies showing that the greater the money value assigned to coin shaped forms in a laboratory setting the larger they are estimated to be in size. If something is worth a lot it has to be big (Fisher 1973, p. 118).

\*\* One investigator found that

. . . the arm was judged to be longer when engaged in a purposeful act. This suggests that you will magnify

the size of body parts that you consider to be especially important or useful to you (Fisher 1973, p. 114).

In conclusion,

. . . this writer can only underscore what others have emphasized again and again: It is not possible to make a meaningful diagnosis or evaluation of a child's behavior or difficulties on the basis of any single sign on an HFD. The total drawing and the combination of various signs and indicators should always be considered and should then be analyzed on the basis of the child's age, maturation, emotional status, social, and cultural background and should then be evaluated together with other available test data (Koppitz 1968, p. 55).

The next chapter, Chapter III, presents the methodology of this study. A discussion of the DAPT and the Emotional Indicator Checklist is also included.

### CHAPTER III

#### PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

##### Introduction

The research design utilized to study body image perceptions of school age leukemic children is discussed in this chapter. The first section describes the setting and the population studied. A description of the tool, "The Draw-A-Person Test" (DAPT), is included with a discussion of the DAPT as it is related to this study. This is followed by methods of data collection and the treatment of the data. Concluding the chapter is a discussion of the "Emotional Indicator Checklist."

##### Type of Study

The most complex and active research methodology is the descriptive survey method (Leedy 1974, p. 109). Only one investigator participated in the research as this was a single-blind descriptive survey. A delimited population and a convenience method of sampling was chosen. Anonymity was guaranteed through the use of random numbering. Data were then collected and analyzed according to the methodology proposed.

### Setting

This study compared leukemic children with normal school age children. Therefore, there were two settings. All leukemic children were clinic patients at a teaching hospital located in a major metropolitan city. This hospital has approximately 300 beds and is devoted solely to the patient having neoplastic disease. It is also a major center for basic research and education conducted primarily to improve patient care. The leukemic children were then matched with a control group who were elementary school students in a public school system in Texas.

### Population

The population consisted of twenty children (Group A), both male and female, who were presently diagnosed as having Acute Lymphoblastic Leukemia and currently under medical treatment. The control group (Group B) consisted of twenty children, also male and female, matched to Group A according to age, sex, ethnic origin, religion, and ordinal position in the family. No child had an obvious physical deformity and all of them were able to see and draw. According to the teachers of the control group participants (Group B), no one exhibited a learning disability.

### Methodology

The methodology utilized in this study is outlined as follows:

- I. Permission
  - A. Texas Woman's University
  - B. Human Rights Committee
  - C. Teaching Hospital
  - D. Public School System
- II. Sample
  - A. Group A
    - 1. Selection
      - a. Leukemic children currently under medical treatment coming to the clinic for scheduled appointments
      - b. Five to nine years old
      - c. Able to see and draw
      - d. Permission from legal guardian
    - 2. Procedure
      - a. Participant given coded DAPT with #2 1/2 pencil with an eraser
      - b. Verbal instructions given
      - c. Completed drawing returned to investigator
      - d. Participant thanked for their cooperation

B. Group B

1. Selection

a. Matched to Group A on the following criteria

- (1) Age
- (2) Sex
- (3) Ethnic Origin
- (4) Religion
- (5) Ordinal position in the family

b. Permission from legal guardian

2. Procedure

a. Participants were given coded DAPT with #2 1/2 pencil with an eraser

b. Verbal instructions were given

c. Completed drawings were returned to investigator

d. Participants were thanked for their cooperation

III. Expert Panel

A. Drawings submitted to three psychologists

B. Evaluation

1. Divided into age groups

2. Utilized "Emotional Indicator Checklist" (Appendix B)

3. Independent ratings of each drawing

IV. Analysis

A. Demographic characteristics of the population

B. Mean Score of evaluator's ratings for each drawing

C. Mean Score of Group A's Emotional Indicators



- D. Mean Score of Group B's Emotional Indicators
- E. Mean Score of Group A's Emotional Indicators according to length of time since diagnosis of leukemia
- F. Correlation of age and score of DAPT for Group A and Group B
- G. Comparison of Group A's and Group B's Emotional Indicators

### Tool

Koppitz states that the following principles are valid for human figure drawings of five to twelve-year-old children:

- (1) HOW a child draws a figure, regardless of whom he draws, reflects his own self concept.
- (2) The person WHOM the child draws is the person who is of greatest concern and importance to the child at the time he is making the drawing. (In the majority of cases, children will draw themselves for obviously no one is of greater importance to a child than he himself.)
- (3) WHAT a child is saying in his human figure drawing may be twofold: it may be an expression of his attitudes and conflicts, or it may be a wishdream, or both. (However, the manner in which the figures were drawn reflects the children's attitude toward themselves) (Koppitz 1968, pp. 75 and 77).

Schilder, Buck, and Machover agree that children's drawings are a valid expression of body imagery.

As Loewenfeld (1939) and Machover pointed out, a child will emphasize and exaggerate on his drawings those parts of the figure which have special meaning for him. He will change and distort a human figure on his drawing until it resembles or reflects his own perception of himself (Koppitz 1968, p. 94).

Cassel, Johnson, and Burns (1958) studied the performance of subjects with the examiner either present or absent while the subject was drawing, and found that more deviant signs were present when the examiner was absent from the room. The subjects were 'normal' job applicants (Swensen 1968, p. 20).

With these facts in mind and drawing being a normal activity for a child, the "Draw-A-Person Test" was utilized to determine the child's perceptions of his body image. Two "Draw-A-Person" kits were purchased from Western Psychological Services, Los Angeles, California. The DAPT's "The Two-Copy Drawing Form" was coded with a random number on the printed side which corresponded to the number on the consent form. In this way, a blank paper was presented to the participant. A key was made to break the code. To insure that the child did draw himself, he was instructed to draw a picture of himself as he would look if he were looking into a mirror at himself. The investigator left the room while the participant was drawing due to the influence she might have on the child's drawing and the limited working area.

Much controversy has arisen concerning the interpretations of a child's drawing. One author has stated,

"Drawing pictures is a child's spontaneous means of expression . . . (Pictures) facilitate the conscious realization of conflicts (Haworth 1964, p. 340).

The use of drawings for diagnostic and therapeutic purposes has been common for a long time. Already in 1905, in Germany, children's drawings were used in research and diagnosis. In this country the well-known Goodenough Draw-A-Man Test was an attempt to standardize drawings of the human figure as a test of intelligence for children (Goodenough 1926). Later, Harris, in the restandardization of the Goodenough test, used it projectively to assess personality (Harris 1961). Interpretations of the Draw-A-Person Test (DAPT) are based on psychoanalytic assumptions (Wysocki and Whitney 1965, p. 499).

Bradshaw (1952) and Lehner and Gunderson (1952) both have attempted to determine the reliability of both the content of figure drawings and the structural aspects of figure drawings (Swensen 1952, p. 431). Both studies used psychology students with test and retest at varying intervals. There were varying percentages of agreement when these studies were compared.

Wagner and Schubert (1955) developed a scale for rating the 'quality' of the DAP . . . . Their study suggests that the 'quality' of the DAP, when judged as a whole, is reliable (Swensen 1952, p. 435).

From the review of literature the following researchers and authors, plus many more, had obtained positive results: Kotkov and Goodman (1953); Berman and Laffal (1953); Fisher and Cleveland (1958); Eigenbrode and Shipman (1960);

Davis (1960); Morino (1960); Guillamin (1961); Granick (1963); Craddick (1963); Centers and Centers (1963); Handler and Reyher (1964); and Gray and Pepitone (1964).

Negative results were obtained from other studies. Among those authors and researchers were: Lehner and Silver (1948); Prater (1950); Fisher and Fisher (1950); Fisher (1959, 1960); Hammer and Kaplan (1964); and Bennett (1964).

As in all studies, there are controversial opinions as to the reliability of the drawings and to the fact that the basic meaning and significance of the human figure drawings is still not satisfactorily formulated or established. These studies, however, "also suggest that there is some basis for believing that the figure drawn may represent S's own body" (Wysocki and Whitney 1965, p. 500).

Gilbert (1969, p. 10) states that the "human figure drawing is a simple technique which yields an abundance of information." According to the literature reviewed, the information yielded from human figure drawings can be used in a variety of circumstances. The DAPT has been used as an implicit validating criterion for other tests of body-image. "Machover's data on the relation between figure-drawings and perceptual judgments of the vertical are held to demonstrate that body image is an important variable in the area of perceptual functioning" (Traub 1964, p. 57).

This tool can best be summarized as:

- (1) According to the research reported and reviewed, both positive and negative results have been obtained.
- (2) It is suggested that the opinion of clinicians that the DAP is of value as a clinical instrument, despite the lack of experimental evidence to support this judgment, is due to the fact that the DAP, in a few cases which impress the individual clinician, does provide an indication of the nature of the individual client's problems (Swensen 1957, p. 463)
- (30) There are evidences to support the use of the DAP as a rough screening device, and as a gross indicator of 'level of adjustment' (Swensen 1957, p. 463)
- (4) As with all studies, future research is suggested. Therefore, the DAPT was utilized to study body image perceptions of leukemic children

### Data Collection

Data for this study were collected during the month of May. Leukemic children and their legal guardians were approached as they came to the pediatric clinic for scheduled appointments. After obtaining legal guardian permission (Appendix A), the participant was given the two-copy coded drawing form and a number two and one-half pencil with an eraser. The following instructions were given: "Draw a picture of all of you as you would look if you were standing in front of a mirror looking at yourself." An interpreter translated the same instructions to those participants who did not understand English. Instructions were repeated for

any participant who requested. The participant was then instructed to bring the completed drawing to the investigator at a designated location. The investigator felt her presence would influence the participant's drawing and would also cause a greater degree of anxiety. As the participant began to draw and all guardian questions were answered, the investigator left the room.

Group A data collection was completed in six days, with the majority of drawings being completed in the morning hours while waiting for the scheduled doctor's appointment. The demographic data (age, sex, ethnic origin, religion, and ordinal position in the family) collected from the participants in Group A was transferred to individual data sheets. One sheet of paper was utilized for each participant. This information was then used to locate children for Group B with the assistance of the school's principals and census records. Confidentiality of all records was maintained by coding groups.

Participants selected were then sent home with the permission form and a letter from the investigator (Appendix A). An attempt was made to explain the study over the telephone and to answer all legal guardian questions. However, the investigator was unable to speak verbally with all participants' legal guardians for various reasons (i.e., no phone, not at home).

Upon receipt of the written permission form with the legal guardian's signature, the child was called to the principal's office in his school where he was seated at a table. This setting could have influenced his drawing, but he did know that he was going to draw a picture prior to coming to the office. He was given the same instructions as for Group A along with the two-copy coded drawing form and a number two and one-half pencil with an eraser. Upon completion of the drawing, he returned it to the investigator who was in the adjoining room.

All participants in the study were thanked for their drawings. Legal guardians were also thanked for allowing their child to participate in the study.

#### Treatment of Data

The coded drawings were divided into age groups and then submitted to three psychologists who practice and utilize the DAPT in a mental health/mental retardation setting for the evaluation and assessment of children. One psychologist has a Ph.D. in Counseling Psychology. The other two raters had completed their MA degree in Counseling Psychology and one was currently working on her dissertation. Guinan and Hurley used three groups for matching drawings from a group of twenty college students from two testing periods five weeks apart. It was found that the Ph.D.'s

were correct on an average better than nineteen out of a possible twenty correct matches (Swensen 1968, p. 21). Each drawing was accompanied by an adapted form of the Emotional Indicator Checklist (Appendix B) which was validated by Elizabeth M. Koppitz in her study of "Emotional Indicators on Human Figure Drawings of Children" (Koppitz 1966, p. 314). Items indicated by this checklist were marked and then totaled. One point was given for each item checked. Space was provided at the bottom of the page for any comments should they select to make any. However, the word "Comments" was not written on the form. Also, accompanying these drawings was a "Drawing Criteria According to Age and Sex" which listed the expected and exceptional items for each age group (Appendix C). This was utilized along with the ages for emotional indicators considered valid by Koppitz.

After completion of the scoring of the drawings, the mean score was utilized in assigning the total number of emotional indicators to the participant.

Mean scores for the leukemic group (Group A) and the normal group (Group B) were then obtained. Each emotional indicator was analyzed separately according to age for Group A and Group B. This was followed by the mean score for the length of time since the participant was diagnosed as having leukemia.



### Emotional Indicator Checklist

The drawings of the participants were rated on a checklist adapted from Koppitz' "Emotional Indicators on HFD's of Clinic Patients and Well-Adjusted Pupils" (1966, p. 314). Since the participant was instructed to draw a picture of himself, the items "clouds, rain" were omitted on the checklist utilized by the raters. Neither of these items appeared on the forty participants' drawings. The thirty items were derived from the literature, research, and clinical experience of Elizabeth M. Koppitz.

Through clinical validation it has been found that two or more indicators are highly suggestive of unsatisfactory interpersonal relationships and emotional problems. It should be recalled that a meaningful diagnosis or evaluation cannot be made on only one drawing or on only one sign of a figure drawing. As stated earlier, other factors must be considered.

For the purpose of this study only one drawing was obtained from each participant. Group A was compared with Group B according to the "Emotional Indicator Checklist." Therefore, no individual diagnosis can be made. The results only apply to the group as a whole.

Summary

A single-blind design was utilized in this study to determine the body-image perceptions of school age leukemic children through the use of the DAPT. Demographic information concerning the participants was collected from the legal guardian and the hospital record at the time permission was obtained. These participants were then matched according to the demographic data to normal children in a public school system where the same procedure was implemented. The drawings were submitted to three psychologists for their interpretation according to an adapted "Emotional Indicator Checklist" validated by Koppitz. The results of this study follow in Chapter IV.

CHAPTER IV  
ANALYSIS OF DATA

Introduction

This chapter presents the results of this study. Twenty leukemic children, Group A, and twenty matched normal children, Group B, drew a picture of themselves as they perceived their body without the use of a mirror. These drawings were submitted to three psychologists for rating according to an adapted form of the "Emotional Indicator Checklist" validated by Koppitz (1966, p. 314). The mean score of only two of the raters was used for analysis as the third rater was inconsistent with her scores. These two were consistent with their interpretations as they followed the outlined protocol for the interpretation of the DAPT.

An outline of this chapter follows:

- I. Data Collection
- II. Demographic Data by Groups
  - A. Age and Sex
  - B. Ethnic Background
  - C. Religious Preference
  - D. Ordinal Position in the Family

E. Length of Time Elapsed Since Diagnosis  
of Leukemia

III. Statistical Analysis

A. t-test Comparison of Group A and Group B

1. Mean Score

2. Length of time since diagnosis of  
leukemia

3. Age groups

B. Comparison of Emotional Indicators by  
Group and Age Group

C. Findings

IV. Summary

Data Collection

Most of the drawings for Group A participants were done either in the waiting room of the pediatric clinic with the use of a clipboard to secure the paper or in the playroom on a small table. All participants worked individually. There were several circumstances in which a participant took his paper with him and completed his drawing while he was receiving his chemotherapy. Another participant drew her picture on the stretcher following her bone marrow and spinal tap as she did not want to draw prior to her procedures, but did want to participate in the study. After returning from

the lab, another participant drew his picture.

Many of the participants would look at themselves several times while drawing. One little boy who had a very decorative shirt returned his drawing with the comment that he could not draw "all of those things on my shirt." However, he did include his freckles. All of the children were eager to draw. With the exception of one participant in Group B, all of the drawings were completed within five minutes from the commencing of their drawing.

One participant in Group B withdrew from the study before final computation of the results. An alternate was selected by the same criteria. Since the school term was completed, the investigator went to the participant's home where the participant drew her picture in the living room on the coffee table. After completion of the drawing, the participant was thanked and the investigator left. This drawing was then submitted to the psychologists for their rating. No mention was made regarding her group classification.

All participants were thanked for their drawings. Legal guardians were given the option of obtaining the final results of the study by completing an address form (Appendix A).

Demographic Data

Table 1 presents the age group and sex of the participants. Sixty percent of the participants were male and 40 percent were female. The population consisted of 15 percent five-year-olds; 30 percent, six-year-olds; 20 percent seven-year-olds; 10 percent, eight-year-olds; and 25 percent, nine-year-olds. Ages ranged from five years, one month, to nine years, eleven and one-half months. The median age was seven years.

Table 1

## Age Group and Sex of Participants

Age	Group A			Group B			Per- cen- tage
	Male	Female	Total	Male	Female	Total	
5	1	2	3	1	2	3	15
6	3	3	6	3	3	6	30
7	4	0	4	4	0	4	20
8	1	1	2	1	1	2	10
9	3	2	5	3	2	5	25
Total	12	8	20	12	8	20	100
Per- cen- tage	60	40	100	60	40	100	

Culture, because it is learned, is an influence on the child. Certain roles are assumed or learned along with behavior and adjustment in the group. A member of the group is ascribed or acquires a certain status or position of prestige. This provides his pattern of living. The artistic expression of each culture varies. This art, as learned by the child, may be evidenced in his drawings. Also, the clothing worn by the culture may indicate the amount of body area exposed in the drawing. Several ethnic groups were represented in this study. These included Latins, Caucasians, and two South Americans. The two South American descendants were matched to Latin children for Group B participants. Table 2 is a breakdown of participant's ethnic groups.

Table 2

## Participants by Groups and Ethnic Background

Ethnic Group	Group A					Total	Percentage	Group B					Total	Percentage
	5	6	7	8	9			5	6	7	8	9		
Latin	1	1	2	1	2	7	35	1	2	2	1	3	9	45
Caucasian	2	4	2	1	2	11	55	2	4	2	1	2	11	55
Negro	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other*	0	1	0	0	1	2	10	0	0	0	0	0	0	0
Total	3	6	4	2	5	20	100	3	6	4	2	5	20	100

\*The two "Other" participants were of South American descent and were matched to Latin children for Group B participants.

Work, money, political behavior, family, child-rearing, and a sense of right and wrong are all attitudes and behavior influenced by religion. Each of these attitudes and behaviors may convey sinfulness or righteousness. Religions listed on the questionnaire by the legal guardians were Catholic, Baptist, Methodist, Pentecostal, Brethren, Nazarene, Church of Christ, and Jehovah's Witness (Table 3).

Table 3

## Participants by Group and Religious Preference

Religious Preference	Group A						Percentage	Group B						Percentage
	5	6	7	8	9	Total		5	6	7	8	9	Total	
Catholic	1	2	2	1	3	9	45	1	3	2	0	2	8	40
Baptist	1	3	0	0	1	5	25	2	1	0	1	1	5	25
Other	0	0	2	1	1	4	20	0	2	2	1	0	5	25
No pref.	1	1	0	0	0	2	10	0	0	0	0	2	2	10
						20	100						20	100

The ordinal position and sex of the child affects the family interaction for the child and adult. The older child usually has a greater sense of responsibility. The younger child has the benefit of parental experience with childraising and older siblings to imitate. Caught between these two is the middle child. The only child may be forced into adulthood before he is ready. He lacks the companionship that siblings provide, and therefore may feel lonely. Twins are likely to be closer than siblings as they share



experiences and interaction between them is often complementary.

Besides being the youngest or the oldest in the family, the participants in the study group also included middle children, the only child, and one twin (B). It was very difficult to match all of the other criteria and then find a child who was born in the exact ordinal position. Therefore, there is a slight variation in this category between the groups. Table 4 demonstrates this.

Table 4

## Ordinal Position in the Family by Groups

Ordinal Position	Group A						Percen- tage	Group B						Percen- tage
	5	6	7	8	9	Total		5	6	7	8	9	Total	
Youngest	1	4	3	0	2	10	50	2	3	2	1	3	11	55
Oldest	1	1	0	1	2	5	25	0	1	1	1	2	5	25
Other**	1	1	1	1	1	5	25	1	2	1	0	0	4	20
						20	100						20	100

\*\*This category includes the only child, the middle children, and a twin.

All of the participants in the study were diagnosed with Acute Lymphoblastic Leukemia (ALL). Other types of leukemia were unavailable for sample selection due to their inaccessibility. During the time that the investigator was collecting data, all clinic patients with leukemia were

diagnosed with ALL. None of the patients who had scheduled appointments or "walked in" were diagnosed with any other type of leukemia. The length of time elapsed since diagnosis varied from six months to seven years, one month, as shown in Table 5 according to age groups.

Table 5

Length of Time Elapsed Since Diagnosis of Leukemia  
(All)

Time Elapsed	5	6	7	8	9	Total	Percentage
Less than one year	1	1	1	1	1	5	25
One to two years (Inc.)	1	1	1	0	1	4	20
Two to three years	1	1	1	0	0	3	15
Three to four years	0	1	1	1	1	4	20
Four years and over	0	2	0	0	2	4	20
						<u>20</u>	<u>100</u>

Statistical Analysis

After receiving the completed "Emotional Indicator Checklists" from the psychologists, ratings were compared, and it was discovered that one rater was consistently lower than the other two. Therefore, this rater's results were discarded and the mean score of the remaining two psychologists were utilized for analysis of the data. This eliminated the possibility of a false mean score.

The "Emotional Indicator Checklist" for this study group consisted of 29 items. Previous research has revealed that two or more indicators are highly suggestive of unsatisfactory interpersonal relationships and emotional problems. This study group showed an average of three indicators. It should be noted, however, that this is based on only one drawing per participant whereas other studies used more than one drawing. The range of mean scores on the drawings varied from 0.5 - 7.5 for Group A and 2.5 to 5.5 for Group B. (See Appendix B for individual mean scores.)

These statistics reveal that the range was greater for Group A, the leukemic group. These findings might be attributed to a greater variation in emotional indicators checked. The mean score for Group A was 3.425, and the mean score for Group B was 3.075.

As Table 6 demonstrates, this was not a significant finding at the .05 level of significance.

Table 6  
t-Test Comparison of Mean Scores for Group A  
and Group B

Group	Range	Mean
A	0.5 - 7.5	3.425
B	1.5 - 5.5	3.075
df = 52.00		
t = .51		
P = not significant		

Table 7 exhibits the length of time elapsed since the participants were diagnosed as having leukemia. The t-test was performed using the matched individuals in Group B for a comparison. The findings were not significant for those diagnosed with leukemia for up to four years. However, the four years and over group did demonstrate a .10 level of significance.

Table 7

t-Test Comparison of Length of Time Elapsed Since Diagnosis of Leukemia for Group A as Compared to Group B

Diagnosis of Leukemia (ALL)	Mean Score		t-test	df	P
	Group A	Group B			
Less than one year	2.500	3.500	0.89	8.00	N.S.
One to two years	3.875	2.375	1.35	6.00	N.S.
Two to three years	1.500	3.333	1.74	4.00	N.S.
Three to four years	5.000	3.250	1.06	6.00	N.S.
Four years and over	4.000	2.875	2.38	6.00	.10

The t-test scores did not reveal any significant findings when Group A and Group B were compared in age groups. This is shown in Table 8. These data reveal that in this study no change in body image perceptions can be statistically proven by the use of the DAPT judged by the "Emotional

Indicator Checklist." The only exception to this statement is for the participants who have been diagnosed with leukemia for four years or more. Statistically, there was a significance at the 0.10 level.

Table 8  
t-Test Correlation of Mean Scores With Age of Participants

Age Group	t	df	P
5	0.23	4.00	N.S.
6	1.22	10.00	N.S.
7	0.00	6.00	N.S.
8	1.30	2.00	N.S.
9	0.53	8.00	N.S.

The comparison of the emotional indicators by group and age are shown in Table 9. This table demonstrates the items checked by the two raters whose results were utilized for this study. "Genitals" and "No neck" were the only two items not checked. On several items the number of indicators checked for Group A participants and Group B participants were equal. They were: "Gross asymmetry of limbs," "Legs pressed together," "no eyes," and "no mouth." The most frequent items checked for both groups were "Transparencies," "Short Arms," and "Hands cut off."

Some of the written comments that were made by the raters regarding the drawings were:

Table 9

## Comparison of Emotional Indicators By Age Group

	Age 5		Age 6		Age 7		Age 8		Age 9	
	Leuk	Norm	Leuk	Norm	Leuk	Norm	Leuk	Norm	Leuk	Norm
1. Poor integration			1	1	2				2	
2. Shading face	2								2	
3. Shading body, limbs			1				2			
4. Shading hands, neck									1	
5. Gross asymmetry of limbs	2	3	3	4	3	1			2	2
6. Slanting figure	2	2	4	2		1		2		2
7. Transparencies	3	2	1	3	3	2	2	3	1	2
8. Tiny figure, 2" or less	2	1	4			1			1	2
9. Big figure, 9" or more		1		1					2	2
10. Tiny head			2		1	1		1	2	
11. Crossed eyes		2		3						1
12. Teeth			1			3		2		
13. Short arms	2	2	4	1	4	2	1	2	2	8
14. Long arms		1	3	1					2	1
15. Arms clinging to body			4	1		1			4	3
16. Big hands	1	1	2	3		3				3
17. Hands cut off	1	2	4	2	2	2			4	2
18. Legs pressed together			1			1		1	2	1
19. Genitals										
20. Monster, grotesque figure		1	5	1	1	3	1	2		1
21. Three figures	2		2						2	
22. No eyes						1			1	
23. No nose				1	1	2			3	
24. No mouth	2	2			1				1	2
25. No body	2				1					
26. No arms	1	2		3	1					1
27. No legs	2			2	4				2	
28. No feet									5	2
29. No neck										

This drawing appears to be underrated by the above categories and in fact worse than all others rated to this point with an equivalent score. The lack of arms eliminates a number of potential scorable points.

A very immature and poorly developed drawing for a seven-year-old

Pretty immature drawing for a nine-year old.

Difficult to distinguish if arms or part of dress.

Hands hidden behind body.

It is interesting to note that there was not a difference in the indicators checked for Group A and Group B in the seven-year-old group. The greatest difference in indicators checked for Group A and Group B is noted in the six-year-old group.

### Summary

Chapter IV has presented the results of this study. Collection of data and an analysis of the demographic data obtained were presented. The t-test was the means utilized for analysis of variance for Group A and Group B. The mean score of group comparison ( $t = .51$ ) was not significant. Comparison of the length of time elapsed since the diagnosis of leukemia and the correlations of mean scores with the age of the participants were also presented. The participants diagnosed with leukemia for four years or more were the only group that presented significant findings.

Conclusions which can be drawn from this study are presented in Chapter V. Implications for nursing and recommendations are also presented.



## CHAPTER V

### SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

#### Summary

This single-blind descriptive study was designed to explore the problem: Does leukemia by type or length of illness influence school age children's body perceptions?

Twenty leukemic children comprised Group A. These participants were clinic patients at a teaching hospital located in a major metropolitan city. This hospital has approximately 300 beds and is devoted solely to the patient having neoplastic disease. It is also a major center for basic research and education conducted primarily to improve patient care. Group B, consisting of twenty matched participants, was selected from children in a public school system in Texas based on demographic data (age, sex, ethnic group, religion, and ordinal position in the family) derived from Group A participants. After reviewing the literature, the "Draw-A-Person Test" (DAPT) was selected and purchased from Western Psychological Services, Los Angeles, California.

After obtaining permission from the legal guardian, each participant was asked to "Draw a picture of all of you as you would look if you were standing in front of a mirror looking at yourself." No mirror was provided for the participants. Each participant was given the DAPT "Two-Copy Drawing Form" which was coded with a random number on the back and a number two and one-half pencil with an eraser. Participants worked individually and without any time limitation.

The population studied ranged in age from five years, one month, to nine years, eleven and one-half months, with seven years as the median. Sixty percent of the study group were males. Latins comprised 45 percent of the study group and Caucasians 55 percent. Various religions were represented with 42.5 percent of the participants being Catholics. Fifty-two and one-half percent of the participants were the youngest in the family.

Group A consisted of children with Acute Lymphoblastic Leukemia. Twenty-five percent of these participants had been diagnosed for less than one year, while 20 percent had been diagnosed for four years or more.

The forty completed drawings were submitted, divided into age groups, to three psychologists for their interpretation according to an adapted form of the "Emotional Indicator Checklist" validated by Koppitz (1966, p. 314). Each

rater worked individually and were compensated for their services. Comparison of their ratings revealed that one rater was consistently lower and therefore, her ratings were discarded to eliminate a false mean. The mean score was derived from the other two raters' scores and this score was assigned to the drawing.

The mean score of Group A was 3.425, and the mean score of Group B was 3.075. A t-test revealed no statistically significant difference between the groups. Using Group A and dividing them into groups according to the length of time since diagnosis of leukemia and comparison of DAP T scores revealed no statistically significant findings.

### Conclusions

Conclusions based on the results of this study were:

- (1) There is no statistically significant findings between body image perceptions of normal five to nine year old children when compared to leukemic children of the same demographic variable as measured by the DAP T
- (2) The length of a leukemic child's diagnosis does not significantly influence body image perceptions as measured by the DAP T. However, after four years since time of diagnosis, there is a trend of change when compared with normal

children ( $t = 2.38$ ;  $P = .10$ )

- (3) These findings support the results of Wysocki and Whitney; Centers; Bakwin and Morris; Pope-Grattan, Burnett, and Wolfe; Craddick; and Machover; and several other researchers.
- (4) This study does not support the findings of Bennett; Hunt and Feldman; et al.
- (5) Statistically there was no difference with use of the tool. However, experience with leukemic children reveals that they perceive themselves as being different. This may not have been manifested due to the lack of sensitivity of the tool
- (6) Further research is needed to determine differences due to the lack of criteria available at this time

### Implications

The general population rejects the disfigured or incapacitated person. In many interpersonal situations, the "abnormal" person is based with acceptance and rejection, trust and fear, curiosity and revulsion, sympathy and pity, and valuation and devaluation. Unfortunately, these persons are stereotyped. No one is perceived as an individual in his own right.

Health care professionals, as part of the general population, also stereotype these individuals. Patients are often referred to as "the leukemic in 313" instead of "Don." Assessment of our own attitudes is important if we are to be successful in assisting the child in establishing or maintaining a positive body image.

In the leukemic child chemotherapy and other treatment modalities cause various bodily changes. Nursing personnel should be aware that all procedures and treatments are a threat to the child's perceptions of his image and also to his self-esteem. The approach and attitude of the nurse toward the child will influence his views and perceptions of himself.

Through experience health care personnel have noted that leukemic children focus on various body parts during their course of treatment. When alopecia is present, the child is not as concerned about his hair loss as the adult. He really does not care to have his head covered. However, when the Cushnoid effects of the steroids appear, he is very concerned about his "fat" body. This may be partly due to his friends calling him "fatty."

The population studied revealed that these changes are not significant in the drawings of leukemic children until the child has been diagnosed with leukemia for four or more years. Could it be that it takes this length of time for the child to internalize his feelings toward himself and then portray these images on paper? With this in mind the next section speaks to recommendations derived from this study.

#### Recommendations

The investigator has the following recommendations:

- (1) This study's design and criteria should be modified to include: (a) a larger sample, (b) other geographical areas; and (c) other types of leukemia
- (2) Future methods should consider utilization of other tools or methods besides the DAPT as (a) the scores did not indicate the quality of some of the drawings, and (b) the validity of projective testing to these data have not been fully researched
- (3) Future methods should consider dividing the drawings into a leukemic group and a non-leukemic group by the ratings

- (4) Other chronic illness and other acute illnesses should be studied to determine their impact on the body image of the child
- (5) Future methods should consider a comparison by the type of chemotherapy the participant is receiving
- (6) Should drawings be utilized in future studies, they should be obtained in a classroom type setting rather than in the clinic where the child's anxiety is increased
- (7) Future studies should consider the hospitalized leukemic child as compared to the child visiting the clinic for treatment modalities

## BIBLIOGRAPHY

- Anderson, Janice M. 1976. Health care approaches to their loss in children with cancer. Home Care for the Dying Child. Edited by Ida Martinson. New York: Appleton-Century Crofts. 255-262.
- Anthony, E. James. 1968. The child's discovery of his body. Physical Therapy. 48(10): 1103-1114.
- Apfeldorf, M. and Smith, W. J. 1966. The representation of the body self in human drawings. Journal of Projective Techniques and Personality Assessment. 30: 283-289.
- Bakwin, Harry and Morris, Ruth. 1966. Clinical Management of Behavior Disorders in Children. Philadelphia: W.B. Saunders.
- Barckley, Virginia. 1975. Childhood leukemia: its changing aspects. The Journal of Practical Nursing. 25(10): 24-27.
- Bellak, Leopold. 1954. The TAT and the CAT in clinical use. New York: Grune and Stratton.
- Bender, Lauretta. 1952. Child Psychiatric Techniques. Springfield: Charles C. Thomas, Publisher.
- Bender, Lauretta and Faretra, Gloria. 1963. Body image problems of children. The Psychological Basis of Medical Practice. Edited by Harold I. Lief, Victor F. Lief, and Nina R. Lief. New York: Hoeber Medical Division, Harper and Row, Inc.
- Ben-Or, Rita. 1964. Perceptual development in infancy. Nursing Science. December: 453.
- Berman, Sidney and Laffal, Julius. 1953. Body type and figure drawing. Journal of Clinical Psychology. IX: 368-370.
- Bettelheim, Bruno. 1950. Love Is Not Enough. Glencoe: Free Press.
- Binger, C.M.; Albin, A.R.; Feuerstein, R.C.; Kushner, J.H.; Zoger, S.; and Mikkelsen, Cynthia. 1969. Childhood



- leukemia: emotional impact on patient and family.  
New England Journal of Medicine. 280(8): 414-418.
- Blaesing, Sandra and Brockhaus, Joyce. 1972. Development of body image in the child. Nursing Clinics of North America. 7(4): 597-607.
- Blumberg, Marvin L. 1959. Emotional and personality development in neuromuscular disorders. AMA Journal of Diseases of Children. 98(Sept.): 45-52 (303-310).
- Brice, Harry V. 1954. Some factors that contribute to the concept of self in the child with cerebral palsy. Mental Hygiene. 38(1): 120-131.
- Bright, Florence and France, Sister M. Luciana. 1967. The nurse and the terminally ill child. Nursing Outlook. 15(9): 39-45.
- Britain, Susan D. 1970. Effect of manipulation of children's affect on their family drawings. Journal of Projective Techniques and Personality Assessment. 34(3): 234-237.
- Brodie, Barbara. 1974. Views of healthy children toward illness. American Journal of Public Health. 64(12): 1156-1159.
- Buck, John N. 1966. The House-Tree-Person Technique--Revised Manual. Los Angeles, California: Western Psychological Services.
- Buck, John N. and Hammer, Emanuel F., Editors. 1969. Advances in the House-Tree-Person Technique: Variations and Applications. Los Angeles, California: Western Psychological Services.
- Centers, Louise and Richard. 1963. A comparison of the body image of amputee and non-amputee children as revealed in figure drawings. Journal of Projective Techniques and Personality Assessment. 27(2): 158-165.
- Chase, Clinton I. and Ludlow, H. Glenn, Editors. 1966. Readings in Educational and Psychological Measurement. Boston: Houghton Mifflin Co.
- Chinn, Peggy L. 1974. Child Health Maintenance Concepts in Family-Centered Care. St. Louis: C.V. Mosby Co.

- Coles, Ruth M. 1972. Acute myeloblastic leukaemia. *Nursing Times*. 68(23): 707-709.
- Conatsen, Betty Cheryl. 1974. Unpublished Master's Thesis. Texas Woman's University, Denton, Texas.
- Craddick, Ray A. 1963. The self-image in the draw-a-person test and self-portrait drawing. *Journal of Projective Techniques*. 27(1): 288-291.
- Cruickshank, William M., Editor. 1955. *Psychology of Exceptional Children and Youth*. 3rd Edition. New Jersey: Prentice-Hall.
- Easson, William M. 1970. *The Dying Child*. Illinois: Charles C. Thomas.
- Engle, Patricia L. and Suppes, Joan Sieber. 1970. The relation between human figure drawing and test anxiety in children. *Journal of Projective Techniques and Personality Assessment*. 34(3): 223-231.
- Erikson, Erik H. 1959. *Identity and the Life Cycle*. New York: International Universities Press, Inc.
- Erikson, Florence. 1965. When 6-to-12 year olds are ill. *Nursing Outlook*. 13(6): 48-50.
- Fagin, Claire M. 1974. *Readings in Child and Adolescent Psychiatric Nursing*. St. Louis: C.V. Mosby Co.
- Finch, Stuart M. 1960. *Fundamentals of Child Psychiatry*. New York: W. W. Norton & Co., Inc.
- Fisher, Seymour. 1973. *Body Consciousness: You Are What You Feel*. New Jersey: Prentice-Hall.
- Fisher, Seymour and Cleveland, Sidney E. 1955. The role of body image in psychomatic symptom choice. *Psychological Monographs: General and Applied*. Herbert S. Conrad, Editor. 69(17): 1.
1968. *Body Image and Personality*. New York: Cover Publications, Inc.
- Fochtman, Dianne. 1976. Leukemia in children. *Pediatric Nursing*. 2(3): 8-13.

- Fox, David J. 1970. Fundamentals of Research in Nursing. New York: Appleton-Century-Crofts.
- Frank, Lawrence. 1948. Projective Methods. Springfield: Charles C. Thomas.
- Freud, Anna. 1965. Normality and Pathology in Childhood. New York: International Universities Press, Inc.
- Fujita, Milton T. 1972. The impact of illness or surgery on the body image of the child. Nursing Clinics of North America. 7(4): 641-649.
- Fulton, Robert and Langton, Phyllis A. 1964. Attitudes toward death: an emerging mental health problem. Nursing Forum. 3(1): 104-112.
- Garrison, Karl C.; Kingston, Albert J.; and Bernard, Harold W. 1967. The Psychology of Childhood. A Survey of Development and Socialization. New York: Charles Scribner's Sons.
- Gilbert, Joseph. 1969. Clinical Psychological Tests in Psychiatric and Medical Practice. Illinois: Charles C. Thomas.
- Goodman, Morris and Kotkov, Benjamin. 1953. Prediction of trait ranks from draw-a-person measurements of obese and non-obese women. Journal of Clinical Psychology. IX: 365-367.
- Greene, Patricia. 1975. The child with leukemia in the classroom. American Journal of Nursing. 75(1): 86-87.
1975. Acute leukemia in children. American Journal of Nursing. 75(10): 1709-1714.
- Greene, William A., Jr. and Miller, Gerald. 1958. Psychological factors and reticuloendothelial disease. Psychosomatic Medicine. 20(2): 124-144.
- Hammer, Emanuel F., Editor. 1968. Use of Interpretation in Treatment. New York: Grune and Stratton.
- Hammer, Max and Kaplan, Arthur M. 1966. The reliability of children's human figure drawings. Journal of Clinical Psychology. XXII: 316-319.
- Hamovitch, Maurice B. 1964. The Parent and the Fatally Ill Child. Duarte, Ca.: City of Hope Medical Center.

- Handler, Leonard and McIntosh, Jerry. 1971. Predicting aggression and withdrawal in children with the draw-a-person and bender gestalt. *Journal of Personality Assessment*. 35(4): 331-335.
- Harris, Dale B. 1963. *Children's Drawings as Measures of Intellectual Maturity: A Revision and Extension of the Goodenough Draw-A-Man Test*. New York: Harcourt, Brace, and World, Inc.
- Haworth, Mary R., Editor. 1964. *Child Psychotherapy Practice and Theory*. New York: Basic Books, Inc.
- Heffron, Warren; Bommelaere, Karen; and Masters, Ruth. 1973. Group discussions with the parents of leukemic children. *Pediatrics*. 52(6): 831-840.
- Hopkins, Lois Jones. 1973. A basis for nursing care of the terminally ill child and his family. *Maternal-Child Nursing Journal* 2(2): 93-99.
- Horowitz, Mardi. 1966. Body image. *Archives of General Psychiatry*. 14(May): 456-460.
- Hurlock, Elizabeth B. 1964. *Child Development*. New York: McGraw-Hill Book Company.
- Isler, Charlotte. 1975. Children are surviving leukemia and lymphoma. *RN*. 38(11): 20-25.
- Jackson, Nancy A. 1968. A child's preoccupation with death. *ANA Clinical Sessions*. 1968. New York: Appleton-Century-Crofts. 172-179.
- Jackson, Pat Ludder. 1975. The child's developing concept of death: implications for nursing care of the terminally ill child. *Nursing Forum*. 14(2): 204-215.
- Jaskar, Raino O. and Reed, Max R. 1963. Assessment of body image organization of hospitalized and non-hospitalized subjects. *Journal of Projective Techniques and Personality Assessment*. 27(2): 185-190.
- Jernigan, A.J. 1970. Judging whether a patient is white or black by his draw-a-person test. *Journal of Projective Techniques and Personality Assessment*. 34(6): 503-506.

- Johnson, James H. 1971. Upper left hand placement of human figure drawings as an indicator of anxiety. *Journal of Personality Assessment*. 35(4): 336-337.
- Jones, Leona W. and Thomas, Caroline Bedell. 1965. Studies on figure drawings: manual of instructions for coding structural and graphic characteristics. *Psychiatric Quarterly Supplement*. 39: 241-267.
- Juenker, Donna. 1971. Child's perception of his illness. *Nursing Care of the Child with Long-Term Illness*. Edited by Shirley Steele. New York: Appleton-Century-Crofts.
- Kamarro, Dennis K. 1967. An investigation on the meaning of human figure drawing. *Journal of Projective Techniques and Personality Assessment*. 33: 429-430.
- Kanner, Leo. 1957. *Child Psychiatry*. Springfield, Illinois: Charles C. Thomas.
- Kerlinger, Fred N. 1973. *Foundations of Behavioral Research*. New York: Holt, Rinehart, and Winston, Inc.
- Kolb, Lawrence. 1959. Disturbances of the body image. *American Handbook of Psychiatry*. Volume I. Edited by Silvano Arieti. New York: Basic Books, Inc.
- Koppitz, Elizabeth Munsterberg. 1966. Emotional indicators on human figure drawings of children: a validation study. *Journal of Clinical Psychology*. 22: 313-315.
1968. *Psychological Evaluation of Children's Human Figure Drawings*. New York: Grune and Stratton.
- Kotkov, Benjamin and Goodman, Morris. 1953. The draw-a-person tests of obese women. *Journal of Clinical Psychology*. 9: 362-364.
- Kubler-Ross, Elizabeth. 1969. *On Death and Dying*. London: Macmillan Publishing Company.
- Lebovits, Benjamin Z. and Lakin, Martin. 1957. Body image and paralytic poliomyelitis. An experimental approach. *The Journal of Nervous and Mental Disease*. 125: 518-523.
- Leedy, Paul D. 1974. *Practical Research Planning and Design*. New York: Macmillan Publishing Co.

- Leventhal, Brigid G. and Hersh, Stephen. 1974. Modern treatment of childhood leukemia: the patient and his family. *Children Today*. 3(3): 2-6.
- Lewinsohn, Peter M. and May, Jack G., Jr. 1963. A technique for the judgement of emotion from figure drawings. *Journal of Projective Techniques*. 27(1): 79-85.
- Lidz, Theodore. 1968. *The Person*. New York: Basic Books, Inc.
- Lorge, Irving; Tuckman, Jacob; and Dunn, Michael B. 1958. Human figure drawings by younger and older adults. *Journal of Clinical Psychology*. 15: 54-56.
- Luckmann, Joan and Sorensen, Karen Creason. 1974. *Medical-Surgical Nursing. A Psychophysiologic Approach*. Philadelphia: W. B. Saunders.
- Ludwig, D.J. 1969. Self-perception and the draw-a-person test. *Journal of Projective Techniques and Personality Assessment*. 33: 257-261.
- McCloskey, Joanne Comi. 1976. How to make the most of body image theory in nursing practice. *Nursing '76*. 6(5): 68-72.
- Machover, Karen. 1949. *Personality Projection in the Drawing of the Human Figure*. Springfield: Charles C. Thomas.
- Mann, Sylvia. 1974. Coping with a child's fatal illness. *Nursing Clinics of North America*. 9(1): 81-87.
- Marino, Elizabeth Begg and LeBlanc, Dona Harris. 1975. Cancer chemotherapy. *Nursing '75*. 5(11): 22-33.
- Marlow, Dorothy. 1973. *Textbook of Pediatric Nursing*. Philadelphia: W. B. Saunders.
- Martinson, Ida M. 1976. Why don't we let them die at home? *RN*. 39(1): 58-65.
1976. *Home Care for the Dying Child*. New York: Appleton-Century-Crofts.

- Miller, Jean. 1974. Cognitive dissonance in modifying families perceptions. American Journal of Nursing. 74(6): 1468-1470.
- Miya, Trudy M. 1972. The child's perception of death. Nursing Forum. 11(2): 214-220.
- Murray, Ruth and Zentner, Judith. 1975. Nursing Assessment and Health Promotion Through the Life Span. New Jersey: Prentice-Hall, Inc.
1975. Nursing Concepts for Health Promotion. New Jersey: Prentice-Hall, Inc.
- Nagy, Maria H. 1959. The child's view of death. The Meaning of Death. Edited by Herman Feifel. New York: McGraw-Hill Book Co., Inc. 79-98.
- Nahigian, Eileen Gallagher. 1973. A 5-year-old child controls his aggressive response to body intrusion. Current Concepts in Clinical Nursing. Volume IV. Edited by Edith H. Anderson et al. St. Louis: C.V. Mosby Co. 134-142.
- Northup, Fran C. 1974. The dying child. American Journal of Nursing. 74(6): 1066-1068.
- Notter, Lucille E. 1974. Essentials of Nursing Research. New York: Springer Publishing Co., Inc.
- Olgas, Marya. 1974. The relationship between parents' health status and body image of their children. Nursing Research. 23(4): 319-324.
- Oremland, Evelyn K. and Jerome D. 1973. The Effects of Hospitalization on Children - Models for Their Care. Springfield, Illinois: Charles C. Thomas.
- Palmer, Irene S. 1965. The development of a measuring device. Nursing Research. 14(2): 100-105.
- Pillitteri, Adele. 1977. Nursing Care of the Growing Family: A Child Health Text. Boston: Little, Brown, and Company.
- Plante, Marie; Bernard, Louis; and Morais-Rochon, Therese. 1975. Le dessin du bonhomme: evolution du nombre d'elements selon l'age et le niveau scolaire.

L'union Medicale Du Canada. 104(3): 432-436.  
(English abstract. Drawing of a man: development  
of the number of elements by age and school level).

Pope, Benjamin and Scott, Winfield. 1967. Psychological  
Diagnosis in Clinical Practice. New York:  
Oxford University Press.

Pope-Grattan, Mary M.; Burnett, Carolyn N.; and Wolfe, Claire  
V. 1976. Human figure drawings by children with  
duchenne's muscular dystrophy. Physical Therapy.  
56(2): 168-176.

Riddle, Irene. 1972. Nursing intervention to promote body  
image integrity in children. Nursing Clinics of  
North America. 7(4): 651-661.

Ritchie, Judith. 1973. Schilder's theory of the sociology  
of the body image. Maternal-Child Nursing Journal.  
2(2): 143-153.

Roback, Howard B. 1968. Human figure drawings: their  
utility in the clinical psychologist's armamentarium  
for personality assessment. Psychological Bulletin.  
70(1): 1-19.

Ross, Walter S. 1970. Leukemia: we're starting to use the  
word cure. Today's Health. 48(10): 49-51.

Rubin, Reva. 1968. Body image and self-esteem. Nursing  
Outlook. 16(6): 20-23.

Schilder, Paul. 1942. Mind: Perception and Thought in  
Their Constructive Aspects. New York: Columbia  
University Press.

Schonfeld, William A. 1963. Body image in adolescents:  
a psychiatric concept for the pediatrician.  
Pediatrics. 31: 845-855.

Schwartz, Lawrence H. and Schwartz, Jane Linker. 1972. The  
Psychodynamics of Patient Care. New Jersey:  
Prentice-Hall, Inc.

Scipien, Gladys M.; Barnard, Martha U.; Chard, Marilyn A.;  
Howe, Jeanne; and Phillips, Patricia J. 1975.  
Comprehensive Pediatric Nursing. New York:  
McGraw-Hill Book Company.



- Shontz, Franklin C. 1956. Body concept disturbances of patients with hemiplegia. *Journal of Clinical Psychology*. 12: 293-295.
- Simone, Joseph V. 1974. Childhood leukemia: the changing prognosis. *Hospital Practice*. 9(7): 59-68.
- Staffieri, J. Robert. 1967. A study of social stereotype of body image in children. *Journal of Personality and Social Psychology*. 1(1): 101-104.
- Steele, Shirley. 1971. *Nursing Care of the Child with Long-Term Illness*. New York: Appleton-Century-Crofts.
- Sutterley, Doris Cook and Donnelly, Gloria Ferraro. 1973. *Perspectives in Human Development. Nursing Throughout the Life Cycle*. Philadelphia: J.B. Lippincott Company.
- Swensen, Clifford H., Jr. 1957. Empirical evaluations of human figure drawings. *Psychological Bulletin*. 54(6): 431-466.
- Swensen, Clifford H. 1968. Empirical evaluations of human figure drawings: 1957-1966. *Psychological Bulletin*. 70(1): 20-44.
- Swensen, Clifford H. and Newton, Kenneth R. 1955. The development of sexual differentiation on the draw-a-person test. *Journal of Clinical Psychology*. XI(4): 417-419.
- Taber, Clarence Wilbur. 1970. *Taber's Cyclopedic Medical Dictionary*. Philadelphia: F.A. Davis Company.
- Thorne, Frederick C. 1955. *Principles of Psychological Examining*. Brandon, Vt.: Journal of Clinical Psych.
- Traub, Arthur C. and Orbach, J. 1964. Psychophysical studies of body-image. I. The adjustable-body distorting mirror. *Archives of General Psychiatry*. 11: 53-66.
- Treece, Eleanor Walters and Treece, James William. 1973. *Elements of Research in Nursing*. St. Louis: C.V. Mosby.

- Tyler, Leona E. 1963. Tests and Measurements. New Jersey: Prentice-Hall, Inc.
- Urban, William H. 1963. The Draw-A-Person Catalogue for Interpretative Analysis. Los Angeles, California: Western Psychological Services.
- Van Eys, J. 1976. Supportive care for the child with cancer. The Pediatric Clinics of North America. 23(1): 215-224.
- Vaughan, V.C. III, and R. James McKay, Editors. 1975. Nelson's Textbook of Pediatrics. Philadelphia: W.B. Saunders, Inc.
- Vernon, David T.A.; Foley, Jeanne M.; Sipowicz, Raymond R.; and Schulman, Jerome L. 1965. The Psychological Responses of Children to Hospitalization and Illness. A Review of the Literature. Springfield, Illinois: Charles C. Thomas.
- Wachs, Hirsh and Zaks, Misha. 1960. Studies of body image in men with spinal cord injury. Journal of Nervous and Mental Disease. 131: 121-127.
- Waechter, Eugenia. 1971. Children's awareness of fatal illness. American Journal of Nursing. 71(6): 1168-1172.
- Waechter, Eugenia and Blake, Florence. 1976. Nursing Care of Children. Philadelphia: J.B. Lippincott Company.
- Whitman, Helen H. and Lukes, Shelby J. 1975. Behavior modification for terminally ill patients. American Journal of Nursing. 75(1): 98-101.
- Wylie, Ruth C. 1961. The Self-Concept. A Critical Survey of Pertinent Research Literature. Lincoln: University of Nebraska Press.
1974. The Self-Concept, Revised Edition. Vol. I. A Review of Methodological Considerations and Measuring Instruments. Lincoln: University of Nebraska Press.
- Wysocki, Boleslaw and Whitney, Eleanor. 1965. Body image of crippled children as seen in draw-a-person test behavior. Perceptual and Motor Skills. 21: 499-504.

- Yakulis, Irene M. 1973. Anxieties of a fatally ill boy.  
Maternal-Child Nursing Journal. 2(2): 121-128.
- Young, Kimball. 1952. Personality and Problems of Adjustment. New York: Appleton-Century-Crofts.

## APPENDIX A

### PERMISSION FOR THE STUDY

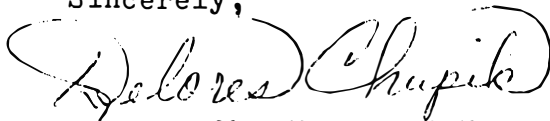
Dear Parent or Guardian,

As part of my graduate work toward a Master of Science Degree in Maternal and Child Health Nursing, I am researching the body image perceptions of school-age children. For this study, your child will be asked to draw a picture of himself as he sees himself without the use of a mirror.

On the attached page, you will find several general questions about your child. Please be honest with your answers as this information is needed for a comparison study.

Thank you for your cooperation.

Sincerely,

  
Delores Chupik, RN, BSN

Consent to Act as a Subject for Research and Investigation:

I have received an oral description of this study, including a fair explanation of the procedures and their purpose, any associated discomforts or risks, and a description of the possible benefits. An offer has been made to me to answer all questions about the study. I understand that my name will not be used in any release of the data and that I am free to withdraw at any time.

\_\_\_\_\_  
Parent or Guardian

\_\_\_\_\_  
Date

\_\_\_\_\_  
Witness

Certification by Person Explaining the Study:

This is to certify that I have fully informed and explained to the above named person a description of the listed elements of informed consent.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Position

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Date

## BODY IMAGE PERCEPTIONS OF SCHOOL-AGE LEUKEMIC CHILDREN

Please complete the following as indicated:

Age \_\_\_\_\_ Years \_\_\_\_\_ Months \_\_\_\_\_

Sex \_\_\_\_\_ Male \_\_\_\_\_ Female \_\_\_\_\_

Ethnic Group \_\_\_\_\_

Religion \_\_\_\_\_

Ordinal position in the family (i.e., youngest, oldest, middle,  
etc. of your living children)

\_\_\_\_\_

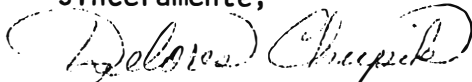
Estimado padre de familia o guardián:

Como parte de mi trabajo de graduado para obtener el Título de Doctorado en Ciencias en Enfermería Maternal y de Niños, estoy estudiando las percepciones de imágenes del cuerpo humano por niños de edad escolar. Para la realización de este estudio se le pedirá a su hijo que haga un dibujo de si mismo como el mismo se ve, sin la ayuda de un espejo.

En la página adjunta Ud. encontrará varias preguntas de tipo general acerca de su hijo. Por favor sea honesto con sus respuestas porque esta información es necesaria para un estudio de comparación.

Muchas gracias por su cooperación.

Sinceramente,

  
Dolores Chupik, RN, BSN

Consentimiento para actuar como sujeto para estudio e investigación

He recibido una descripción oral de este estudio, incluyendo una justa explicación del procedimiento y de sus propósitos, cualquier riesgo o incomodidad asociados con los mismos y una descripción de los posibles beneficios. Se me ha hecho una oferta para contestar todas las preguntas acerca del estudio. Tengo entendido que mi nombre no será utilizado con cualquier publicación de los datos y que estoy libre a retirarme del estudio en cualquier momento.

\_\_\_\_\_  
Padre o Guardián                      Fecha                      Testigo

Certificación de la persona explicando el estudio:

Por medio de la presente certifico que he completamente explicado e informado a la persona mencionada más arriba, una descripción de los delineados elementos del consentimiento informado.

\_\_\_\_\_  
Firma                      Fecha                      Puesto

\_\_\_\_\_  
Testigo                      Fecha

PERCEPCIONES DE IMAGENES DEL CUERPO HUMANO POR NIÑOS  
DE EDAD ESCOLAR AFECTADOS POR LEUCEMIA

Por favor complete lo siguiente como se indica:

Edad \_\_\_\_\_ años \_\_\_\_\_ meses.

Sexo \_\_\_\_\_ masculino \_\_\_\_\_ femenino

Grupo étnico \_\_\_\_\_

Religión \_\_\_\_\_

Posición ordinal en la familia (Ejemplo: el menor, el mayor, el del medio,  
etc. de sus niños vivos)

\_\_\_\_\_

¿Por cuánto tiempo su niño ha sido diagnosticado como teniendo Leucemia?

\_\_\_\_\_ años \_\_\_\_\_ meses

Tipo de Leucemia \_\_\_\_\_



BODY IMAGE PERCEPTIONS OF SCHOOL-AGE  
LEUKEMIC CHILDREN

I am interested in knowing the results of this study in which my child has participated. Please send a summary to the following address.

NAME\_\_\_\_\_

ADDRESS

CITY STATE\_\_\_\_\_ZIP CODE\_\_\_\_\_

# Interoffice Memorandum

TO: Department of Nursing  
 DATE: April 22, 1977  
 FROM: Surveillance Committee  
 SUBJECT: Thesis Proposal by Dolores Chupik, R.N., B.S.N.

The Surveillance Committee reviewed Miss Chupik's protocol entitled "Body Image Perceptions of School-Age Leukemic Children" on April 20, 1977 and approved it for activation with the understanding that the project will be under the direct supervision of Dr. [redacted] in the Department of Pediatrics.

\_\_\_\_\_  
 Chairperson  
 Surveillance Committee

Attachment

cc:  
 Office of Research



92  
TEXAS WOMAN'S UNIVERSITY  
DALLAS, TEXAS 75235



COLLEGE OF NURSING

March 10, 1977

Ms. Delores Chupik

Dear Ms. Chupik:

The Dallas Center Sub-Committee for Human Research has approved your proposal for "Body Image Perceptions of School-Age Leukemic Children." Following acquisition of agency approval you may now proceed with your data collection as planned.

Sincerely,

A handwritten signature in cursive script that reads 'Geri Goosen'.

Geri Goosen, R.N., M.S.  
Chairman of Human Research Committee  
Dallas Center

cc: Dr. Phyllis Bridges  
Graduate Dean

GG:js

OFFICE OF THE ASSOCIATE DEAN  
TEXAS WOMAN'S UNIVERSITY  
DALLAS CENTER  
1810 INWOOD ROAD  
DALLAS, TEXAS 75235

OFFICE OF THE DEAN  
TEXAS WOMAN'S UNIVERSITY  
Box 23026, TWU STATION  
DENTON, TEXAS 76204

OFFICE OF THE ASSOCIATE DEAN  
TEXAS WOMAN'S UNIVERSITY  
1130 M. D. ANDERSON BLVD.  
HOUSTON, TEXAS 77025

TEXAS WOMAN'S UNIVERSITY  
COLLEGE OF NURSING  
DENTON, TEXAS

DALLAS CENTER  
1810 Inwood Road  
Dallas, Texas 75235

HOUSTON CENTER  
1130 M.D. Anderson Blvd.  
Houston, Texas 77025

AGENCY PERMISSION FOR CONDUCTING STUDY\*

THE \_\_\_\_\_

GRANTS TO Delores Chupik

a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University, the privilege of its facilities in order to study the following problem:

Body Image Perceptions of School-Age Leukemic Children

The conditions mutually agreed upon are as follows:

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

Date May 10, 1977

Delores Chupik  
Signature of student

\_\_\_\_\_  
Signature of Agency Personnel

Mona M. Counts  
Signature of Faculty Advisor

\*Fill out and sign three copies to be distributed as follows: Original -- Student; first copy -- agency; second copy -- T.W.U. College of Nursing.

## APPENDIX B

### EMOTIONAL INDICATORS CHECKLIST

APPENDIX B . EMOTIONAL INDICATORS \*+

---

1. Poor integration
2. Shading face
3. Shading body, limbs
4. Shading hands, neck
5. Gross asymmetry of limbs
6. Slanting figure
7. Transparencies
8. Tiny figure, 2" or less
9. Big figure, 9" or more
10. Tiny head
11. Crossed eyes
12. Teeth
13. Short arms
14. Long arms
15. Arms clinging to body
16. Big hands
17. Hands cut off
18. Legs pressed together
19. Genitals
20. Monster, grotesque figure
21. Three figures
22. No eyes
23. No nose
24. No mouth
25. No body
26. No arms
27. No legs
28. No feet
29. No neck

---

\_\_\_\_\_ Total (Number of characteristics checked)

---

\*Refer to "Drawing Criteria According to Age and Sex"

+Refer to Psychological Evaluation of Children's Human Figure Drawings

APPENDIX B. EMOTIONAL INDICATOR CHECKLIST MEAN SCORES

---

GROUP A		GROUP B	
Participant Number	Mean Score	Participant Number	Mean Score
1	7.5	1	2.5
2	4.5	2	4.0
3	7.5	3	5.5
4	2.0	4	3.0
5	1.5	5	3.0
6	4.0	6	3.0
7	2.0	7	2.0
8	4.0	8	2.0
9	0.5	9	4.5
10	3.5	10	2.5
11	6.0	11	5.5
12	2.0	12	2.0
13	3.0	13	3.0
14	7.0	14	3.0
15	1.0	15	4.5
16	3.5	16	2.5
17	3.0	17	2.0
18	1.0	18	2.0
19	3.0	19	3.5
20	2.0	20	1.5

---

## APPENDIX C

### DRAWING CRITERIA ACCORDING TO AGE AND SEX



## APPENDIX C.

98