

FAMILY ROLE PERCEPTION OF THE SCHOOL-AGE
CHILD WITH LEUKEMIA

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BY
BARBARA K. BREWER CATHEY, R.N., B.S.

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CHAPTER 1

INTRODUCTION

Due to the advances in the protocol for treatment of leukemia, many children's lives are being prolonged. The child with leukemia undergoes various treatments and chemotherapy and lives through exacerbations and remissions of the disease process. In comparison to his peers, he may realize that he is different from his classmates and friends. The child with leukemia may become isolated in his own environment and even within his own family as changes in his physical appearance may bring attention to his body. The family relationships may also undergo changes with the occurrence of the illness in the child. Parents react in different ways; they may be overly protective and indulgent of the child, or they may even deny the child's illness.

A child is dependent on his parents for food and shelter, for emotional and social support, and for security. The child with leukemia who had previously reached stages of independence may become increasingly dependent and more demanding of the parent's attention as a result of his illness. As a result this may cause

severe emotional stress within the family. 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 and family portraits.

Most children love to draw and paint. The pictures most often drawn by children are those that represent human beings. According to some psychologists the child has a clear-cut knowledge and experience of his own body and sees the world in comparison to his own body (Bender, 1952). The school-age child is beginning to develop a sense of industry versus inferiority. The school-age child has an increased sense of reality, however, he has a well-established body image and a minimum understanding of his bodily functions. Preceptions are also a part of his internal makeup (Erikson, 1959). A child's self-perceptions are derived primarily from his parent's attitudes and reactions toward him until he goes to school. In school, the teacher and peer group's remarks and reactions influence his self-perception because the child's body image and self-concept are reinforced or weakened through the school experience.

Development of an acceptable body image presents a difficult task for healthy children, but for the child with leukemia, who has so many stresses, the task may

seem insurmountable. The child with leukemia, due to chemotherapy and other treatment modalities, undergoes many more body changes than the non-leukemic child. The child is not alone in his plight--his illness, and his reactions also affect his parents. In turn their reactions affect the child's response to the disease, therapy, and life in general. This study was an attempt to identify the family role perception of the school-age child with leukemia.

Statement of Problem

The problem of this study was to determine if there is a significant difference between family role perception of school-age children with leukemia and the family role perception of school-age children without leukemia.

Purposes

The purposes of this study were to:

1. Identify the family role perception of the school-age child with leukemia.
2. Identify the family role perception of the school-age child without leukemia.
3. Compare the family role perception of the school-age child with leukemia and the family role perception of the school-age child without leukemia.

Theoretical Framework

The theoretical framework of the study was based on theories of family, stress, crisis, and child development which also includes role perception.

Family Theory

The family may be described in various ways, one of which is to look at the family as a whole, which functions as an entity with its own structure, rules, and goals. As cited by Napier and Whitaker (1978), Hoffman, a family theorist, described the family as a system. Hoffman's definition of family is the following:

. . . any entity the parts of which co-vary inter-dependently with one another, and which maintains equilibrium in an error-activated war.
. . . a "something" with parts, these parts behaving in a predictable relationship with one another, thus creating a pattern that maintains a stable equilibrium by making changes in itself. (Cited in Napier & Whitaker, 1978, p. 47)

Looking at the family as a system, one can see how crisis and stress of a potentially fatal illness, such as leukemia, can disrupt the equilibrium of the family.

Murray and Zentner (1979) referred to the family as a suprasystem composed of individual systems of persons, parents, children, and/or other kin, who collectively constitute the physical components of the family as a system. This study was based on the concept of the family as a system.

Stress Theory

Selye (1976) described stress as the rate of wear and tear on the body. Stress is the nonspecific response of the body to any demand. The author also stated that stress aids the internal milieu in maintaining homeostasis or the staying power of the body. Stress may be caused by pleasant conditions. Unpleasant stress is called "distress" and pleasant stress is called "eustress" (Selye, 1976, p. 74). During both distress and eustress the body undergoes virtually the same nonspecific responses to the various positive or negative stimuli on it (Selye, 1976).

Stress causes certain changes in the structure and chemical composition of the body. The totality of these changes--the stress adaption syndrome--is called the general adaptation syndrome (GAS) which develops in three stages: (a) the stage of alarm reaction, (b) the stage of resistance, and (c) the stage of exhaustion (Selye, 1976). In the tissues of the body directly affected by stress there develops a local adaptation syndrome (LAS); for example, the leukemic blast cells in the blood, bone marrow, and other tissue in the child with leukemia (Selye, 1976). Stress is further described by Selye

(1976) as the common denominator of all adaptive reactions in the body.

There have been isolated observations in research that indicate some relationships between stress, the adaptive hormones, and cancer. General stress tends to suppress cancerous growth. The treatment with large doses of anti-inflammatory hormones tends to inhibit certain cancers. ACTH and COL are effective in slowing down lymphatic cancers and the leukemias. During the alarm reaction and after treatment with anti-inflammatory hormones, the growth of lymphatic tissue and of certain white blood cells, like lymphocytes and eosinophils are inhibited (Selye, 1976).

Crisis Theory

A diagnosis of leukemia creates a state of crisis or disequilibrium not only for the child but also for the family. According to Caplan (1964), there are four developmental phases in a crisis:

1. There is an initial rise in tension as habitual problem-solving techniques are tried.
2. There is a lack of success in coping as the stimulus continues and more discomfort is felt.
3. A further increase in tension acts as a powerful internal stimulus and mobilizes internal and external resources. In this

stage emergency problem-solving mechanisms are tried. The problem may be redefined or there may be resignation and the giving up of certain aspects of the goal as unattainable.

4. If the problem continues and can neither be solved or avoided, tension increases and a major disorganization occurs (p. 40-41)

Aguilera (1978) stated that whenever stressful events occur, there are certain recognized balancing factors that can effect a return to equilibrium; these are perception of the event, available situational supports, and coping mechanisms.

Physical illness, like leukemia, is described as a situational crisis which also has many developmental factors. There is a common view that during the acute phase of any serious illness, like leukemia, a child's emotional state is characterized by fear, since the illness threatens his total integrity as well as his sense of personal adequacy and worth to others (Aguilera, 1978).

The potentially fatal illness of a child leads to an emotional crisis for parents. This crisis is characterized by marked internal temporary interpersonal disequilibrium and the triggering of coping as well as defensive measures to deal with the danger. When the diagnosis is leukemia, the crisis may be prolonged and

the intensity of the threat varies due to the course of the disease. There are a number of dilemmas confronting parents in their adaptive dilemma, parents need to work out a balance between conflicting adaptive tasks (Anthony, 1973).

Child Development Theory

School-age years are characterized as the learning stage--that is, I am what I learn (Erikson, 1959). The child is venturing away from the protective shelter of family and wants to be shown how to do things both along and with others. The child is developing a sense of industry; he feels pleasure when his attention and diligence produce a completed work. Also, there is a development of the cognitive phase which includes the mastery of skills in manipulating objects. Piaget (1963) described this age as concrete operational.

During these middle years, the healthy child is reaching out to his peers, and the home is becoming secondary to him. A sense of adequacy, forming of friendships, and sharing with peers increase a school-age child's self-esteem. The school-age child is forming associations as a member of a social group. Group

activities such as games and sports become very important to the school-age child. Feelings of inadequacy and inferiority may begin if the school-age child does not develop a sense of adequacy. Sometimes family life may not have prepared the child for school, or the school itself may fail to help him develop the necessary skills for competency (Aguilera, 1978).

Illness may cause the child to regress to an earlier developmental stage. Leukemia may interfere with the maturational development of the school-age child. The child's dependency, due to age and leukemia, may cause the parents to become overprotective, thus hampering the normal development of the child. The possible social isolation of the child during his initial treatment phase and following relapses, may interfere with the child's maturational development. Changes in the child's body image, such as alopecia, may decrease his self-esteem. The school-age child desires to be like peers. The child with leukemia may experience many changes in his body which may lead him to project a different body image from his peers (Aguilera, 1978).

Based upon these theories of family, stress, crisis, and child development, this study has attempted to identify the family role perception of the school-age

child with leukemia and the school-age child without leukemia.

Background and Significance

A child is a social being and can never be understood apart from his social environment. To totally assess a child one needs to know his social background; how the child perceives himself his family, and his place within the family. Subconsciously, a child may feel ambivalent or hostile toward his parents, but on the conscious level, he will rarely criticize them. For a child to admit that his parents are inadequate threatens his basic security (Koppitz, 1968).

When children are unwilling or unable to put their hostile attitudes toward parents into words, they can and do express these feelings quite readily in drawings. Drawings can frequently offer insights into a child's interpersonal relationships which other techniques or methods may fail to provide (Di Leo, 1977).

Koppitz (1968) described three different types of drawings that can reveal a child's positive and negative attitudes toward his family. There are spontaneous drawings, human figure drawings, and family portraits. In general, a child will draw a fairly faithful likeness

of himself and others if he has a positive attitude toward the people in the drawing. If the attitude is negative, he will distort and disguise the figures (Koppitz, 1968).

The Draw-A-Family technique is not new; a number of clinicians have written about it. From 1951 to 1958, Hammer (1958), Hulse (1951), and Reznikoff and Reznikoff (1956) found that family drawings reveal a child's attitude toward other members of his family and his perception of his role within the family. Family relationships are expressed by the relative size and placement of the figures on the drawing and by the omissions, substitutions, or exaggerations of the figures or parts of them (Koppitz, 1968).

A family portrait reveals a child's attitude toward his family and is not an exact reproduction of the child's actual family; however, it may be this too. The omission of parents and siblings in the drawing is always highly significant and may be more revealing than their presence in the drawing (Koppitz, 1968).

Drawings are less susceptible than speech to the influence of defenses. More than words can tell, drawings are valuable aids to understanding the child and his problems. Children speak through their drawings more clearly and openly than they are willing or able to do

verbally. There is something very personal about one's drawing, especially if the subject is the human figure, alone or as part of a family group (Di Leo, 1970).

In drawings by children old enough to portray members of the family each doing something (Burns & Kaufman, 1970), the child often reveals the nature of a problem that is rooted in the complex transaction within the family group. The child who excludes himself from his drawing of the family may demonstrate feelings of inadequacy or of not belonging (Di Leo, 1970).

The use of drawings as indicators of intelligence was demonstrated in 1926 by Goodenough and 1963 by Harris. These studies provide a firm base for the validity of drawings. Goodenough's well-standardized and validated Draw-A-Man Test has become widely accepted and used, especially in schools and for research purposes. Some 35 years later, Harris went to great lengths to revise and extend the Draw-A-Man Test, but found that Goodenough's work was so carefully designed and executed that relatively little could be added to improve it. Harris reported numerous studies which show a fairly high correlation between scores on the Draw-A-Man Test and IQ scores from intelligence tests. Harris emphasized a special point in stating that the Draw-A-Man Test measures mental

maturity and is not a test of traits and personality dynamics. There is no doubt that those who are primarily interested in obtaining a Mental Age or IQ score from human figure drawings can use the Goodenough-Harris scoring method with a reasonable degree of confidence (Koppitz, 1968).

Children with leukemia may not understand the purpose of treatments and chemotherapy. Parents and hospital staff may explain these procedures to the child, but the child's perception of illness may produce feelings of inadequacy. School-age children with leukemia should be encouraged to give expression to their feelings; a drawing is a most valuable medium for the release of pent-up destructive feelings (Di Leo, 1970).

A projective technique which has become widely recognized and accepted as a method to facilitate communication with the child about his body has been the human figure or body outline drawing. Cunningham (1971) in her unpublished thesis, stated that the child must be able to

. . . validly and effectively communicate his feelings to persons providing his care. The value of children's art as a technique by which the child communicates about himself is becoming increasingly recognized. (p. 85)

According to Erikson (1959), during the stage of growth and development from 6 to 12, a child develops either a sense of industry or a sense of inferiority. The danger at this stage lies in a sense of inadequacy and inferiority. Erikson (1959) referred to this age as when the child sees society in a wider scope. Society becomes significant in its ways of admitting the child to an understanding of meaningful roles. A child's development may be disrupted when family life has failed to prepare him for school life, or when school life fails to sustain the promises of earlier stages (Erikson, 1959).

During the middle childhood years, the child's social environment expands outside the home. Several of the developmental processes include the child's sex role identification, learning how to interact with peers, and development of various academic skills. The school-age child is testing out his skills against the peer group. At school the child may begin to compare himself with his peers where he is less likely to be supported than in his home. If he has or merely thinks he has any kind of physical handicap or limitation, he begins to view himself as inferior to other children (Blaesing & Brockhaus, 1972).

The 10-12-year-old child is in the throes of body changes and sensations of puberty. This is a period of rapid growth with the girls physically outgrowing the boys. These natural changes increase the child's self-consciousness and focus on his body and the bodies of others (Blaesing & Brockhaus, 1972).

Parents continue to be a vital part of the school-age child's life. The child has identified with the parent of the same sex and through imitation continues to learn his social role. The family atmosphere has considerable impact upon the child's emotional development and future response within the family when he becomes a teen-ager. The child still needs parental support but pulls away from overt signs of parent affection. When the child is ill or threatened by his new status, he turns to his parents for love and protection (Murray & Zentner, 1979).

During the course of growth and development, the child is beginning to form a concept of his own body. The child's mental picture of his own body is unique to each child because it is derived from his individual sensorimotor and affective experiences. The body image of the child is flexible and changes as it becomes necessary for him to make adjustments and reorganize his body boundaries (Blaesing & Brockhuas, 1972).

Anything that makes him different from others influences his perception of self. An example of this is alopecia due to chemotherapeutic drugs. The child does not fully understand why he is bald and 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)

The development of body image, according to Schilder (1935) is continuous, active, and affected by physiological, psychological, and sociological factors. These factors are classified, according to Schonfeld (1963) as follows:

- (1) The actual sensory experience of the individual in regard to his body through the integration from earliest infancy of multiple perception 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. (p. 145)

As stated in the above (3), the family's perception is also important. Perception includes traits, attitudes, values, and frames of reference. Perception is the means by which one comes into contact with the outside environment (Schonfeld, 1963).

The continuously changing body image and perceptions of the child appear to be influenced by many factors. Leukemia may contribute to a changed family role perception. Therefore, research is needed to determine whether the child with leukemia in fact does have a different family role perception in comparison to the child without leukemia.

Hypothesis

To carry out the purpose of this study, the following null hypothesis was tested:

There will be no significant difference between the family role perception of the school-age child with leukemia as identified by the Draw-A-Family Test and the family role perception of the child without leukemia as identified by the Draw-A-Family Test.

Definition of Terms

The following definitions were utilized for this study.

1. Leukemia--a malignant disease due to uncontrolled neoplastic poliferation of leukocyte precursors in the blood, bone marrow, and reticuloendothelial tissues (Nelson, 1975), as determined by a medical diagnosis according to clinic charts.

2. School-age child--a male or female child between the ages of 6-12 years.

3. Family--a suprasystem composed of individual systems of persons, parents, children, and/or other kin, who collectively constitute the physical components of the family as a system (Murray & Zentner, 1979).

4. Family role perception--the way one perceives himself within the family system as measured by the Draw-A-Family Test and Koppitz's 30 Emotional Indicators.

Limitations

For the purpose of this study, the following limitations were identified.

1. There was no control on economic level or social class of any subject.

2. There was no control on the child with leukemia as to the stage or length of disease process.

3. There was no control on previous psychological counseling or intervention with the subjects and/or their families.

4. There was no control on the subject's intelligence quotient.

5. The reliability and validity of the Draw-A-Family Test was not known in the measurement of family role perception.

6. The sample was a convenience sample not based on randomization.

Delimitations

For the purpose of this study, the following delimitations were identified.

1. Group A, the children with leukemia, was obtained from one hematology clinic in a metropolitan area.

2. Group B, the children without leukemia, was obtained from one protestant church in a metropolitan area of over one million persons.

3. Both male and female subjects were included and were 6-12 years.

4. Subjects were able to speak and understand English, draw with a pencil, and see.

Assumptions

The following assumptions to this study were that:

1. Social and psychological deprivation have an effect on a child's development of family role perception.
2. All subjects will draw their family portrait as they perceive the family.
3. Family role perception can be measured by the Draw-A-Family Test and scored by Koppitz's 30 Emotional Indicators.

Summary

The problem in this study was to determine if there is a difference in the family role perception of the school-age child with leukemia compared to the family role perception of the school-age child without leukemia. The school-age child is in a unique period in his development of body image. Fatal or terminal illness, like leukemia, poses a threat to the school-age child's completion of this developmental task and is, therefore, a threat to his perception of his role within his family.

At the present time no known nursing research has been conducted to identify the family role perception of children with leukemia. Knowledge of such perceptions may enable nurses and other health care professionals to

assist patients and their families to understand the change in the child's perception of his role within the family if any difference is identified.

CHAPTER 2

REVIEW OF LITERATURE

This chapter presents an overview of the psychosocial development of the school-age child. The concept of family, as a system, and development of family role perception will be reviewed along with leukemia and its psychosocial implications for the school-age child will be discussed. Children's art will be traced through the developmental phases and discussed as a tool for identifying family role perception.

The Family and School-Age Children

Typically the American family today consists of 4-6 persons who maintain from 6-15 interpersonal relationships within the family. The age range for all family members is from infancy through, plus or minus, 40 (father) with the eldest child being a school-ager. Parental crisis continues to be that of self-absorption versus finding fulfillment in rearing the next generation. The school-age child's developmental crisis is risking a sense of inferiority as he develops the capacity of work enjoyment (industry). The family developmental task

revolves around the major goal of reorganization to make way for the expanding world of school-agers (Murray & Zentner, 1979).

Development of the School-Age Child

The school-age period is often termed the "latent" period, but the child is far from latent in that he is continuing his struggle and striving toward developmental maturation. Peers become an important component and directive in the development of the child. Erikson (1959) stated that the major developmental crisis of this period is to acquire a sense of industry as opposed to a sense of inferiority. The socialization process of this period can either accomplish a realization of competency or develop a sense of inferiority for the child. The understanding of the psychosocial development of the school-age child is imperative to achieve a higher level of understanding of the child and the effect of various stresses upon him (Chinn, 1979; Erikson, 1959; Maier, 1969).

During the school years, the family loses a great deal of influence to the child's peer group. The school-age child is caught in two worlds--that of adults and of children. The child cannot successfully compete

in the adult world so he turns to his peers. The school-age child judges himself and his accomplishments against his peers to measure his own worth and skills. To accomplish the task of development during this period, the child must have a sense of accomplishment as he strives to be successful in his tasks (Briggs, 1970; Chinn, 1979; Maier, 1969).

Next, the child moves into the concrete operation period; he begins to incorporate his peer's point-of-view into his own. The socialization process becomes a more acceptable two-way, give-and-take form. With this developmental process, the child becomes less selfish, less self-centered, and less aggressive and becomes more cooperative, out-going, and group conscious (Hurlock, 1972; Piaget, 1963). This is an important part in the child's development because acceptance by peers is a necessary goal to be reached in this stage. In developing his capacity to communicate with others, he is gaining in the cultural tools that will be necessary for healthy socialization (Chinn, 1979; Hurlock, 1972; Maier, 1969).

During the school-age years, boys and girls segregate and form separate groups. The child finds it more appropriate to judge oneself against a member of the same sex than against the opposite sex because of the different

cultural and sexual tasks that are expected of the child (Brown, 1975; Gesell & Ilg, 1949; McCollum, 1975).

The school-age child has a desire to learn about the biological aspects of sex and the body. This natural interest in the body can be shared with peers; they can gain reassurance that others also utilize their body to reduce tension and produce comfort (Chinn, 1979; McCollum, 1975).

A sense of belonging becomes increasingly important to the school-age child as he grows and matures and gains increasing independence (Maier, 1969; McCollum, 1975).

"The focus has shifted, then from dependence upon the parent as the child's major influence, to dependence upon social institutions" (Maier, 1969, p. 56).

The school-age child comes into contact with other children in school forming groups that share common characteristics, such as team sports and scouting. These types of groupings are utilized by children to meet their social needs since they do not yet fit into the adult world. The school-age groups have developed more structure than the groups of younger children; there is a definite leadership and hierarchy. Each child must earn his place in the hierarchy of the gang by his abilities, skill, and looks (Briggs, 1970; Gesell & Ilg, 1949; Hurlock,

1972; Scipien, Barnard, Chard, Howe, & Phillips, 1975).

Ritual and rigid rules of conduct, achievement, and appearance are expected by the peer group. Children conform most to the rules set up by the group. The child must conform, and sameness is necessary to successfully enter a group (Briggs, 1970; Chinn, 1979; McCollum, 1975).

The child may be loved and accepted in the home just because he exists and is a member of the family. The same child must prove himself among his peers, and he becomes valued by his peers for what he achieves. The child may have been protected in the home, but as he moves into the school-age period, he finds he cannot always fit into a group. If the child has difficulty fitting into a group, it may cause negative reflections for the child, as well as a lack of opportunity to practice the art of relating to others. The child needs his peers against which to judge himself or he cannot accomplish the task of this stage which requires competition among peers (Briggs, 1970; Mussen, Conger, Janeway, & Kagan, 1974).

High status in the group builds a positive self-concept in children, while lack of status and security results in unpopularity, dissatisfaction with self, and lack of self-esteem (Scipien et al., 1975, p. 165).

Identification becomes an important proponent in the development of the child's behavioral pattern during

the school-age years. In the process of identification, the child originally may select the parent of the same sex for his role model, but he may transfer his identification to other adults, usually of the same sex, that he views as admirable. By identifying with this role model, he begins to understand sex-appropriate behavior and attitudes (Briggs, 1970; Chinn, 1979; Maier, 1969).

Reality is more important to the school-age child than fantasy play, and thus he becomes more involved in learning by doing. The child has much to learn in various fields such as science, math, language, and socialization skills and is constantly striving to meet these deficiencies (Maier, 1969; Scipien et al., 1975).

The school-age period is a time when the child is aware of his need to learn about a wide variety of areas and tries out his newly-acquired knowledge and skills against and with his peers. Through a successful combination of widening skills and knowledge and socialization, the child can achieve a sense of industry (Maier, 1969).

The developmental crisis for this period is industry versus inferiority. Industry is an interest in doing the work of the world, the child's feeling that he can learn

and solve problems, the formation of responsible work habits and attitudes, and the mastery of age-appropriate tasks. The danger of this period is that the child may develop a sense of inferiority, feeling inadequate, defeated, unable to learn or do tasks, lazy, unable to compete, compromise, or cooperate, regardless of his actual competence (Erikson, 1959; Murray & Zentner, 1979).

Until the child is school-age his self-perception is derived primarily from his parents' attitude and reactions toward him. If the child has been loved for what he is, he has learned to love and accept himself. If his parents' reactions have been rejecting, if he has been made to feel ugly, ashamed, or guilty about himself or his behavior, he enters school feeling that he is bad, inadequate, or inferior. A positive self-concept is important for happiness and personality unity. A negative self-image causes the child to feel defensive toward others and himself (Erikson, 1959; Murray & Zentner, 1979).

The child compares himself with and is compared by peers in appearance, motor, cognitive and language ability, and social skills. Cultural attitudes also affect self-concept. The perception and reaction of the teacher, nurse, and parent are extremely important. The

school experience may either reinforce or weaken the child's feelings about himself as a unique, important person, with specific talents or abilities (Erikson, 1959; Murray & Zentner, 1979).

Family Role 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 memories or learning (Palmer, 1965).

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)

Perception brings one into contact with the outside environment and enables one 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, doubtlessly often blurred and chaotic, the infant and child gradually move to perceptions which are more differentiated and, in time, integrated.

The school-age child's family role perception is developed in several ways. According to Murray and Zentner (1979), the family structure, developmental level, and roles of family members--their health status, their perception of baby, and community resources for the family--influence the child's development and well-being. The child learns to behave differently, and as an adult he will have different values and expectations if he is reared in a single-parent, nuclear, extended, matrifocal, or patriarchal family or if he is reared in a poor or wealthy family. The number of siblings, their sexes, and birth order influence how the child is treated and perceives himself.

The family forms the earliest and most persistent influence in the life of infants and young children. Di Leo (1970) discussed Freud and Burlingham's (1944) study of how children without families have observed

children living in residential nurseries who have emotions that would normally be directed toward parents remain undeveloped and unsatisfied, but latent in the child and ready to leap into action the moment the slightest opportunity for attachment is offered.

As the child grows older, interest and feelings are extended to include people outside the family circle. Outside factors become increasingly influential in shaping attitudes and behavior, but the family or the lack of it continues to be the basic, most determining influence because it was there that the child learned or should have learned how to deal with his own and other people's feelings (Di Leo, 1970).

Human Figure Drawing

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,
4. The easy estimation of drawing age.
(Bakwin & Morris, 1966, p. 259).

Machover (1953) stated 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. . . . 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. (p. 5-6)

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 judgments that the test derives (Machover, 1953).

A projection of body image, figure drawings, is believed to be an expression of the child's knowledge of the body. Projection of attitudes toward a significant person or denial of existing deformities or preoccupations or anxieties concerning existing 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 (Machover, 1953; Murray & Zentner, 1979).

The art of young children everywhere is identical. Art comes from the same beginning and uses the same shapes found in primitive art. The walls of tombs and the shapes of ancient pottery and the finger paintings of today's child each bear the same testimony--that in art

all mankind is one (Kellogg, 1967). Not until the weight of culture lays a burden upon the child can the art of one country and century be told from that of one another. The child then assumes the style of his own time and place (Kellogg, 1967).

Children's drawings of the family are valuable expressions of their feelings and how they view the transactional patterns within the family. When children are asked to Draw-A-Family, the response will tend to be colored by affective elements. This mobilization of feeling confers upon it significance as an expression of the child's emotional life. The family drawing can be reviewed as an unstructured projective technique that may reveal the child's feelings in relations to those he regards as most important and whose formative influence is most powerful (Di Leo, 1970). As a projective technique, the family drawings are especially revealing during the child's latency period between 6-10 years (school-age years), when graphic expressions are free from cultural pressures that tend to make them more conforming and less individual (Di Leo, 1970; Erikson, 1959).

Di Leo (1970) stated that children of school-age years will eagerly draw a family. The author identified

that items of importance to the child will be expressed by size and location with the lowest at the end of a row or even omitted. Affinity may be indicated by proximity or similarity of attire, rejection by relegation to the end, or elimination by representing the sibling as a worm. Expression may be explicit but is more typically symbolic according to Di Leo (1970). The author also indicated that when giving instructions to a child to draw a family, one should not tell the child to include self. Who shall be included or omitted from the drawing of the family is entirely and most significantly up to the child alone. How the child sees himself in relation to those who count most in his life is one of the most revealing aspects of the Draw-A-Family Test (Di Leo, 1970; Koppitz, 1968).

The Draw-A-Family Test is probably the most valuable of the projective techniques in that it is not dependent upon the child's willingness or ability to give verbal expression to his emotional conflict. In the family drawing, one may see how the child views himself in relation to those who count most in his life. To recognize the value of expressions of feelings are more revealing than words (Di Leo, 1970; Koppitz, 1968).

Di Leo (1970), as well as Koppitz (1968), placed emphasis on emotional indicators as to the family relationships. Di Leo (1970) stated the child will tend to place himself next to the favored parent or sibling with whom the child is in good rapport. The child will use size to express the importance attributed to a person.

The family drawing is not a test of mental ability, as is Goodenough's Draw-A-Man Test. The product is highly colored by the child's feelings; as a result the response is predominately emotional. The child tells how he feels about himself and his family and less about what he knows (Di Ldo, 1970; Goodenough, 1926; Koppitz, 1968).

Children usually express themselves more naturally and spontaneously through actions rather than through words. Figure drawings provide an excellent method of exploring the world of the child. Drawing tests are simple to administer, non-threatening, and can be used where other techniques are limited by such factors as language barrier, cultural deprivation, and inability to communicate (Burns & Kaufman, 1970; Di Leo, 1970; Koppitz, 1968).

Analysis of human figure drawings, as a psychological test, was first done in 1926 by Goodenough.

The Draw-A-Person Test became an accepted and widely-used psychological test of intelligence. In 1948, Buck introduced the house-tree-person technique. The author proposed that the test aided the clinician in obtaining information concerning the sensitivity, maturity, flexibility, and degree of personality integration through analysis of the person. This was one of the first uses of human figure drawings as a psychological projective test (Burns & Kaufman, 1970).

Machover (1953) discussed some of the qualitative aspects related to psychopathology in human figure drawings. The earliest reports found in the literature on family drawings are those by Hulse (1951). Aside from the studies by Reznikoff and Reznikoff (1965) and Shearn and Russell (1969), no other reports on Draw-A-Family could be found in the journal literature. Hammer (1958), Koppitz (1968), and Di Leo (1970) discussed the use of Draw-A-Family in their comprehensive books (as cited by Burns & Kaufman, 1970). In 1970, Burns and Kaufman described a method of simply asking children to draw the members of their families doing something. These authors anticipated that the addition of movement to the akinetic drawings would help mobilize a child's feelings not only as related to self-concept but also in the area of

interpersonal relationships. This was found to be a reality from Burns and Kaufman's study in 1970.

The Child with Leukemia

In comparison to adult leukemia, the diagnosis of acute leukemia of childhood is very rare. In the United States there are approximately 11 children per 100,000 annually who develop cancer of any form, including about four out of 100,000 children who develop leukemia (Evans, 1976).

The composite picture of the "typical" child with leukemia is as follows: a median age of 6 years; signs and symptoms of pallor, fever, fatigue, and pain; and a duration of these symptoms for about 4 weeks. A physical examination reveals moderate enlargement of the liver, spleen, and nodes, but hemorrhage is not apparent to any great degree. The hemoglobin is 6 gm%, the leukocyte count $12,000/\text{mm}^3$, platelets $35,000/\text{mm}^3$, the peripheral blood shows a significant number of blasts, and the bone marrow is completely replaced with leukemic cells. The majority of children with leukemia have some circulating blasts which are usually sufficient to alert the physician that the picture reflects a malignant disease (Evans, 1976).

Examples of carefully-designed studies of treatment for leukemia can be obtained from St. Jude's Children's Research Hospital. The current aim in the treatment of leukemia is to reduce the cell numbers to the smallest fraction at the start of the treatment before resistance occurs. If the cell population can be reduced to a very small number, perhaps that population may finally be dealt with by an immune mechanism recognizing an abnormal cell. In 1960, the first three studies at St. Jude's achieved a higher remission rate and remission of a longer duration than had been obtained previously. This resulted in a 20% long-term remission at 5 years (Evans, 1976; Nelson, 1975).

The main problem in the treatment of leukemia involves disease in the central nervous system (CNS), where relapses can occur because of the blood-brain barrier to most anticancer agents. All regimens now include some CNS treatment since more than one-half of the children with leukemia will develop this complication. The studies at St. Jude's included various schedules of intrathecal methotrexate and/or radiation therapy. The remission rate remained the same, but the survival rate of 5 years exceeded 50% (Evans, 1976; Nelson, 1975).

Additional treatment methods include bone marrow transplantation and total bone irradiation. Thomas and colleagues in Seattle are doing outstanding work in this area. Bone marrow transplantation is recognized today as one mode of treatment. One of the primary side effects of the treatment is immunosuppression. After the patient overcomes the various infectious episodes and complications of graft-versus-host reaction, the prospect of a functioning marrow graft and leukemia remission is excellent (Evans, 1976; Nelson, 1975).

During the last 20 years, some children with leukemia have been followed to adulthood and now have children of their own. Why some children with minimal treatment have survived and are considered cured, while others with more extensive treatment have not survived is still a mystery. In talking with parents of newly-diagnosed children with leukemia, emphasis is placed on treatability not curability (Evans, 1976).

In summary, cancer is the number one cause of death from disease in children between 1-15 years of age. The incidence is approximately 10 per 100,000 children annually. Acute leukemia is the most common malignancy; it occurs in nearly four per 100,000. Acute leukemia in children may be considered a primary disorder of the

bone marrow in which the normal marrow elements are replaced by immature or undifferentiated blast cells. When the quantity of normal marrow has been depleted below the level necessary to maintain peripheral blood elements within normal ranges, anemia, neutropenia, and thrombocytopenia follow (Evans, 1976; Fernbach & Starling, 1975; Nelson, 1975).

Psychological Factors of the Child with Leukemia

Hardgrove (1972) devoted considerable attention to the concept of having parents of hospitalized children live in the hospital with their children. Having parents live-in means the child does better, the parents take a positive role by participating in the care. Fernbach and Starling (1975) stated that explanations of events should be presented to the child in a forthright, honest manner. Once the school-age or even older preschool children grasp the concept that they have "passed" or "failed" their bone marrow or peripheral white blood cell tests, they quickly comprehend the reasons for social isolation or changes in medications. Lack of direct communication between the health care professionals and the child can result in catastrophe because fear of

the unknown exceeds the concern about bad news that is accompanied by a logical explanation.

Peers are crucially important to the school-age child; their opinions can have a major influence on his self-esteem. At home, in a normally devoted family, he has been loved and valued as a family member just because he exists. Among his peers (and the adults associated with them, like teachers, coaches, Scout leaders), the child is valued for what he achieves. At home, he is judged and treated as an individual with particular significance to his family. Among his peers, the child is judged as a member of a group in relation to collective standards of behavior, like taking a dare. He may take a certain position as a leader or follower, and be expected to carry out certain responsibilities. The judgments and opinions of peers may help the child develop a more realistic conception of himself than he would develop within his family alone (McCollum, 1975; Murray & Zentner, 1979).

The school-age child is striving to gain independence from his family. In time older children develop a compassion, feeling of empathy for others, and tolerance for individuality. However, the need for conformity probably peaks between 10-12 years of age. During this

period, group expectations and judgments can be harsh. All children, healthy as well as ill, experience moments of anguish when they feel they deviate or fail to measure up (McCollum, 1975).

Being different becomes a reality to the child with leukemia. His appearance may be changed either by the disorder itself or by the medical treatment he receives. The differences are observed by his peers, who are interpreted or misinterpreted and commented on according to their attitudes or level of understanding (McCollum, 1975).

The family of a child with leukemia may try to spare him the knowledge of his diagnosis. However, the conspiracy of secrecy is the very thing that has been found to be the most terrifying to the child. Without realistic knowledge, forced to construct theories in his imagination which are apt to be more frightening than reality, his fears have no boundaries and he feels utterly alone (McCollum, 1975).

Providing the child with some appropriate information can help to reduce his anxiety. Information about his illness can be useful to a child only if it is given in terms he can understand. Knowing is a way of feeling in charge. Truth offers a base for problem solving.

This information enables the ill child to make judgments that gradually help him toward independence in managing his medical needs. Knowing helps the child meet the challenge of revealing his needs and problems to his peers. The knowledge helps to immunize him against feeling suddenly overwhelmed by their statements or questions. Being told allows the child to communicate with his parents about the illness and prevents him from feeling utterly alone (McCollum, 1975).

Hospitalization during relapses of leukemia becomes a source of stress for the school-age child. He has many fears like fear of loss of control, exposure, social disadvantage, abandonment, and permanent physical disability and possible death. The responses to stress characteristic of early childhood continue to be observed up to the teen years. The child's reaction to stress may take several forms, such as regression, withdrawal, compliance, protest, denial, and projection. When a child is able to master such difficult experiences, considerable mental and emotional growth often result (McCollum, 1975).

Youngsters who are critically ill in mid-childhood can, with sensitive and compassionate care, continue to feel well supported even if they must finally die.

Supportive communication is an essential ingredient of compassionate care. A child who feels surrounded by a conspiracy of secrecy and silence among the adults, who observes that they evade his questions and avoid listening to his fears, may yield to despair because he feels abandoned to face his destiny in isolation. In contrast, a child who has a trusted adult available to listen and respond to his concerns, one who understands his needs for realistic reassurance, may find it possible to sustain hope to the end (McCollum, 1975).

During relapses for the child with leukemia, hope may narrow and be focused on the thought that there will be another medication to free the child of discomfort. The child has a right to know the plan of care for him. In the end as death approaches, nothing may matter more to the child than the trusted hand he holds (McCollum, 1975).

The Family and the Child with Leukemia

The parents of the child with leukemia are confronted with severe stress that continues over a protracted period. Assistance for parents in developing meaningful relationships with helpful persons and resources in the environment can provide an effective stress-mediating

system and can help cushion the impact of stress on the parents (Mann, 1974).

The parents of children with a diagnosis of leukemia are in a crisis situation that may involve serious loss. Parent's emotional response to the precarious situation produce the crisis. Caplan (1964) described four phases of crisis. In the first stage, tension rises, from the initial impact of the crisis event, and habitual problem-solving responses are called upon. In the second stage, the failure of these responses increases tension. Third, the continuing increase in tension leads to the mobilization of external and internal resources that may resolve the crisis. Finally, if the crisis is not resolved, tension increases and leads to disequilibrium.

When the diagnosis is leukemia, the process is not simple. The parent may have achieved relative equilibrium after an initial period of diagnosis only to be upset by the child's relapse. Reorganization may be difficult to achieve if relapses occur in rapid succession (Caplan, 1964; Mann, 1974).

Erikson (1959) distinguished situational crisis arising from environmental sources from developmental crisis resulting from the task of maturation. In the instance of leukemia, both types of crisis may operate.

An example would be the developmental issues of separation in the young child may affect the situational crisis of illness so that tasks and issues of both situational and maturational crisis are not clearly separate (Erikson, 1959).

Parents progress through a series of reactions as they learn to cope with the threatened loss of their child. Initial reactions as denial, self-injury, refusal to believe the diagnosis (or reversing it) and disbelief are common (Kubler-Ross, 1970; Steele, 1977). Emotional stress causes the human body to react with physiological change. A pounding heart, breathlessness, trembling and perspiring hands, pallor, dry mouth, digestive upsets and frequent urination are among the many common bodily expressions of fear, anger, or sorrow (Kubler-Ross, 1970; McCollum, 1975; Selye, 1976).

The parents may feel a need to fight the disease. They may attack in several ways like mastering the home-treatment program for the child (diet, medication, physical therapies) and by planning for future treatment needs (organizing donors to insure an ample supply of blood should transfusions be needed). Parents may join with others to educate the public about leukemia, or raise funds for medical research (McCollum, 1975).

When the diagnosis of leukemia confronts a family, safeguarding the family relationship is important. Parents who face the threat of their child's illness and their own fear of loss, need the comfort of closeness and human warmth. The threat to their child, rather than drawing them together, can alienate them. Even close couples may sense the strain while others feel like hostile strangers. The coping style of husband and wife may be different causing one or the other to feel abandoned (McCollum, 1975).

Children usually do not want to be sick, and they attempt to camouflage their illness. The child with a medical condition, such as leukemia, is greatly concerned by the new situation. Introduction of a large number of medications, painful diagnostic procedures, and irradiation therapy is difficult enough for the child to cope. The child does not need to make changes in the environment and will readily note changes in the way the adults in his life respond to him (Steele, 1977).

Children, whether the sick child or sibling, readily give their own interpretation to the parents' changes of mood, withdrawal of attention, and actual absences. Too often, the children may conclude that the parents have lost interest in them, stopped loving them, and this may be

because they are not lovable. The siblings may feel resentful toward the ill child who seems favored (McCollum, 1975).

The nurses' response to the family has been studied by Bozeman, Orbach, and Sutherland (1955) and Friedman, Chodoff, Mason, and Hamburg (1963). The studies asserted the need for nurses to work with parents rather than be in conflict with them. The parents and child feel more secure and satisfied when explanations are given to them. The additional time spent by the nurse with the family is a source of great comfort to the parents and child and indirectly aids the nurse also. There is less parent anxiety and resulting questioning when treatment plans are implemented (Steele, 1977).

Summary

This chapter presented the school-age child's developmental level, concepts and development of family role perception, and the psychosocial effects and stress of leukemia on the child and family. Also included was a discussion on art and its use as a projective technique. The aspects presented indirectly support the need to study the family role perception of the school-age child with leukemia.

CHAPTER 3

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This study was concerned with comparing the family role perception of school-age children with leukemia who attended a hematology clinic to the family role perception of school-age children without leukemia. The literature reviewed reinforced the concept that family role is important to the school-age child and that alterations in family role might be reflected in the manner in which a child draws the family in the Draw-A-Family Test. This study utilized ex post facto method of research as described by Isaac and Michael (1977).

Setting

The study was conducted in two settings. One setting was in a hematology clinic in a non-profit, private, 117-bed children's hospital in a metropolitan area of over one million persons. The clinic charts provided the information from which the subjects were chosen and contacted. In this setting, a well-lighted office was used to administer the tool. The second setting was a protestant church located in the same metropolitan area

of over one million persons. In this setting a small, well-lighted, air-conditioned classroom was utilized for data collection.

Population and Sample

Group A consisted of 12 children with leukemia, ages 6-12 years. The 12 children were selected by the convenience sample method from a larger group of school-age children at a hematology clinic in a 117-bed children's hospital located in a metropolitan area of over one million people. The clinic charts provided the information from which the subjects were chosen and contacted. The restrictions for this group were that the children were not newly diagnosed and were not in the terminal stage of the disease process.

The control group consisted of a total of 18 children, ages 6-12 years. The population for the control group was selected by the convenience sample method from a larger group of school-age children at a protestant church which is located in a metropolitan area of over one million persons. Both males and females were represented. There were the restrictions that the subjects did not have any physical handicaps or limitations and were not under

medical supervision for any health problem. This health information was determined by questioning the parents.

Description of the Tool

Two instruments were used: (a) Draw-A-Family Test, and (b) Parent Questionnaire to describe the family system of each child. Koppitz (1968) developed a scoring device to be utilized with the human figure drawing to promote ease of testing and objectivity. Emotional Indicators, a scoring device, which originally contained 38 items, was basically derived from Koppitz's (1968) own clinical experience and research and Koppitz's summary from Hammer (1958) and Machover's (1953) writings.

Koppitz (1968) developed criteria that the items must meet on the human figure drawings to be considered Emotional Indicators. The 38 Emotional Indicators which fit the second and third criteria were selected and a normative study utilizing 1,856 boys and girls, ages kindergarten through sixth grade, was carried out to determine whether the criteria could be met. In this study two of the 38 original items met the criteria (Koppitz, 1968).

To provide validity that these Emotional Indicators could in effect show differentiation between human figure drawings of children with and without emotional problems

and behavior systems, Koppitz (1968) designed a validity study. In this study 76 pairs of public school children, ranging from 5-12 years of age, were matched for age and sex. Group A consisted of students selected by their teacher as students with good social, emotional, and academic adjustment. The study was significant and showed validity of the test in that:

It was found that 58 of the 76 subjects in Group B, or three-fourths of all well-adjusted pupils, exhibited no Emotional Indicators at all on their HFD's. Only seven of the clinic patients in Group A drew figures without Emotional Indicators. (Koppitz, 1968, p. 41)

Thirty of the 32 items were considered valid.

The validity and diagnostic value of the Emotional Indicators became even more evident when all the test items were considered instead of each individual item. By considering the study this way, it indicated that two or more Emotional Indicators on a human figure drawing are highly suggestive of emotional problems and unsatisfactory interpersonal relationships exists within a family. Less than two Emotional Indicators indicate a child with a healthy family relationship. The Draw-A-Family Test speaks to interpersonal relationships that exist within a family (Koppitz, 1968).

Based on the preceding research and the review of the literature, the human figure drawing in a Draw-A-Family Test scored by Koppitz's 30 Emotional Indicators (Appendix A) is the instrument that was utilized in this study. In this study only the subject within the family was scored and not the total family members.

Collection of Data

Written consent from the hospital was obtained prior to the administration of the test (Appendix B). After consent was received from the Human Rights and Research Review Committee of Texas Woman's University (Appendix C), the investigator had an interview with the hospital administration. At the hematology clinic, the investigator verbally explained the purpose of the study to the parent(s) and obtained their written consent (Appendix D). At the clinic the investigator verbally explained the procedure, the possible associated risks and ways of alleviating the risks, and possible benefits to Group A subjects and the parent/legal guardians. The investigator answered questions from the parents at this time. The parents were asked to complete a questionnaire (Appendix E).

Written consent from the protestant church was obtained prior to the administration of the test (Appendix

F). The investigator had an interview with the educational director and the youth director of the church. The parents of potential subjects in the control group (B) were contacted individually by the investigator, and the purpose of the study was verbally explained. A written presentation form (Appendix D) was presented to the parent(s) to read and the investigator read the form to them. After receiving signed consent from the parent(s), stating that they understood their involvement and agreed to have their child participate, each child was approached on a one-to-one basis by the investigator. The investigator introduced herself to each subject and informed him that the purpose of the encounter was to study drawings done by children. The child was informed that whatever was drawn was acceptable. The child was given the opportunity to verbally refuse to participate in the study or to agree to participate in the study by his signature.

Administration of the Draw-A-Family Test for Group A was completed in a small, well-lighted examination room in the clinic area of a 117-bed children's hospital. Group B data were collected in a small, well-lighted room in a protestant church. The Draw-A-Family Test was administered to each child in both group A and B

on a one-to-one basis. There was a maximum time limit of 30 minutes for the child to complete the drawing. However, each child completed the drawing within a 15-minute period.

Each subject was asked to draw his family on a blank sheet of white paper, size 8-1/2 by 11 inches with a number two pencil. The investigator stated: "I would like you to draw a picture of your whole family; you can draw it any way you want to." Anything the child drew was accepted. When the picture was completed, the investigator asked the child to identify the figures in the drawing.

Each judge was given the 30 Emotional Indicators, as designed by Koppitz (1968). The listing of the Emotional Indicators was attached to a drawing with a coded number. All three judges stated that they were familiar with Koppitz's criteria. The judges were told to score only the subject within the family.

Three judges representing the fields of nursing and psychology worked independently of each other in scoring the drawings. The judges were chosen because of their interest in children, professional background, and their use of children's art in their thesis and their work.

Judge I was a private nurse practitioner in the field of clinical psychology. She utilizes play therapy and art in her work with children. She is currently completing her doctorate in psychology.

Judge II had experience and background in working with children and their art. She has worked in the psychiatric unit in a children's hospital and is teaching nursing with a clinical focus in pediatrics. She received a Master of Science degree with a major in nursing in 1976.

Judge III had experience as a pediatric staff nurse and presently teaches nursing with a clinical focus in pediatrics. She used children's art in her thesis for her Master of Science degree in nursing in 1978.

To provide anonymity to each subject, the drawings from Group A were coded A1-A12 and Group B drawings were coded B1-B18. All drawings were checked by the judges for the presence of the 30 Emotional Indicators. The judges were unaware of the subject group membership. Each drawing was scored on a separate score sheet. One point was assigned for each Emotional Indicator present on the drawing to give the total number of Emotional Indicators. After the scoring was completed, the drawings and score sheets were separated into identified

groups. Tables were used for presentation of the test results.

A comparison of the family role perception of the school-age child with leukemia, who is attending a hematology clinic, and the family role perception of the school-age child without leukemia was based on the 30 Emotional Indicators present on the Draw-A-Family Test as described by Koppitz (1968). The Draw-A-Family Test of each subject was scored for the presence of Emotional Indicators. A nonparametric test was used to compare the scores because the data consisted of frequencies and the sample was not taken from a normally distributed population. Chi-square was used to test for the significant difference in family role perception between the control group and the group with leukemia at the .05 level of significance.

Summary

This chapter has described the research study's setting and population. Koppitz's 30 Emotional Indicators Test was discussed. The method for collection and treatment of data to determine the child's family role perception was presented.

CHAPTER 4

ANALYSIS OF DATA

This study was conducted to compare the family role perception of school-age children with leukemia to the family role perception of school-age children without leukemia. Data were collected through the use of the Draw-A-Family Test utilizing Koppitz's 30 Emotional Indicators as the scoring system. Three judges independently scored the drawings. Chi-square was used to test for the significant difference in family role perception between the control group and the group with leukemia to the .05 level of significance.

Description of Sample

The sample was chosen by the convenience sample method and consisted of 30 males and females between the ages of 6-12 years. The group (A) with leukemia had seven (58.3%) males and five (41.6%) females. Two males from the sample with leukemia refused to participate in the study, and one male from the control population refused. One subject from the control group omitted herself from the family drawing, and consequently was

not scored by the judges. Table 1 illustrates the sex distribution of the subjects by group classification.

Table 1
Sex Distribution of Sample

Group	Male	Female	Total
A - Leukemia	7	5	12
B - Control	<u>9</u>	<u>9</u>	<u>18</u>
Total	16	14	30

N = 30.

Difficulty was experienced in obtaining a sample of subjects with leukemia because each subject was screened by the hematology clinical nurse specialist according to specific criteria determined by the hematology staff. Actual screening of the subjects was done by the hematology clinical nurse specialist from August, 1979 through December, 1979 in the hematology clinic held on Tuesday and Wednesday mornings of each week between 8:00 a.m. and 12:00 p.m. The 12 subjects with leukemia (Group A) were not in the early diagnostic stage of illness nor in the terminal stage of the disease process and were attending school. The 12 subjects with leukemia had

completed their initial chemotherapy and has been in remission for 3-6 months.

The control group was selected by the investigator by verbally contacting the parents of the subjects between the ages of 6-12 years who attended a protestant church in the same metropolitan area. A list of subjects who attended the church was obtained from the educational director and youth director. Collection of the data on a 1:1 basis was obtained at the church during the Wednesday night and Sunday night youth activities held from 6:00 p.m. to 9:00 p.m. August, 1979 to December, 1979. The control group (Group B) consisted of 18 school-age subjects who did not have any physical restrictions and were not under medical supervision for any health problem.

Table 2 presents the age distribution of the sample. The average age of the subjects with leukemia (Group A) was 8.83 years while the average age of the control group (Group B) was 9.4 years.

To further describe the family system for the sample, the parents of both groups of subjects answered the questionnaire (Appendix E) soliciting information about the subject while the subject was performing the drawing. Nine of the families with a subject in Group A had two or more children. One of the families with a subject in

Table 2

Age Distribution of Sample

Age (Years)	Group A Children with Leukemia	Group B Control Group	Total
6	4	3	7
7	1	1	2
8	1	0	1
9	1	4	5
10	1	3	4
11	0	4	4
12	<u>4</u>	<u>3</u>	<u>7</u>
Totals	12	18	30

N = 30.

Group A indicated that other people besides the immediate family lived with them. The data acquired from parents of the control group (Group B) indicated that all 18 families had two or more children. Two of the control group families had other people besides the immediate family living with them.

Information was requested from the parents regarding any crisis situation which might have occurred in the preceding year. Two parents of subjects with leukemia

(Group A) listed a crisis situation. Divorce was indicated as the crisis in both situations. None of the families in either Group A or Group B indicated their child had problems in school. Each mother in both groups indicated that she was the major provider of care when the subject was ill.

Scoring of the Drawings

Data were obtained through the use of the Draw-A-Family Test utilizing Koppitz's 30 Emotional Indicators (Koppitz, 1968) as a scoring device. The 30 drawings of the child figure only in the family were scored independently by three judges who represented the fields of nursing and psychology. Total Emotional Indicator scores for each of the drawings of the child ranged from the lowest possible score of 0 to a score of 9. Each Emotional Indicator represented on a drawing was assigned 1 point according to Koppitz, 1968. Certain Emotional Indicators are normally present at a specific developmental age with respect to the sex of the subject as a normal occurrence, and thus, are not scored. Therefore, age and sex were utilized in the scoring of the drawings. The range of their highest possible scores varies according to age and sex of the subjects. The

younger the subject the lower the highest possible score. Appendix G indicates each individual subject's group placement, age, and scores assigned by Judge I, Judge II, and Judge III.

The three judges' score for each of the subjects was compared. None of the three judges agreed on the number of Emotional Indicators present in the drawings by the subjects with leukemia. Three of the judges had agreement on four scores of drawings of the child of the control group. Two of the three judges agreed on the scores of the drawings of nine of the subjects with leukemia. Two of the three judges agreed on the scores of 11 of the control subjects. The three judges agreed on three scores of the subjects of the control group. There was no agreement of the three judges with three subjects with leukemia. There was no agreement of the three judges with four subjects in the control group. See contingency table 3.

Test of the Hypothesis

To test the hypothesis, there will be no significant difference between family role perception of the school-age child with leukemia as identified by the Draw-A-Family Test and the family role perception of the child without

Table 3

Agreement of Judges for Koppitz's
Total Emotional Indicators

Group	3 Judges Agree	2 Judges Agree	No Agreement	Total
A - Leukemia	0	9	3	12
B - Control	<u>3</u>	<u>11</u>	<u>4</u>	<u>18</u>
Total	3	20	7	30

N = 30.

leukemia as identified by the Draw-A-Family Test, a comparison of the scores of Koppitz's Emotional Indicators based on the mean of the scores of the three judges was made using the Chi-square analysis. This particular comparison is based on Koppitz's assertion that with a score of two or more indicators, a child may have possible interpersonal relationship problems; therefore, the scores in each group were divided into two categories: 0-1 and 2 or more indicators. Table 4 illustrates the number of drawings by the subjects in Groups A and B according to the number of indicators present in the drawing. Based on the computed Chi-square ($\chi^2 = .16$, $df = 1$) with an associated probability value of $p = .693$, the null hypothesis was retained.

Table 4

Number of Emotional Indicators Present
in Drawings by Groups A and B

Number Emotional Indicators	Group A Children with Leukemia	Group B Control Group
0-1	3 (25%)	7 (39%)
2 or more	<u>9</u> (75%)	<u>11</u> (61%)
Total ^a	12 (100%)	18 (100%)

N = 30. $\chi^2 = .16$. df = 1. $p = 0.693$.

^a30 drawings were evaluated by the judges.

The scores, according to Koppitz's 30 Emotional Indicators, on the Draw-A-Family Test of the school-age child with leukemia and the school-age child without leukemia demonstrate no significant difference in their family role perception when the data are analyzed in categories (category 1: scores 0-1; category 2: scores of 2 or more).

Additional Findings

Utilizing the subjects' total frequency of Emotional Indicators (based on the mean score of the three judges), the Mann-Whitney U analysis was computed to ascertain if the groups differed significantly in terms of total

frequency of Emotional Indicators. The Mann-Whitney U is a nonparametric statistical procedure which involves ranking, requiring at least ordinal measurement, but not assuming underlying statistical normality (Pilot & Hungler, 1978). The calculated Mann-Whitney U statistic was 61.5, which is significant at the .05 level ($p = .049$). When taking relative frequency into account instead of Koppitz's criteria of two or more indicators, there is a difference in the two groups. Thus, the number of Emotional Indicators identified in the leukemia group (A) (mean = 3.667) was significantly higher than the number of Emotional Indicators in the control group (B) (mean = 1.900).

Each of the three judges commented on the frequency of the subjects' representation of self as a tiny figure (less than 2 inches in height) in the family drawing. The tiny figure represents an Emotional Indicator as described by Koppitz (1968). In the subjects with leukemia, 10 (83.3%) of the 12 subjects with leukemia demonstrated drawings of tiny figures. In the control group, four (21%) of the 18 subjects without leukemia demonstrated the drawings of tiny figures. The use of tiny figures was analyzed using Chi-square (see Table 5).

Table 5

Comparison of Tiny Figures of Self
Drawn by Subjects

Size of Figures	Group A Children with Leukemia	Group B Control Group
Tiny	10	4
Normal	<u>2</u>	<u>14</u>
Total	12	18

N = 30.

The results of this analysis was $\chi^2 = 8.49$ with $df = 1$, and an associated probability of $p = .004$. Therefore, the subjects with leukemia differed significantly from the school-age subjects without leukemia in the number who drew tiny figures of self on the Draw-A-Family Test.

Summary

In summary, this study revealed the following findings: there was no significant difference between the family role perception of school-age subjects with leukemia and the family role perception of school-age subjects without leukemia using the Draw-A-Family Test as scored by Koppitz's criteris of two or more Emotional

Indicators. However, when the relative frequency of the Emotional Indicators were used, a Mann-Whitney U analysis revealed that the leukemia group (A) scored a significantly higher number of Emotional Indicators than did the control group (B). Chi-square analysis indicated a significant difference in frequency of drawing tiny figures of self in the subjects with leukemia.

CHAPTER 5

SUMMARY OF THE STUDY

This chapter includes a review of the study of the family role perception of school-age children with leukemia and school-age children without leukemia. Conclusions have been drawn from the findings and the implications of these findings for nursing education, nursing service, and nursing research are discussed. The chapter concludes with recommendations for further investigation.

Summary

The problem of this study was to determine whether there was a difference in family role perception of school-age children with leukemia and school-age children without leukemia. Ex post facto research strategy, as described by Isaac and Michael (1977), which utilized the posttest only design, was selected to investigate the problem.

The sample for this study was selected by the convenience sample method. There were 12 subjects with leukemia (Group A) selected from a metagology clinic in a 117-bed children's hospital located in a metropolitan area of over one million persons.

Physicians, hospital administration, and Human Rights Committee approval for conduction of this study were secured. The control group for this study was selected by the convenience sample method. There were 18 subjects in the control group (B) selected from a protestant church located in the same metropolitan area of over one million persons. Informed consent was obtained from each subject's parent and each subject was given the opportunity to consent or refuse to participate in the study.

To determine the child's family role perception, the Draw-A-Family Test was administered to the sample population. The drawings were scored by three judges independently, who utilized Koppitz's 30 Emotional Indicators as criteria.

The hypothesis tested was: there will be no significant difference between the family role perception of the school-age child with leukemia as identified by the Draw-A-Family Test and the family role perception of the child without leukemia as identified by the Draw-A-Family Test. The null hypothesis was retained. Therefore, the family role perception of the school-age child with leukemia was not different from the school-age child without leukemia using the Draw-A-Family Test as scored

by Koppitz's criteria of two or more Emotional Indicators. However, when the relative frequency of the scores of Emotional Indicators were used, a Mann-Whitney U analysis revealed that the leukemia group (A) scored a significantly higher number of Emotional Indicators than did the control group (B). Chi-square analysis indicated a significant difference in frequency of drawing tiny figures of self in the subjects with leukemia.

Discussion of Findings

The findings of this study suggest the following:

1. Based on the Chi-square analysis of a comparison of the scores (based on two categories of scores of 0-1 and 2 or more) on the Draw-A-Family Test of school-age children with leukemia and school-age children without leukemia, there was no significant difference in the family role perception of the two groups. Thus, leukemia does not appear to alter family role perception.

2. Based on the lack of agreement of the three judges, they may not have the same understanding of the tool. Each judge had past experience with Koppitz's Emotional Indicators; however, the manner of looking at only the subject in a family drawing may have been different for them. Pretraining sessions with the three

judges together may have provided a clearer understanding of scoring the tool. Written instructions may also have solved the problem since each judge had been given separately only verbal instructions along with copies of Koppitz's Emotional Indicators to use when scoring each subject's drawing.

3. The tool may be invalid for measuring family role perception. The drawing of the subject only within the family drawing was scored. Koppitz's tool looks more at the subject's body image than the specific role in the family or how the child perceives self within the family.

4. The hematology personnel in the clinic placed an additional limitation on selecting the sample in Group A. The subjects were screened by the clinical specialist. The subjects were neither newly-diagnosed nor were they in the terminal stage of leukemia. All subjects had completed their initial chemotherapy and had been in remission for 3-6 months. The limitations placed upon the study excluded a large number of potential subjects for Group A, perhaps, creating an atypical. The amount of time for collecting the data was extended due to the limitations placed on the study by the hematology clinic.

5. The relative frequency of the scores of the subjects indicate a significant difference in the subjects

with leukemia (A) as compared to the control group (B). Therefore, a score of less than 2 Emotional Indicators may need further study when used for family role perception.

6. An 8-year-old female subject in the control group omitted herself in the drawing of the family. Koppitz (1968) stated that this is not unusual on such drawings, but is always significant. Therefore, children who omit themselves in the family drawing may not consider themselves as important or as an integral part of the family. The omission is never deliberate; it reflects the child's unconscious feeling of insignificance and rejection. Therefore, this child may have felt herself to be an insignificant member of the family. The three judges did not score this child's drawing because only the subjects in the family drawings were scored according to Koppitz's Emotional Indicators.

7. Using Chi-square for data analysis, the findings suggest that there was a significant difference in the two groups in the frequency of drawings of tiny figures ($p = .004$). The subjects with leukemia drew tiny figures (less than 2 inches in height) of themselves in 10 of the 12 family drawings, while other family members were in

larger proportion (more than 2 inches). Koppitz (1968) indicated this Emotional Indicator reflects extreme insecurity, withdrawal, and depression.

Conclusions and Implications

Based on this study, the following conclusions were made.

1. Scoring based on two or more Emotional Indicators places equal value on all scores above 2; therefore, all subjects are placed into two categories, either the normal or abnormal. Thus, leukemia does not appear to be related to family role perception.

2. The use of tiny figures (less than 2 inches in height) suggested that the subjects with leukemia have more depression and withdrawal than do the control group (B).

3. Omission of self by the subject may indicate timidity, withdrawal, and depression.

4. Validity and reliability of the tool as a measurement of family role perception needs to be established.

5. Limitations established by the staff in the hematology clinic may have produced an atypical sample.

The statistical findings of this study have implications for nursing service, nursing education, and nursing research. The implication of this study, which is pertinent to nursing, is the finding that the family role perception of the school-age child with leukemia needs further study. Understanding family interpersonal relationships of the school-age child with leukemia can improve the nurse's approach to and effectiveness with the child in peer interaction and family involvement based on the literature reviewed.

Every health problem with medical intervention to meet the problem or support the patient can exert a significant influence upon the perception a person has of himself or will have of himself in the future (Riddle, 1972). Also, in view of the developmental processes, as described by Erikson (1959), which affect the formation of family role perception, nursing practice needs to be aware of ways to assist the patient in his development of a healthy family role (Briggs, 1970; Fisher & Cleveland, 1968; Gorman, 1969). The family exerts a prime influence on the development of the child's family role perception; therefore, the nurse must include the family in the provision of a supportive interpersonal relationship with and between the patient and family. The family must be

considered as a whole or total unit by nurses. The total family system is to be considered in caring for the child with leukemia for each family member is a link within the family structure.

Implications for nursing education include teaching students the concept of family theory, developmental aspects, and factors affecting family role perception. Students need an understanding of methods of promoting a healthy family role perception of the child and also an understanding of the additional stresses placed upon children with a chronic or potentially fatal illness, such as leukemia. Implications for nursing research are to determine what factors, if any, of the disease process of leukemia and its associated psychosocial problems may produce changes in the child's interpersonal relationships with the family.

Recommendations for Further Study

The following recommendations are offered as possible studies related to the findings of this study.

1. Comparison between children from two hematology clinics with different family philosophies to determine family role alterations.

2. A similar study including children in various stages of leukemia.

3. A similar study utilizing the tool Kinetic Family Drawings (KFD) described by Burns and Kaufman (1970).

4. Development of a tool to measure family role perception.

5. Instructions to all three judges with pretraining sessions.

6. Further study regarding categories of Koppitz's Emotional Indicators.

7. Validity of tiny figure drawings regarding family role perception.

APPENDIX A

LIST OF EMOTIONAL INDICATORS ON HUMAN
FIGURE DRAWINGS OF CHILDREN

(All of the Emotional Indicators are considered valid for boys and girls ages 5-12 unless otherwise indicated.)

Quality Signs

Poor integration of parts of figure (Boys 7, Girls 6)

Shading of face

Shading of body and/or limbs (Boys 9, Girls 8)

Shading of hands and/or neck (Boys 8, Girls 7)

Gross assymetry of limbs

Slanting figure, axis of figure tilted by 15 or more

Tiny figure, 2 inches high or less

Box figure, 9 inches or more in height (Boys and Girls 8)

Transparencies

Special Features

Tiny head, head less than 1/10 of total figure in height

Cross eyes, both eyes turned in or out

Teeth

Short arms, arms not long enough to reach waistline

Long arms, arms long enough to reach knee line

Arms clinging to side of body

Big hands, hand as large as face of figure

Hands cut off, arms without hands or fingers (Hidden hands not scored)

Legs pressed together

Genitals

Monster or grotesque figure

Three or more figures spontaneously drawn

Clouds, rain, snow

Omissions

No eyes

No nose (Boys 6, Girls 5)

No mouth

No body

No arms (Boys 6, Girls 5)

No legs

No feet (Boys 9, Girls 7)

No neck (Boys 10, Girls 9)

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Koppitz, E. M. Psychological evaluation of children's Human Figure Drawings, pp. 333-334. New York: Grune & Stratton, 1968.

APPENDIX B

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 Children's Medical Center of Dallas, Texas

GRANTS TO Barbara Cathey

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:

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 9-19-79

Signature of Agency Personnel _____

Barbara Cathey
Signature of student

James L. Wallace
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.

Elizabeth M. Koppitz, Ph. D.
R. F. D. 1, Box 200, Stanwood
Mount Kisco, New York 10549

June 23, 1979

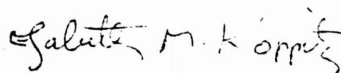
Ms. Barbara Cathey
2022 Spiceberry Lane
Mesquite, Texas 75149

Dear Ms. Cathey:

School is out and at last I find time to answer my badly neglected mail. I was much interested to hear about your proposed thesis on "Family Role Perception of the School-age Child with Leukemia". You have my permission to reproduce and use in your thesis the list of 30 Emotional Indicators from my book "Psychological Evaluation of Children's Human Figure Drawings". I would appreciate very much if you would share with me the findings of your study after the thesis has been completed.

All good wishes for your study.

Sincerely



Elizabeth M. Koppitz

APPENDIX C

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Barbara Cathey Center: Dallas
Address: 2022 Spiceberry Lane Date: 8/14/79
Mesquite, Texas 75149

Dear Ms. Cathey:

Your study entitled Family Role Perception of the School-Age Child With Leukemia has been reviewed by a committee of the Human Research Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education and Welfare regulations require that written consents must be obtained from all human subjects in your studies. These forms must be kept on file by you.

Furthermore, should your project change, another review by the Committee is required, according to DHEW regulations.

Sincerely,



Chairman, Human Research
Review Committee

at Dallas

APPENDIX D

WRITTEN CONSENT OF THE STUDY

I am a registered nurse and a graduate student at Texas Woman's University College of Nursing. I am currently working on a thesis for a Master's degree which involves learning about family role perception of a school-age child with leukemia. The more nurses can learn about the family role perception of children with leukemia, the better we will be able to help the child and his family to cope with his illness.

Two groups of school-age children, with and without leukemia, will be included in this study. Both groups will be asked to Draw-A-Family using a pencil and paper.

A potential risk to the human participant might be the release of the individual results of the Draw-A-Family Test to the public. Another potential risk might be an increase of the parent's anxiety that perhaps their child has a poor family role perception.

Your participation in this research project will remain anonymous. Also, you may terminate participation in the project at any time that you choose. Your consent or refusal to participate in this study will have no effect on the care that you or your child receives in this or any other agency.

If you and your child decide to participate in this study, the test will be conducted on a one-to-one basis with your child. You may have access to the results of this study. If you agree to have your child participate in this study, please sign the attached form.

Sincerely,

Barbara Cathey

TEXAS WOMAN'S UNIVERSITY

(Form A--Written presentation to subject)

Consent to Act as a Subject for Research and Investigation:

(The following information is to be read to or read by the subject):

1. I hereby authorize Barbara Cathey to perform the following procedure:

After permission is granted by the parent or guardian, the researcher will introduce herself to the child and will explain that she is collecting information about school-age children and their art. The researcher will have the participant draw a family on a blank sheet of paper with a #2 pencil. The procedure will be performed in a small private office with the researcher and participant present.

2. The procedure or investigation listed in Paragraph 1 has been explained to me by Barbara Cathey.

3. (a) I understand that the procedures or investigations described in Paragraph 1 involve the following possible risks or discomforts:

- (1) A potential risk to the human participant might be the release of the individual results of the Draw-A-Family Test to the public.
- (2) A potential risk might be an increase of the parents' anxiety that perhaps their child has a poor body image.
- (3) Loss of anonymity.

- (b) I understand that the procedures and investigations described in Paragraph 1 have the following potential benefits to myself and/or others:

The study will attempt to discover if the school-age child with leukemia has a different family role perception than the child without leukemia. A large proportion of chronically-ill children also have serious psychological and social problems which may be a consequent of the physical

condition. It is imperative that individuals caring for children with leukemia concern themselves with the psychosocial aspects of this disease; along with the importance of the families supportive role to the child. Thus with knowledge gained from this study, if it does in fact show that in general the child with leukemia does have a poor family role perception in comparison to the normal school-age child, the individual caring for the child with leukemia needs to direct his attention toward this aspect of care also. Much research has been done in the past several years on the development of family role perception and this could be combined with the other aspects of care for the child with leukemia if the study shows children with leukemia in general have a poor family role perception.

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

Subject's Signature

Date

(If the subject is a minor, or otherwise unable to sign, complete the following):

Subject is a minor (age ____), or is unable to sign because:

Signatures (one required)

Father

Date

Mother

Date

Guardian

Date

APPENDIX E

PARENT QUESTIONNAIRE

Please list all family members and persons living in the home.

<u>Age</u>	<u>Sex</u>	<u>Relationship to Child</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please list any children not living in the home.

<u>Age</u>	<u>Sex</u>	<u>Relationship to Child</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Has there been any crisis in the family during the past Year?

_____ Yes _____ No

If yes, please describe briefly.

Has the child who is participating in this study had any school problems during the past year?

_____ Yes _____ No

If yes, please describe briefly.

Who meets the special care needs for this child at home (such as giving medication).

_____ Mother
 _____ Father

_____ Brother
 _____ Sister
 _____ Others

APPENDIX F

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS 76204

DALLAS CENTER
1810 INWOOD ROAD
DALLAS, TEXAS 75235

HOUSTON CENTER
1130 M. D. ANDERSON BLVD.
HOUSTON, TEXAS 77025

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE Mimosa Lane Baptist Church

GRANTS TO Barbara Cathey

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:

Family Role Perception of the School-age Child with Leukemia
through the use of the Draw-A-Family Test.

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: August 20, 1979

Barbara Cathey
Signature of Student

Signature of Agency Personnel

Jamie L. Wallace
Signature of Faculty Advisor

* Fill out and sign three copies to be distributed as follows: Original-Student;
First copy - agency; Second copy - TWU College of Nursing.

APPENDIX G

SCORES OF DRAW-A-FAMILY TEST BY EACH JUDGE

Subject Number	Judge I	Judge II	Judge III	Tiny Figures	Median
<u>Group A</u>					
1	5	5	6	x	
2	1	3	1	x	x
3	5	8	7	x	
4	3	4	4	x	
5	2	3	1		
6	8	8	6	x	
7	1	0	0	x	x
8	1	2	1	x	x
9	3	4	4		
10	2	2	3	x	
11	8	4	9	x	
12	4	4	5	x	
<u>Group B</u>					
1	3	4	2		
2	2	2	2	x	
3	2	3	2		
4	0	0	0	x	
5	NS ^a	NS	NS		
6	4	5	5		
7	3	3	2		
8	0	1	0	x	
9	4	3	5	x	
10	3	3	3	x	
11	1	3	2	x	
12	2	4	3		
13	1	0	0	x	
14	1	2	2		
15	3	2	2		
16	0	1	1		x
17	0	1	0		x
18	1	3	1		x
19	1	0	0		x

N = 30.

^aNo score. Therefore this subject was not included in the N.

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