

A COMPARISON OF BODY IMAGE OF ADOLESCENTS WITH
CONGENITAL HEART DISEASE AND ADOLESCENTS
WITHOUT CONGENITAL HEART DISEASE

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We hereby recommend that the Thesis prepared under
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CHAPTER I

ORIENTATION TO THE STUDY

Introduction

Teenagers as a group are frequently overlooked in their quest for medical care. The adolescent with long-term illness, such as heart disease, has problems that are neither pediatric nor adult in orientation. The restrictions and demands that he may experience have likely set him apart from his peer group. As a teenager, he is seeking independence from his family and trying to find the "role" that is right for him.

Two crucial tasks in the adolescent period are 1) to develop a sense of identity and 2) to complete the process of self-image. Identity should be established as the adolescent finds answers to questions such as "Who am I?," "Why am I here?," and "What am I capable of doing?" He has a strong need to "be like the others." His concept of self determines his ability to experience effective and happy living. This self-concept is influenced by how he perceives and feels about his own body, or his body image. In addition, emotional concerns and attitudes toward one's body are encompassed in his body image.

The child who has been dependent because of heart disease may find it especially difficult to sever the ties with overprotective parents. In preparation for the adult role, an adolescent must have opportunities for accepting responsibility for himself. Parents are often reluctant to permit children to reach this level of independence, especially if the child has been plagued with a chronic illness.

The medical profession as a whole should be perceptive to this plight of adolescents. Nurses can take an active part in determining whether illness is a period of emotional growth or regression for adolescents. Through awareness of the factors which influence the life-style of teenagers, those who help care for them should be able to provide intervention that will positively influence their self-image. This action is important to enhance adolescents' effectiveness in preparation for adult-living.

Statement of Problem

The problem of this study was to determine if there was a difference in the body image of adolescents with congenital heart disease and adolescents without congenital heart disease.

Purpose

The purpose of this study was to compare the body image of adolescents with congenital heart disease and the body image of adolescents without congenital heart disease.

Background and Significance

For clarity of the presentation, the background and significance of this study were separated into three sections: adolescents, body image, and effects of illness as it relates to development and body image.

What is the special task of the adolescent period? Marlow (1969:30) defines this as clarifying who one is and what his role in society will be. She further states that there are five problems to be resolved in the adolescent period.

1. integration of personality for future responsibility,
2. emancipation from parents and family,
3. creation of satisfactory relations with members of the opposite sex,
4. acceptance of new body image after a period of rapid physical change,
5. decision regarding vocation. (1969:31).

Other authors agree that the primary task is to attain independence and a sense of self (Schowalter 1971:127; Duran 1972:65). Duran explains this as a period of self-identity which is gained as one moves away from a mirror-like view of self to a sense of self.

Is body image of importance to the adolescent? The consequences of social experiences and the rapid and drastic physical changes make adolescents especially sensitive to their body and body image (Jourard 1964:97; Schowalter 1971:127). Hurlock (1955:465) believes that self-image is essentially completed by adolescence. It is well known that appearance is of primary interest to adolescents. Anything that detracts from it is to be avoided. Being different from peers in appearance is a crucial matter, especially when related to such causes as physical illness (Mash and Dickens 1970:666). In The Transparent Self, Jourard states

When one's body is disliked because of deviation from norms for function or appearance, replicated evidence shows that anxiety, insecurity, and low self-esteem are regular correlates (1964:91).

Fisher and Cleveland (Wylie 1961:263) describe the concept of body image as those emotional concerns, attitudes, and feelings that one has about his own body. These ideas are the basis of self-concept. That is, the development of self-concept is influenced by a person's perception of his body characteristics, i.e., his body image (Wylie 1961:159).

Hurlock defines concept of self as

a system of central meanings the individual has about himself and his relations to the world about him. It includes a system of ideas, attitudes, appraisals and commitments (1955:465).

Adolescent Development by Hurlock also stresses the physical self-image as it relates to concept of self. Physical self-image consists of concepts regarding appraisals of looks, i.e., "pretty," "ugly." "Every part of the body that has a function or prestige associated with one's behavior, such as the heart" is another component of self-image (1955:466). According to Hauser (1972:538) adolescent developmental issues are closely linked with self-image. Gergen sees that self-concept has a "role in orienting the individual to the world around him, and in enabling him to increase rewards and decrease punishments" (1971:38).

How does illness effect the development of adolescents? Marlow describes the effect this way.

Illness or accident may interfere with a child's sense of trust that his own body or outside world is really dependable. . . . Prolonged illness may lead the child whose sense of autonomy is not fully developed into overdependency on others. Illness may curb the sense of initiative or of industry (so) that the adolescent is unable to gain satisfaction from seeking the answers to questions or from starting or completing a project (1969:631).

Weininger and Rotenberg agree that "adolescent growth is seriously blocked by anything that keeps youngsters from responding specifically to one another (1972:250-51).

Imposition of physical illness causes the teenager increased concern regarding his body image. This concern with identity includes his emerging sexuality. During illness,

questions he asks about his body image are, "Is it (body image) being altered?," "Will this effect my relationships, skills, future plans?" (Tiedt 1972:136).

Drawings of adolescents who have had an accident, surgery, or severe illness have been interpreted by Kestenberg, et al. (1972:164). Their findings show reactions of anxiety, fears, hostility or fantasies of deserved mutilation, or feelings of rejection by a significant person. Vernon and other authors (Vernon 1965; Marlow 1969:58-59; Mash and Dickens 1970:666-67; Roberts 1972:1080-85) have identified specific illnesses and procedures which produce psychological responses in children and adolescents. Vernon (1965:145-47) reports studies which reveal that the organ involved influences the extent of anxiety the patient experiences. In particular, illnesses involving the heart, brain, genitals and eyes produce high anxiety responses. Other illnesses which are likely to lead to psychological upset are diarrhea, ulcerative colitis, whooping cough, inguinal hernias and tonsillectomies.

The effects of a handicap such as impaired hearing, blindness, cardiac disease, diabetes or cerebral palsy may tend to make a child overdependent on adults. Conditions which limit social contacts and ability to relieve emotions

through physical exercise often cause various degrees of rejection in self, parents, and peers (Marlow 1969:631; Weininger 1972:250; Fisher and Cleveland 1968:16; Jourard 1964:97).

This researcher found a dearth of literature regarding adolescents with heart disease and their concept of self. Two writings are significant. Mash and Dickens (1970:447) stress that children with heart disease quickly find their limitation of activity in most instances, therefore they should be permitted desired activity. This will enable a stronger concept of self to emerge. An aspect of heart disease which must be considered is body image, adds Florence Roberts. She writes that "a child's perception of his body and his ability to control and use it has a great influence upon his self-concept" (1972:1083).

In summary, the significance of body image of adolescents as it relates to chronic illness has been discussed. It has been stated that the body image is important to teenagers because of 1) their acute awareness of their body development and 2) their strong need to be "like the others." Any factor which interferes with these processes cause increased concern about body image. To conclude the background and significance of this study, the observations of Schowalter and Lord are quoted:

"Adolescence is a time of life when beauty and strength are prized--a debilitating illness brings feelings of shame and loss of self-esteem" (1971:127-28).

Hypothesis

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

There will be no difference between the scores on the Draw-a-Person test of adolescents with congenital heart disease and the scores on the Draw-a-Person test of adolescents without congenital heart disease.

Definition of Terms

1. Adolescent--person between the ages of twelve and nineteen years.
2. Body-image--an individual's emotional concerns, feelings, and attitudes toward his own body measured by the score on the Draw-a-Person test.
3. Congenital heart disease--a cardiac defect diagnosed in the newborn period.
4. Self-concept--the attitudes which an individual has about his identity, life role and appearance.

Delimitations

1. Fifteen adolescent subjects with congenital heart disease who were under medical treatment at the time of this study.

2. Fifteen adolescent subjects without congenital heart disease who were under no medical treatment at the time of this study.

Assumptions

1. All adolescents have an image of their body.

2. The way in which individuals conceptualize their body is related to their concept of self.

3. Long-term illness has an effect on an individual's self-concept.

Summary

The adolescent is in a unique period of development in which he is striving for independence, a sense of identity, and an accurate perception of his self-image. Chronic illness, such as heart disease, poses a threat to the adolescent's completion of his developmental tasks, and is therefore a threat to his body image. Illness may be a time of emotional growth or regression for the adolescent. The problem of this study was to determine if there was a difference in the body image of adolescents with

congenital heart disease and adolescents without congenital heart disease.

The background and significance was discussed in the following areas: adolescents, body image, and illness as it relates to development and body image. Illnesses involving the heart have been identified as conditions which produce high anxiety and an altered self-concept. The hypothesis, definition of terms, delimitations and assumptions specific to this study were also included in Chapter I.

Chapter II presents a review of literature pertinent to the study. The Procedure for Collection and Treatment of Data, Description of the Tool, and the Sample are discussed in Chapter III. Chapter IV describes the Analysis and Interpretations of Findings. The Summary, Recommendations, Implications and Conclusions compose Chapter V.

CHAPTER II

REVIEW OF LITERATURE

Introduction

It was the intent of this review to investigate literature which reveals the existing concepts of body image of adolescents and how it is affected by chronic illness, specifically congenital heart disease. The following areas of investigation form the framework of this study: Overview of Studies on Normal Adolescent Development, Body Image--Concepts and Development, including Draw-a-Person test to Determine Body Image, Chronic Illness in Adolescents, and Responsibilities of the Health Team.

Overview of Studies on Normal Adolescent Development

Physical Growth

The term adolescent presents a set of preconceived ideas regarding the American teenager. Many studies have been undertaken in an attempt to define the parameters of healthy adolescents. The earliest effort to establish a separate psychology of adolescence was by G. Stanley Hall. He attributed this period of stress, strain and uncertainty to the physical and physiological effects of puberty

(Bernard 1971:3). The growth spurt in boys usually occurs between the ages of twelve and sixteen years; in girls it occurs between eleven and fourteen years. Girls experience earlier physical growth, but boys have earlier development of strong sexual feelings. These are factors which may precipitate social and emotional difficulties (Gallagher 1966:58-59). Rapid growth changes in voice, alterations of body proportions, growth of facial and axillary hair and increases in size and function of sex organs and glands are areas to which the adolescent must adapt (Bernard 1971: 3-4). The Committee on Adolescence in their study, Normal Adolescence (1968:74), concurs that all changes in the body require modification of the earlier established mental images of the body. Recognition and acceptance of one's physical and biological being is a prerequisite for achieving a mature personal identity.

Gallagher (1966:56-58) believes that adolescents display over-concern about real or imagined abnormalities in growth and development because of a fear that something is wrong with their bodies. Cultural stereo-types of masculinity and femininity may impair the adolescent's ability to accept his body image because of unavoidable variations in his development, e.g., high voice and

pudginess in the boy; flat chest in the girl (Committee on Adolescence 1968:74-75).

Alissi, in his paper entitled, "Concepts of Adolescence," contrasts the works of Kroh and Spranger. Kroh, in 1951, emphasized totality of personality throughout the developmental process. His concept is that adolescence is a period of emergence of a theoretical view of the world and a deeper understanding of life. In comparison, Spranger sees adolescence as a period of transition in which a hierarchy of values is established. Inward changes, as described by Spranger, which are experienced at this time are 1) radical and dramatic changes in self-perception, 2) gradual adoption of cultural values, and 3) achievement of goals through self-discipline and active efforts. Alissi continues to explore developmental theories by investigation of Piaget and Inhelder's theory developed in 1958. That is, adolescents' cognitive skills develop as he begins to reason on the basis of symbols or verbal propositions. Anna Freud, also in 1958, added that it is normal for adolescents to be inconsistent, unpredictable and to fluctuate between opposites in their behavior and reasoning.

In 1963, Erikson's concept of ego identity was defined as the relationship between what a person appears to be in the eyes of others as compared with what he feels

he is (Alissi 1971). Based on this work of Erikson's, Marlow describes the period of adolescence, usually beginning at age twelve, as the time when an attempt is made to develop a sense of identity. Success in this effort brings about self-esteem; lack of success may result in self-diffusion because of conflicting desires, possibilities and chances that are part of this period. Difficulty in achieving self-identity may result in a "sense of not belonging" (Marlow 1969:30-31). In relation to the above developmental task of self-identity, Hughes stresses the importance of mastery of the body parts as a task of young adolescents. In achieving mastery, he sees himself as a "distinct, separate individual who has certain abilities and limitations in attempting to control his body" (1967:117). Bernard (1971:62) adds that the adolescent should be proud of, or at least accept, his physical stature. This is a task which involves learning to use and protect one's body. Gallagher succinctly describes this concept of striving for tasks by stating that the teenager is one who is "active in his quest for recognition and his need to acquire confidence" (1966:198).

Success in reaching self-set goals of development promotes a feeling of self-confidence and self-satisfaction. Failure in achieving these tasks may cause the adolescent to:

. . . 1) adjust to the failure of reevaluating his competence or skill, thereby making an adjustment of his level of aspiration, 2) substitute a different kind of activity in which he can succeed, or 3) blame others, poor health or use some other form of defense to excuse his failure (Hurlock 1955:467-68).

Cultural Effects

In addition to the significance of physical and psychological development of the adolescent, much has been written of the cultural effects on development. In 1928, Margaret Mead wrote that the stress and strain of the teen years was felt to be a result of cultural pressures (Bernard 1971:4). The Committee on Adolescence (1968:9) concentrated attention on the fact that adolescent development takes place within a cultural context, therefore bears the bias of the culture with which adolescents are most familiar. Bernard summarizes the physical, psychological and cultural influences on adolescent development by describing the uniqueness of adolescence as follows:

1. Adolescence is a transition period that overlaps childhood and adulthood . . . (they are) subject to a double-message system.
2. The adolescent is profoundly affected by the culture in which he lives.
3. Rapid biological change sometimes imposes stress which in turn provokes psychological problems.
4. The adolescent has certain developmental tasks that must be accomplished in his progress toward maturity (1971:15-16).

Human Needs

Many categorizations of human needs have been formulated through the years. Adolescents are only beginning to recognize the priority of needs which has previously been provided for them. From the writings of Symonds, Trow, Maslow, Leuba and Huxley, the basic human needs have been organized by Bernard into three headings: 1) organic, 2) psychological, and 3) social. He defines organic needs as rest, exercise, protection from bodily injury, food, water and maintenance a bodily temperature of about 98°. Psychological needs which influence behavior include the following: 1) to feel secure, 2) to manipulate and to satisfy curiosity, 3) to achieve, and 4) to be independent. Fulfillment of social needs is also necessary for mastery of the environment. These needs include 1) belonging, 2) love and affection, 3) companionship and 4) understanding. Each of these areas (organic, psychological and social) are interdependent on the others for integration of personality and maintenance of life (Bernard 1971:52-60).

The fulfillment of these needs, plus successful achievement of adolescent tasks are basic to the teenager's normal development. Physical, psychological and cultural

influences are of primary importance to the formulation of self-concept.

Body Image Hypothesis

Relationship of Self-Concept to Body Image

This concept of self, or self-image, is central to the subjective life of the individual in determining his thoughts, feelings and behavior (Rosenberg 1965:vii). Rosenberg (1965:3-5) further explains that it is during the adolescent period between about fifteen and eighteen years of age that the individual becomes keenly concerned with his self-image. He attributes this heightened awareness to adolescence being a time for major decision, a period of unusual changes, and a period of unusual status ambiguity. These are factors which influence the self-image, or the attitude toward self. Bernard (1971:169-70) defines this conception (self-image) as one's system of ideas and values, his attitudes and desires, and his commitments to self. Concept of self is a direct reflection of what others think of an individual. Therefore it is important to give the adolescent feedback which fosters his sense of worth.worth. He continues "sharing with them enough time to make them feel significant, and respecting them enough to listen will tend to nourish a sturdyego."

Gergen, in 1971, describes the ways in which one develops a concept of self:

1. The individual may simply label his dominant behavior patterns in socially prescribed ways.
2. Appraisal from others, or reflected appraisal may have a powerful effect on the person's concept of self.
3. One's level of self-regard may be vitally affected by the surroundings in which he happens to find himself. (This is projected as social comparison; defining self in relation to others.)
4. In determining . . . one's behavior, it is necessary to scan both the environment and one's memory for confirmation or disconfirmation.
5. . . . in daily life we learn the behavior and words that are appropriate for each occasion; role playing is powerful in its effect on identity (1971:40-56).

According to Blaesing and Wylie, self-concept and body image are related. "A person's body characteristics as he perceives them might exert a central influence on the development of his self-concept" (Wylie 1961:159). The degree to which he likes himself, his self-concept, is directly related to the definiteness of his body image. The definiteness of the body image is determined by how well defined or structured one perceives his body in relation to specific personality variables (Blaesing 1972: 602). Nassen (1970:2172) adds that body image, whether favorable or unfavorable, is an intimate and vital part of one's sense of being. Jourard states that "body image and spirit are both likely affected by the design and meaning for life that we call culture" (1964:97). He cites Fisher and Cleveland's work as showing that it does matter how a person unconsciously conceptualizes his body. "The body

image with its hypothetical boundaries, doubtless is 'built in' as a consequence of socialization experiences" (1964:97). He adds that this body image may also be related to spirit-titre. Spirit-titre is described as enthusiastic, active, expressive, effective behavior which is comparable to Fisher and Cleveland's body boundary (1964:92).

As a component of the wider scope of self-concept, body image has been defined in the literature with overlapping connotations (Shontz 1969:5). The two terms, self-concept and body image, have also been used interchangeably. Other terms frequently seen are self-awareness, body-ego, and body schemata (Schonfield 1963:845). Schilder defines body image as "the picture of our own body which we form in our mind . . . the way in which the body appears to ourselves" (1950:11). Kolb adds that body image includes our view of ourselves psychologically, physiologically and sociologically (Schonfield 1963:845). Shontz differentiates between body schemata and body image: body schemata is identified with a perceptual orientation, while body image is concerned with the personality process-- "the personal body as a dynamic component of personality" (1969:5-6). In Body Image and the Image of the Brain, Gorman (1969:6) specifically defines body image as a concept

of one's own body, based on present and past perceptions. This concept is built on reports from consciousness and from outside the area of awareness. In 1958, Fisher and Cleveland described "body image" as an important, largely nonphenomenal aspect of the self-concept. Although the term is loose and generalized, their belief is that it refers to the body as a psychological experience and focuses on an individual's feelings and attitudes toward his body (Wylie 1961:263). The study they carried out was designed to evaluate a subject's experience of his body as a "more or less pregnable" boundary between self and environment. Body image barrier and penetration scores were determined to identify definiteness of body image boundaries (Wylie 1961:11).

Norris, writing in Behavioral Concepts and Nursing Interventions, includes a more complex definition of body image:

Body image is the constantly changing total of conscious and unconscious information, feelings and perceptions about one's body in space as different and apart from all others. It is a social creation, developed through the reflected perceptions about the surfaces of one's body and responses to sensations originating from the inner regions of the body as the individual copes with a kaleidoscopic variety of living activities. The body image is basic to identity (1970:42).

Functions of Body Image

Fisher and Cleveland repeatedly described the function of body image as a "boundary between self and environment" (Shontz 1969:166). Self-acceptance is a factor of the functionally operant body image. This demonstrates a need for integration of a healthy body image (Rubin 1968:20). Schonfield classifies the psychological components that determine the "structure" of the body image on both the conscious and unconscious levels as follows:

1. the actual subjective perception of the body, both as to appearance and ability to function;
2. the internalized psychological factors arising out of the individual's personal and emotional experiences as well as distortions of the body concept expressed as somatic delusions;
3. the sociological factors, namely, how parents and society react to the individual and the adolescent's interpretation of their reactions; and
4. the ideal body-image, formulated by the individual's attitudes toward the body derived from his experiences, perceptions, comparisons, and identifications with the bodies of other persons (1963:846).

There is considerable agreement that the body image functions as a frame of reference which influences the ways in which a person perceives himself and influences his ability to perform (Norris 1970:42). Norris continues in her conceptualization of body image by providing the following operational definition.

1. Body image is a social creation.
 - a. Normality is judged by appearance, ways of gesturing or posturing, and other ways

- of using the body that are prescribed by society.
- b. Painful sanctions are imposed for deviations from normality, whether behavioral or structural.
 - c. Approval and acceptance are given for normal appearance and proper behavior.
 - d. Body image emerges out of an almost infinite variety and number of approvals and sanctions and an individual's response to them. Experience is integrated into the personality in terms of the satisfaction or dissatisfaction that the individual has had with it.
 - e. Body development continually enlarges the individual's world, his mastery of it, his interaction with it, (including interpersonal interaction) and his ability to respond to the wide variety of experience it offers.
 - f. This integration, which is largely unconscious, is constantly evolving and can be identified in the person's values, attitudes, and feelings about himself.
2. There is very close interdependence between body image and personality, ego, self-image and identity.
 3. Body image is an important determinant of behavior.
 4. The impact of any experience on the human being is determined by the interplay of its reality level or meanings, the level of conscious fantasy and feeling about it, and the unconsciously motivated fantasies and feelings (1970:43).

Gorman (1969:3) sees the function of body image as an intimate personal possession which exists within the mind as a concept that affects every bodily action. Hauser and Shapiro (1973:63-68) sought to determine factors which differentiate self-image. They found that age, sex and psychopathology are factors which influence some realms of body image. Many authors (Gallagher 1966:197; Marlow 1969: 31; Hurlock 1955:465; Mash and Dickens 1970:666) stress the

importance to the adolescent of not being or feeling different from his friends, i.e., having a body image that is acceptable to himself in relation to the norms of the peer group.

Development of Body Image

Definitions and concepts of body image are not adequate for clear understanding of this phenomena. Norris (1970:44-45), in her chapter, "The Professional Nurse and Body Image," outlined the steps in the development of body image. A discussion of this process follows.

There is no physical body image present at birth except at the feeling level. Mother is perceived as an external source of comfort. Exploration of self occurs next, including sensory impressions, mobility, and touch sensations. This stage is the beginning of learning body attitudes, values and boundaries. Opportunities for exploring and manipulating the environment lead to awareness of one's body being separate from mother's and all others. Learning about various parts of the body and their functions may instill a sense of pride or shame. Mastering the body gives feelings of pleasure and power which fosters self-esteem.

As the stages of development of body image unfold, learning to use and master the environment becomes important.

Success in this area promotes feelings of competence and worth. Relating to others of the same sex is the next milestone in developing a healthy body image. The task of learning to "listen to the body" with the potential of internalizing feelings of pleasure and power is important. Comparative and competitive appraisal of the body and its functions with the peer group is necessary to learning values of strong and powerful or weak and helpless. Relating to persons of the opposite sex and concomitant learning of values, attitudes and use of the body is the next sequential step in body image development. The final phases of body image development which prepare one for the full human potential for living are: 1) accepting one's body without undue preoccupation with its functions, 2) recognizing unresolved fears and misconceptions about body image from childhood, and 3) seeing the personality as a whole with less emphasis on the physical self and greater emphasis on the inner self (Norris 1970:44-45).

To further explore the steps of body image development, the researcher reviewed the works of other theorists in the field. Schonfeld believes that parents initially impart an impression on the child's concept of himself.

From earliest infancy, the mother conveys her attitude toward her child's body by the way she holds him,

feeds him, touches him and attends to his needs. Later her approval or disapproval is also conveyed verbally (1963:850).

Fisher and Cleveland (1968:263) feel that the foundation of one's body image probably begins to be laid about six months of age. Schilder (1950:104-06) also thinks that infancy is a significant period in development of body image. The two factors which play a part in the creation of body image are 1) pain and 2) motor control over limbs, both of which occur in the infant year. According to Blaesing in "The Development of Body Image in the Child," (1972:598-99) the infant has no physical body image at birth except at the feeling level. She adds that during the first year the infant differentiates self from the outside world. The child who develops a sense of trust in this year is capable of developing a good self-concept. A sense of mistrust will cause the child to see himself as bad and, therefore have a poor self-concept.

Blaesing continues to identify the development of body image throughout childhood. In the toddler stage, age one to three years, the child differentiates self from environment. Children who are accepted by the family usually do not undervalue or overvalue their bodies. If a child feels his body does not meet expectations of those around him, he develops self-depreciating feelings and experiences

shame (1972:599-600). The three to six year-old-child, in preschool years discovers what kind of a person he is to become. This is the stage at which initiative develops. His body image is at a more conscious level. Body image confusion may develop if a child does not conform to the body build or behavior appropriate for his sex (1972:600-01). The school-age child, six to twelve years, is striving to develop a sense of industry. If he actually has, or thinks he has any kind of a physical handicap or limitation, he begins to view himself as not as good as, or inferior to other children. Physical impairments have a big role in the body image of school-age children (1972:601-02). Children's concept of body image is an indicator of the degree of personality organization and ego strength. The way the child organizes his experiences during these developmental stages determines his body concept and degree of body boundary definiteness (1972:606).

Each phase of development inherits all that has occurred in the previous phases. It is significant to note, writes Dempsey (1972:609), that earlier as well as current experiences have an impact on adolescents. She continues that one has had many experiences with his body by the time he reaches adolescence, thus the chances and new experiences of adolescence are super-imposed on previous

experiences. Experiences which are helpful to the adolescent are those which cause him to feel good about himself. Two major consequences of change occur in adolescence:

- 1) subsequent changes in the body image in the adolescent himself, and
- 2) others' response to his bodily change and their communication of their values about the body to him (1972:615).

Norris (1970:47-48) concludes that it is because adolescents don't know how to manage their changed bodies that causes preoccupation with the changes in terms of cultural and social norms and attractiveness. Adolescents study their bodies and compare their own to that of their peers.

Dempsey (1972:611-15) states that it is the consequences of change plus comparison with norms and peers that the adolescent utilizes to evaluate himself. Adolescence is a time of high ideals, with a real concern regarding appearance. Body image is the base for identity, therefore "any change in structure or function is experienced as a threat" (Norris 1970:52). This is particularly true in adolescence and can occur even with the normal growth process because of the threat of new expectations and the threat of being found inadequate (1970:52-53). To compensate for these threats, a teenager may distort his body image to bring it up to his ideals. If the ideal is

impossible, "he may discredit himself by seeing his body as defective, inferior or incapable" (Dempsey 1972:615).

In further discussion of the body image of adolescents, Schonfeld writes that development in this period is reflected by

intensified awareness of his body (which) stems partly from the consciousness of his own physical development, partly from the inflated emphasis assigned to physical traits by school mates and partly from increasing identification with culturally determined standards (1963:845).

Dempsey (1972) and Wylie (1961) stress that the key factor for change in body image in adolescence is growth. Because growth is rapid, it is usually noticed by self and others. In addition to growth, change and increase in feelings cause the adolescent to focus attention on his body and force him to change his image. He becomes more aware of his body, therefore body image has a greater significance (Dempsey 1970:609-11). Wylie adds that the influence of body characteristics are more noticeable in adolescence when "body changes which are important for social functioning are numerous, rapid and obvious" (1961:160).

Since these periods of growth and changes direct attention to that part that is changing, the adolescent becomes more sensitive to that part and its changes. It is this input that can lead to accurate body image or distortions. If distortion occurs, it may be of two

types: 1) the adolescent may think the body or a part is overly important, or 2) he may think the body or a part is more perfect than it is. Most frequently adolescents tend to overemphasize defects and underevaluate self. If there is any real or imagined defect, it often becomes a scapegoat for other problems (Dempsey 1972:614-15).

Schonfeld identifies internalized psychological factors as influences on development of body image. . . . it is the personality which experiences the perceptions and creates the concepts which make up the body image" (1963: 848). In contrast, Schontz identifies the body as a "component of and influence upon the personality of the individual" (1969:165). Schonfeld further explains that

. . . previous emotional experiences influence the individual's observations and interpretations. Body image is a condensed representation of the individual's current and past experiences of his own body, both real and fantasied. It has both conscious and unconscious aspects (1963:848).

There is some disagreement as to the age at which body image is fully developed (Engel 1959; Kresky and Simon 1961; Schonfeld 1963). Engel (1959:211) stresses that it is not known by which age the process of self-concept reaches stability, although the concept of self remains relatively stable in young adults. Kresky and Simon (1961:785) propose that body image is not fully developed until eight to nine years of age. Schonfeld

(1963:848) writes that most of the essential components of personality are integrated in childhood, but the inter-relationship is not fully established until late adolescence.

Human Figure Drawings

Koppitz, in Psychological Evaluation of Children's Human Figure Drawings, hypothesized that human figure drawings reflect "primarily a child's level of development and his interpersonal relationships, that is, his attitudes toward himself and toward the significant others in his life" (1968:3). She further believes that drawings reveal attitudes toward stress and the child's way of handling the stress. Strong fears and anxieties, conscious or unconscious, may be demonstrated through human figure drawings. Koppitz does not regard the human figure drawing as a self-portrait of the child's enduring personality traits, nor of his actual appearance. However, she does believe that human figure drawings show the current stage of mental development as well as the attitudes and concerns of the child at any given moment. Therefore, the human figure drawing is regarded as a "portrait of the inner child of the moment" (1968:3-4).

Machover's (1949:5) theory is that an individual, when asked to "draw a person" will utilize projection and introjection in selecting the figure to draw. She maintains

that the individual will call upon his conscious and unconscious system of psychic values for this assignment. The body, or self, is the most intimate point of reference in any activity. The perception of body image as it has developed out of personal experience will guide the individual to produce a drawing which expresses his body needs and conflicts. Specifically, Machover reports that the human figure drawn by an individual "relates intimately to the impulses, anxieties, conflicts and compensations characteristic of that individual (1949:35). Her theories are supported by Hammer's (1959:38) statement that an individual when asked to draw a human figure, projects to some extent what he perceives himself to be, what he wishes to be, and what he fears to be. Schildkrout, et al. (1972:3) agree with Machover and Hammer that body image evolves from a combination of physical, physiological, psychic and inter-personal experiences, and that these factors determine the features one selects in drawing a person.

A child will draw what is suggested, but the drawing will be a representation of that which impresses him mentally and emotionally (DiLeo 1970:102). Landisberg (1969:136-38) states that the choice for features of the drawings come from two sources: 1) perceptions, including perceptions of self and others, and 2) conceptions,

including concepts of a person's feelings, needs and conflicts.

Developmental and Personality Traits

Developmental factors should be considered in determining the effectiveness of the DAP test as an indicator of body image. Machover (1949:102) states that the chronological age of the subject does not alter the value of the DAP test since the graphic expression is based on body image projection. She warns that a consideration must be made of the drawing traits in the individual's age group so as to determine which traits are "normal" expressions of a developmental age. Schildkrout, et al. (1972:6) stress the importance of familiarity with stages of adolescent development, problems and changes to be expected, in order to effectively assess adolescents' drawings.

Early adolescence, ages twelve to fifteen, is characterized by the conflict of the urge to return to a dependency state and an effort to resist this tendency by pulling away from parents. This state commonly results in drawings with midline emphasis, numerous buttons and belt buckles. Efforts to control impulses are reflected in frequent use of stripes, plaids, dots and other designs covering much of the body. Use of body shading and

emphasis in sexual regions are indicators of the anxiety experienced over the rapidly occurring physical changes.

Middle adolescence, ages fifteen to eighteen, is a time of identification with the parent of the same sex and establishment of a masculine or feminine role. There is also a search for a love object of the opposite sex. Drawings may depict an idealized physical image. Fashionably dressed females and athletic men are figures which may be depicted. Meticulous detailing is often a sign of intellectualization and idealism. Dependency conflicts and sexual identification confusion which persist through this stage tend to diminish at about age eighteen.

Late adolescence, eighteen to nineteen years of age, is the period when stabilization occurs. Feelings of equanimity, self-esteem and purpose should be landmarks of this stage. Drawings can be expected to be free of anxiety indicators, to have obvious differentiation between male and female figures, and to convey a feeling of adequate integration (Schildkrout, et al. 1972:6-8).

Shontz (1969:191-92) and Schildkrout (1972:22-23) agree that feelings about the body which are derived from Draw-a-Person productions reveal personality traits that are associated with perceptions of the body. A large number of adolescents' drawings demonstrate the self-image as

immature and inadequate. These drawings are often the portrait of younger children, representing an inner image reinforced by others in his life who continue to perceive him as a young child (Shildkroun 1972:22-23). Other personality traits which may be reflected in human figure drawings by teenagers are dependency needs and sexual identification ambiguity (1972:8).

Controversy about Draw-a-Person Test

The use of the Draw-a-Person (DAP) test has been in controversy over the years. Some support the test as a projective technique which provides valuable data about the subject (Blaesing 1972; Vernon 1972; Shontz 1969).

Other authorities are less positive about the use of the Draw-a-Person test. Swenson, after an extensive review of research, wrote that the drawings do not provide enough data for a reliable diagnosis. Like Vernon, Swenson (1965:609-50) does believe that the Draw-a-Person has a place as part of a diagnostic battery. He further states that literature offers some support that the over-all adequacy of the figure has some relationship to personality adjustment; therefore, it may serve as an index to determine how well a patient is functioning, or an indication of the nature of the problem. Traub and Orbach feel that projective techniques, especially Draw-a-Person and

Rorschach tests, "generally lack the objectivity necessary to achieve consensus" (1964:53).

The use of Draw-a-Person test in studies of body image depend on the assumption that an individual's spontaneous drawings of the human figure represent a projection of his own body image. Unfortunately, no satisfactory validating criterion has yet been proposed to verify this point (1964:57).

Wylie (1961:264) echos the concern of Fisher and Cleveland (1968) that it is difficult to differentiate which aspects of a human figure drawing are linked with body image, which with drawing skill, and which are due to the manner in which the drawing is obtained. There have been too few studies which determine whether or not the figures drawn do represent the subject's perception of himself (Swenson 1957:435). Some examples of these studies follow.

A series of studies of obese women showed changes in the body image of the subjects. The body image hypothesis accounts for only part of the differences obtained in those results (Kotkov and Goodman 1953:364). Berman and Laffal (1953:370) designed a study to determine whether subjects tend to draw a figure that represent their body style, draw an idealized figure, or draw a figure that bears no relationship to themselves. Results suggest that subjects tend to draw a figure-type with which they are most familiar, i.e., their own. Maloney and Payne (1969:119-21) also carried

out research in attempting to determine the validity of DAP for measurement of body image. Teenage retarded girls served as subjects. The authors did not consider the results sufficient basis for using DAP as an index of body image in these subjects. They recommended further research to determine validity of DAP in normal subjects.

In addition, the measurement of body image has long been a subject of conflict among authorities in the clinical field. Machover's (1949:4-5) theory is that when a person responds to the request to draw a picture of a person, he draws a picture of himself. Gorman (1969:116-19) feels that few will argue over whether drawings are a truthful representation of a component of body image; rather the controversy is over the value of DAP as an instrument for psychological diagnosis. He continues that two camps exist regarding the use of human figure drawings as a measure of body image--one group is mostly experimentalists who conclude that the projective drawings of human figures are of little value in making personality evaluations; the other group is mostly clinicians who say the DAP test is a valuable psychodiagnostic instrument. Gorman recognizes that the validity of DAP tests in measuring body image has been challenged by lack of objective data, but feels that its use is of

definite clinical value in estimating the outline of body image.

Schildkrout, et al. state that "whatever the intent, a drawing projects man's idiosyncratic image of himself or his fantasied self" (1972:1). They agree with the works of others that have established the use of human figure drawings as an indicator of emotional and organic deviations from normal. The Draw-a-Person test is a projective technique which assesses body image by permitting the child to demonstrate positive or negative feelings toward his body (Blaesing 1972:606).

In contrast, Shontz states that the DAP technique is "too heavily loaded with demands for specific skills to be acceptable as a measure of the general factor it is intended to assess," i.e., body image (1969:179).

Utilization of Draw-a-Person Test

Koppitz (1968:7-8) has utilized the DAP test extensively to determine an effective interpretation of human figure drawings. She has developed two sets of objective signs which serve to evaluate drawings in two ways: 1) Development Items--related to children's age and level of maturation, and 2) Emotional Indicators--related to children's attitudes and concerns. Of the thirty possible items which may be identified in drawings as

Emotional Indicators, eight have been recognized to be statistically significant in drawings of children with known emotional problems. These include poor integration of body parts; shading of body, limbs; slanting figures; tiny figures; big figures; short arms, hands cut off; no neck (Koppitz 1966:313-15).

As a result of her work, Koppitz (1968:35-43) states that when a human figure drawing shows none of the thirty Emotional Indicators, it seems likely that the subject is free from serious emotional problems. The presence of only one Emotional Indicator is inconclusive as evidence of emotional deviations from normal. Two or more Emotional Indicators are highly suggestive of emotional difficulties and unsatisfactory inter-personal relationships. The Emotional Indicators on human figure drawings are believed to reflect anxieties, concerns and attitudes. These components of the personality are created by the many factors which influence the adolescent's perception of himself, some of which are: the period of major decisions, unusual change in ideas and values, interpretations of what others think of him, and rapid growth with resulting body changes (Rosenberg 1965:3-5; Bernard 1971:170; Gergen 1971:49; Gallagher 1966:56-58; Dempsey 1972:611; Wylie 1961:160).

The use of the DAP test has been advocated as a screening device because of its ability to provide a gross indication of 1) the nature of the client's problem, and 2) his level of adjustment (Swenson 1957:463). Schonfeld and Ludwig both recognize the advantage of administering the DAP test to teenagers. Schonfeld (1963: 852-53) suggests that every pediatrician evaluate the attitudes of his adolescent clients to his body image by asking him to "draw a person." In addition, Ludwig (1969: 260) reports that this technique will reflect any alteration in self-esteem and performance on the DAP test when a threatening situation is introduced.

Chronic Illness: Effect on Body Image

Understanding Health Norms

The advertising media, our systems of public information and entertainment, and hero worship of athletes have created a population who glorifies the ideal body and degrades the deviant. The United States is committed to beauty, wholeness and health (Schonfeld 1963:851; Norris 1970:4). Bernard states the physical health is an important influence in self-concept and emotional control and expression. Adolescents who over-do because of the demands of competitive athletics or their own demands to participate in a wide variety of activities are frequently hard to get

along with at home and school. He further believes that "chronic illness predisposes a person to a pessimistic attitude" (1971:171-72). It has long been recognized that an intimate relationship exists between a person's physical health and his body image. Many investigations have been made regarding physical health and body image (Kurtz and Hirt 1970:149-50; Fisher and Cleveland 1955; Schilder 1950).

Causes of Alterations in Body Image

Every adolescent has a need for a sense of his own worth; anything that makes him feel inadequate or inferior is apt to be met with some defensive reaction. To the adolescent, being different usually implies being inferior; ". . . when he feels that his body fails to come up to the expectations of those about him, he frequently develops self-deprecatory feelings" (Schonfeld 1963:849-50). Adolescent peer groups are particularly sensitive to similarities and differences in one's body. The adolescent whose appearance, development or behavior is not within the peer norms will have more difficulty being accepted; any physical characteristic may eliminate one from a group. Like Schonfeld, Dempsey (1972:613) stresses that being "different" often means being inferior.

Schonfeld's (1963:846) works show that modification in the actual appearance of the body may cause changes in body image because one does not see his body as it actually exists. This disturbance may be a result of an inner emotional condition that exaggerates defects, or a result of actual somatic delusions. People invest emotions in their body and its well-being. Anxious and disturbed feelings are aroused if internal or external changes occur. Any alteration in the body is a threat to emotional integrity (Leonard 1972:687). The degree of threat to body image is related to the extent on which a person depends upon, or his feelings about, that organ. If the organ is not seen as important, the threat is not as great. The stage of development is also a factor in determining the degree of threat. For example, an illness which interferes with self-mastery is more threatening to a three-year-old, while a disfiguring illness is a greater threat to the sixteen-year-old. Norris (1970:50-55) continues with a discussion of the known effects of change in body image with the loss of a body part, but reinforces that less is known about the effect of loss or changes in the physical body which are not visible (e.g., colostomy, hysterectomy, etc.). She feels that heart attacks, asthma and pneumonia have a symbolism in terms of life and death.

Effects of Illness

Fear of physical illness is indicated as a major concern for the adolescent by several authors. Mash and Dickens in Nursing Care of Children (1970:666-67), explain that fear of illness may cause a teenager to have symptoms which do not exist, or to deny symptoms which are present. Fear of losing control is the foci of Robert Hughes' (1967:116-7) works. He says that this fear is realized because preadolescents and adolescents are concerned about their controls, and are consciously working at maintaining impulse control. He has defined the primary stress producer for the patient as threat to one's ego or identity.

Feelings of guilt regarding the illness may cause feelings of mistrust, self-doubt and inferiority, explains Marlow (1969:631). She further cautions that there is a possibility of the ill adolescent giving up hope of healthy personality development, and resorting to blame and/or punishment of others. Schowalter and Lord (1971:127) write that the depersonalizing experiences of hospitalization accentuates regressive behavior, and is therefore especially threatening to the vulnerable adolescent who is striving to attain independence. Vernon (1972) agrees that children ages two-and-a-half to seven and adolescents are

more vulnerable to stress than are other children. Other feelings of the ill adolescent have been described by Marlow, Hurlock, Schowalter and Lord, Burling and Collipp.

Chronic Illness

Health problems also pose a serious threat to the development of body image of infants, children and adolescents (Riddle 1972:660). Illness focuses attention on the adolescent's body. This sets him apart from his peers and as a result, poses a threat to his self-image and his feelings about himself (Hammar and Eddy 1966:89). Research by Meissner et al., (1967:1100-01) suggests that physical disability of high obvious visibility and great impact are factors in determining change in self-concept. Severely handicapped adolescents had a more negative self-concept than non-handicapped teenagers. An exhaustive collection of studies concerning the problems of body image of patients with physical illnesses and disabilities or somatic complaints has been reviewed by Shontz in his book, Perceptual and Cognitive Aspects of Body Experience (1969:167-68).

The child who lacked stability because of prolonged illness, disturbances in parent-child relationship, and problems of adjustment often fail to develop a wholesome

frame of reference for self-concept as an adolescent (Schonfeld 1963:848). Marlow (1969) and Hurlock (1955) discuss the prerequisite qualifications for success of the adolescent with long-term illness. Marlow (1969:631) feels that if the teenager is given an opportunity to master self and environment within the limits of reality and to become independent, he will probably be successful in his personality development. Hurlock (1955:467-68) stresses the need for the adolescent to set his own realistic goals, select activities in which he can succeed, and avoid using poor health as an excuse for failure.

Peterson in his article for The Journal of Health and Social Behavior (1972), describes the research designed to examine the life-style of adolescents who are frequently ill. Participating in the study were 6,725 adolescents, some of whom had chronic illness. (It should be noted that none of the subjects were seriously ill or had debilitating illnesses because they were all in attendance at a public high school on the day the questionnaires were administered.) The many hypotheses of the study were based on the commonly held ideas that

. . . the adolescent who is "sickly" has to curtail his activities and is overprotected by his parents, siblings, and peers. He lives a somewhat lonely existence; he is a wallflower at social gatherings. He is lonely, sad, not readily accepted into peer

activities, and too readily accepted into familial activities (1972:435-36).

The following conclusions did not support the hypotheses of this study.

1. Adolescents with a history of illness do not have more protective, concerned and solicitous family members than adolescents who are in good health.
2. It seems that there is a hierarchy of concern based on the health-illness typology.
3. This concern is only operative when the adolescent is ill.
4. It does not appear to be true that adolescents with a history of illness are more empathetic toward persons who are ill than healthy adolescents.
5. Adolescents with a history of illness are not limited in their activities (1972:436).

The chronically ill adolescent patient experiences greater fear and apprehension regarding the future than does the acutely ill patient (Tiedt 1972:137; Vernon 1965: 145). Leonard describes the fears of disabled patients as: fear of death, incapacitation, pain, abandonment, loss of self-esteem and disturbances of interpersonal relationships. He states that

Chronic illness may or may not be manifestly disabling--disability results from impairment of the biologic, physiologic or sociologic efficiency of the person and prevents him from pursuing his normal or usual activities (1972:687-88).

It is the findings of Kurtz and Hirt (1970:151) that chronically ill subjects evaluated their bodily appearances more negatively than do healthy subjects. Their study

supports that variations in physical health are related to variations in body image. Koppitz has found that

Children with handicaps who are concerned with their disabilities will reflect these concerns on their human figure drawings just as they would any other concern or anxiety (1968:104).

She also writes that it has been suggested that children with physical handicaps who do not show body distortions or conflict signs on human figure drawings are using denial or depicting a wish-fulfilling figure.

Schildkrout, et al., (1972:49-50, 147) report their impressions that human figure drawings collected from hospitalized adolescents are reflective of disturbed body image. The work of these authors has been based on content analysis of a collection of drawings from ill adolescents. They feel the drawings are of value in discovering unsuspected conflicts and anxieties. Feelings of helplessness and being manipulated are aspects projected in drawings from these patients. The affected part of the body is frequently the focus of attention. Chronic illness is especially tragic in adolescence, writes Schildkrout. Some of the more obvious traits of these patients are withdrawal, negativism, hostility, insatiable demands, devouring needs and denial. Physical illness may cause a narcissistic blow to the adolescent and result in regression. The drawings often show removal of the

affected region, or dehumanized figures. Machover has this to say about the effect of illness on body image and the DAP test.

Individuals who, because of physical or mental disease are restricted in movement or contact with the outside world and are left to feed largely on the perceptions and sensations derived from their own body, may project either an elaborate expression of inner fantasy activity, or lacking active fantasy compensations, may portray an empty, vegetative, regressed, and sometimes silly figure, reducing the image or the personality to the barest and crudest essentials (1949:59).

The Heart and Body Image Changes

In discussing body image changes after myocardial infarctions, Smith (1972:633-34) relates the importance of one's perception of his heart. The heart may be viewed in three ways: 1) as the seat of emotions, 2) as the center of the body, and 3) as life itself. From the perspective of emotions, it is the heart area where feelings are experienced--for example, those emotions which cause one to be "heartsick," "gladhearted," "chicken-hearted," etc. The heart is seen as the center of the body because it is the organ which is unpaired and without which an individual cannot survive. It is thought of as life itself because death occurs when the heart stops functioning. Based on these perceptions of the heart, it is appropriate to examine the effect of congenital heart disease on adolescents and their body image.

Roberts insists that body image is an aspect of heart disease which must be considered. "A child's perception of his body and his ability to control and use it has a great influence upon his self-concept" (1972:1083).

Although many children with previously life-threatening conditions can now look forward to complete cure, it is possible that they will continue to have severe social and emotional difficulties (Adams and Moss 1969:605).

Green and Levitt (1962:438-39) hypothesized that the presence or absence of functional impairment is related to the concept that the child has of himself. They also felt that the body image of children with congenital heart disease is constricted as compared to normal children. In their study, the height and number of square inches was less in human figure drawings of cardiac children than in normal and retarded and emotionally disturbed groups of children. They conclude that it would be helpful to know the reasons for this outcome in terms of prevention, prediction and therapy. It is their contention that

The body image concept is not only biologically determined in laws of growth and development and therefore constitutionally limited, but is constantly modified in the light of perceptual and social experiences . . . (1962:440).

Adams and Moss (1969:605) report a number of studies which show that children with congenital heart disease make poor

adjustments in leadership, work habits, responsibility and self-confidence.

Because adolescence is naturally a time of rebellion, there are special problems in management of teenagers with congenital heart disease. Prepuberal and adolescent patients may push beyond capacity to prove normality because of social pressures to conform to the group (Engle 1970:271; Adams 1969:606).

An article published in 1959 in the South African Medical Journal by Dr. Harold Cooper (1959:350-51) fully discusses the psychological aspects of congenital heart disease. Children with a cardiac lesion are subject to profound psychological reactions which must be assessed along with routine physical evaluations. Two sources are identified as basis for psychological problems: 1) the physical handicaps produced by the cardiac disease, and 2) faulty parental attitudes.

The physical handicaps begin the day of birth when every normal child starts the task of establishing emotional security. Cooper writes that to the child with heart disease anxieties are magnified and his ability to deal with them are reduced. This infant may have difficulty feeding, undue strain may accompany the passing of excreta, dyspnea may interfere with sleep . . . thus the anxieties

grow. At every stage he is at a disadvantage: development of motor power, coordination, walking. For the cardiac child nothing comes easy and the world seems unsafe and frightening. Soon he finds it impossible to keep up with other children. Once a cardiac child is physically handicapped, psychological impairment will follow (Cooper: 1959:350-51). Glasser, et al. (1964:367), suggest that physical problems associated with congenital heart disease may provide anxiety which leads to withdrawn and overly dependent or aggressive and attention-seeking behavior.

Parental attitudes influence the emotional adjustments of these children. Some will try to defend themselves against anxiety. Others will abandon the struggle and avoid anxiety-producing situations; many will become over-dependent on their parents. Guilt feelings and pathological anxiety in parents influence the parents' attitude toward the child. Rejection or overprotection are particularly frequent parental behaviors (Cooper 1959: 350-51). Depending on the child's reaction he may become asocial and withdrawn, developing an introverted personality or may fail to achieve the degree of emotional independence which is necessary for normal interpersonal relationships (Cooper 1959: 350-51).

Other personality traits attributed to congenital heart disease are visualized in the human figure drawing of a twenty-year-old female with severe cardiac disease. The drawing was interpreted by Schildkrout, et al. (1972:59) and included in their book of adolescents' human figure drawings. The significant and interesting characteristics of the drawing are: face in profile (indicates defensive avoidance), necklace-like line which draws attention to the chest, omission of hands and feet (indicates a sense of helplessness), shaky outlines which reveal anxiety, and omission of the pupil of the eye (projects a wish not to see painful reality).

Responsibility of the Health Team

The health care professionals have a great responsibility in maintaining the integrity of body image of ill adolescents. The teenager's image of himself is determined by his own concept of illness and health, and by the reactions of others to his body, ideas and feelings (Hammar and Eddy 1966:33). In a paper presented at the Conference of American Association for Child Care in Hospitals, Hofmann (1971) stated that the adolescent responds to the impact of illness and hospitalization out of his own patterns of behavior and his pre-existing personality structure. He has emotional flexibility and

adaptational responses available that are determined largely by the attitudes and approaches of those around him. The importance of significant others is stressed by many. Riddle (1972:659) believes that peers are instrumental in determining how an adolescent perceives himself. Leonard (1972:688) says that the patient's feelings are influenced by those caring for him. In addition, the stage of development and the illness event are factors which Fujita (1972:648) identifies as important to the body image of hospitalized patients.

Although these and others recognize the need for quality care for adolescents, the teenager is frequently excluded as a recipient of medical care. Some of the reasons this may occur are:

1. They fall between medical specialties and miss peak attention by any specialist.
2. They are a tough group to deal with; their troubles are elusive and exasperating.
3. Their problems prevent them from presenting themselves for medical attention (Sternlieb and Munan 1972:177).

Burling and Collipp urge the medical profession to give "more thought to the constructive role the hospital can play in children's emotional growth (1969:646). The health team may reinforce anxieties or contribute to the growth of the client by their very behavior. The physician's comments or attitudes may be misinterpreted by the

adolescent who is experiencing increased concern for his body. To him, even slight aberrations in growth or development within the extremes of normal maturation is cause for alarm (Schonfeld 1963:851). Principles of nursing intervention should be derived from the body image theory to assist young patients in mastering health problems and overcoming body image threats (Riddle 1972:660).

Hammar and Eddy (1966:33) emphasize that the manner in which the hospitalization of a teenager is handled by the medical and nursing staff determines whether the patient's self-concept will be kept intact. Schildkrout, et al. (1972:145), see it as a primary responsibility of the health care professionals to include assessment of body image in the total evaluation of a client's health needs.

Summary

To summarize the review of literature presented in this chapter, the focus was directed toward the following areas: Overview of Studies on Normal Adolescent Development, Body Image--Concepts and Development, Draw-a-Person Test, Chronic Illness in Adolescents, and Responsibilities of the Health Care Team.

The studies and works of many authors were reported which described the interrelationship of physical, emotional and cultural development. The concern an adolescent has

for his body was discussed as a normal occurrence of adolescence. The developmental tasks from childhood through adolescence gave perspective to the demands of adolescence. Human needs as they relate to teenage growth were identified.

The definition of body image and its relation to self-concept was presented as it occurs throughout its development from infancy to adolescence. Emphasis was placed on the effect that physical growth and change have on body image.

The body image theory of the Draw-a-Person test was discussed from the viewpoint of clinical experts with differing opinions. The literature reviewed indicates that most agree that the DAP test is a projective technique which can be utilized to ascertain information about personality traits and body image. The test however, is generally thought to be inadequate when used alone for the purpose of diagnosing personality disorders. Developmental factors as important considerations in interpretation of the drawings were described.

The following information was also derived from the literature review. The American culture places great priority on physical health and attractiveness. The effect of chronic illness is often devastating to the

adolescent who is striving for independence and acceptance by his peer group. The studies reviewed indicated that disturbances in physical statue are reflected in distorted body images. The special problems of adolescents with congenital heart disease were considered as a separate entity. The psychological needs of the adolescent with heart disease were related to the importance of his self-concept. Parental behavior was considered as a basis of problems in these adolescents' adaptation. Descriptions of a human figure drawing of a patient with congenital heart disease emphasized the value of the DAP test.

The need for quality health care with attention to body image assessment for adolescents was presented. The experience of hospitalization and the role of the health care team in contributing to the healthy, positive body image of the ill adolescent was fully explored.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

Introduction

This chapter describes the type of research designed to study the body image of adolescents with congenital heart disease. The setting from which the subjects were selected is identified, and the method of selection and description of the population are included. Description of the Instrument gives a brief overview of the historical development and use of the Draw-a-Person test. Emotional Indicators are discussed as an evaluative tool. The procedure for collection of data and procedure for treatment of data are described.

Type of Study

This study was concerned with investigating the body image of adolescents with congenital heart disease to determine if a difference exists between this group and adolescents without congenital heart disease. The literature reviewed reinforced the concept that body image is important to adolescents and that alteration in body image might be reflected in the figure that an adolescent

draws in the Draw-a-Person test. This study was designed to be descriptive nonexperimental research.

Setting

The study took place in two settings. The hospital from which the control group and names of all subjects were secured was non-proprietary, 120 bed, Children's Medical Center in Dallas, Texas. Permission to utilize hospital records and hospitalized patients was granted by Miss Trude Aufhauser, R.N., Director of Nursing. Subjects who were hospitalized at the time the data were collected were patients in this hospital. The second setting was the private homes in the greater Dallas area in which the remaining subjects live.

Population

A total of thirty subjects, ages twelve to nineteen years, participated in this study. One-half of the subjects belonged to Group A, one-half to Group B (see Table I).

TABLE 1

AGE AND SEX DISTRIBUTION FOR GROUP A AND GROUP B

Group A				Group B			
Age	Boys	Girls	Total	Age	Boys	Girls	Total
12-14	1	0	1	12-14	6	3	9
15-17	2	7	9	15-17	1	5	6
18-19	3	2	5	18-19	0	0	0

Selection of Control Group

Fifteen adolescents were selected by the convenience sample method from a larger group of junior volunteers at a hospital, and from teenage visitors at the hospital and in the homes. Eleven subjects were hospital volunteers, two were hospital visitors and two were home visitors. These adolescents were assigned to Group A. There were six males and nine females ranging in age from fourteen to nineteen years. The mean age for the group was 16.87 years. All of the subjects had completed the previous school grade and planned to return to school in the fall. Of the fifteen subjects, seven had been a patient in the hospital at some time; five of those seven had undergone some type of surgical procedure (see Table 2). To the best of their knowledge, none of the subjects had any physical restrictions or limitations. All of the subjects had one or more

sibling. Criteria for assignment to Group A was that the adolescent was not under medical supervision for any health problem.

TABLE 2

HISTORY OF ILLNESS OF SUBJECTS IN GROUP A AND GROUP B

	Group A	Group B
Have been patient	7	13
Now a patient	3	0
Have had heart surgery	0	9
Have had surgery-other	5	5
Total in Group	15	15

Selection of Experimental Group

Fifteen additional adolescents were selected by the convenience sample method to participate in the study. Hospital admission charts and doctors' records provided information from which the subjects were contacted. Three of the subjects were in-hospital patients at the time the test was administered; twelve were out-patients. There were seven males and eight females ranging in age from twelve to seventeen years. The mean age of Group B was 14.07 years (Table 1). Thirteen of the fifteen patients in Group B had been a patient in the hospital at some time;

the remaining two had had physical evaluation on an out-patient basis. Nine out of the thirteen who had been patients had had heart surgery prior to reaching adolescence. In addition, four of those nine had had other types of surgical procedures. Only one subject with congenital heart disease who had not had heart surgery had had a surgical procedure unrelated to his heart defect (see Table 2). Two patients in this group described mild activity restrictions which excludes strenuous exercise from their activities. All of these subjects had also completed the previous school grade and planned to return to school in the fall. All of the subjects had one or more sibling. Criteria for admission into Group B was that the patient was currently under medical supervision for treatment or follow-up of congenital heart disease.

Description of Instrument

For centuries art has been recognized as an accepted method of self-expression. With the discoveries of psychoanalysis there has been a new appreciation for art as a projective tool concerning the dynamics of the unconscious (Hammer 1958:5-20). The more recent interest in

using children's human figure drawings was initiated by Florence Goodenough (1926) who devised the Draw-a-Person test to determine intellectual growth and development based on the details a child included in his drawings of a person. Machover expanded the hypothesis of the test to include an index of body image; she believed that "in some sense the figure drawn is the person" (1949:35). Others who have studied adolescents (Ludwig 1969:257; Kaufman 1972:157; Kestenberg 1972:164) support Machover's findings that the Draw-a-Person test is a successful projective tool for determining "impulses, anxieties, conflicts and compensations of that individual" (1949:35). Freeman relates that the drawn human figure represents one's "body image--a symbol of the concept of self, a reflection of self regard" (1962:674). It is the Draw-a-Person test, based on these concepts which was utilized for this study.

Later, Koppitz identified thirty-eight objective signs which might be present on human figure drawings. She described these objective signs as Emotional Indicators which are a reflection of a child's anxieties, concerns and attitudes. These signs were based on the work of Machover and Hammer, and Koppitz' clinical experience. The list of Emotional Indicators includes three types of items: 1) those related to the quality of the human figure

drawing, 2) special features not usually found on human figure drawings, and 3) omissions of items which would be expected on the human figure drawings of children at a given age level (see Appendix A). A normative study of 1,856 children was carried out by Koppitz to determine whether the items on the original list of thirty-eight signs could meet the following criteria for Emotional Indicators:

- 1) that they are not primarily related to age and maturation and hence do not increase in frequency of occurrence as a result of the children's increase in age.

- 2) that they are rare or unusual and occur on 15% or less of all human figure drawings at a given age level (1968:35-36).

Thirty-two of the thirty-eight items met the criteria.

Another study was designed by Koppitz to determine whether the thirty-two items could differentiate between human figure drawings of children with and without emotional problems and behavior symptoms. In her validation study, Koppitz (1966:313-15) found that three-fourths of all well-adjusted school children selected by their teachers as outstanding all-around pupils with good social, emotional and academic adjustment revealed no Emotional Indicators at all; only seven out of seventy-six in a group of children with identified emotional disturbances had human figure drawings without such signs. Thirty items were found to

be statistically significant when the total number of Emotional Indicators in each group was compared. Each item was found to be valid for girls over nine years of age and boys over ten years of age.

The list of thirty Emotional Indicators was the tool used to evaluate the Draw-a-Person test in this study. Based on the review of literature, the Emotional Indicators are a more objective means of scoring the Draw-a-Person test to assess body image than the more commonly used Content Analysis method. Koppitz states that

Children with handicaps who are concerned about their body disabilities will reflect these concerns on their human figure drawings just as they would any other concern or anxiety (1968:104).

Therefore it is apparent that this means of scoring will reflect body image alterations in children who have concerns about their body. As described in Chapter II, body image is an important concept to all adolescents, and body image alterations are of particular consequence to adolescents with congenital heart disease and other long-term illnesses. The items included in the tool and definitions of each item are in the Appendices (see Appendix A for Score Sheet, Draw-a-Person Test; Definitions of Emotional Indicators are included in Appendix B).

Procedure for Collection of Data

The design for this study involved the subjects drawing a picture of a person. Each out-patient was contacted by telephone and an appointment was made for the researcher to visit that subject in his home. On two occasions visitors in the homes were invited to participate in the study and so agreed. In-hospital patients and junior volunteers were approached at a time convenient to them. Two hospital visitors were also asked and agreed to take part in the study. The researcher introduced herself to each subject and informed him that the purpose of the visit was to collect information about teenagers. Each subject was provided a plain white sheet of paper, 8-1/2 by 11 inches and a number two pencil. The instructions were to "Draw a picture of a whole person." Each subject was given encouragement as needed, but no further directions were given. After the subject had completed the picture, the researcher obtained information requested on the Participant Information form (Appendix C). The Participant Information sheet was a questionnaire designed to obtain specific information about the patient and his medical history. It required short answers.

Each subject's drawing and information sheet was numbered consecutively as collected. Assignment to Group A

or to Group B was later made on the basis of the response to the questions, "Are you now under a doctor's care?" and, if yes, "What is the reason?" A response of "no" placed the subject in Group A. Affirmative answers for reasons of congenital heart disease, or any description thereof, placed the subject in Group B. There were no affirmative answers for any health reason other than heart disease.

The thirty drawings were combined without identifying information on the papers (see Appendix D). The previously assigned number corresponding to the number on the information sheet was written on the back of the paper on which the drawing was made. They were randomized using a table of random numbers to insure unprejudiced scoring by the judge.

The judge evaluated each drawing for the presence of each of the thirty Emotional Indicators. A separate score sheet was provided for each drawing (see Appendix A). One point was assigned for each Indicator observed in the drawing, thus giving a score of the total number of Emotional Indicators.

Judge

Mrs. Diana Cunningham, R.N., M.S., served as judge. Her qualifications are her wide education and background

in the mental health field. Her Master of Science degree is in Psychiatric-Mental Health nursing; she is presently a doctoral student in clinical psychology and engaged in private practice. Her past experiences include teaching and serving as Staff Development instructor in a children's hospital. There her primary focus was play therapy for the children. At that time she strongly encouraged the use of art and human figure drawings as a means of self-expression. Mrs. Cunningham has had extensive experience with the Draw-a-Person test and Koppitz' Emotional Indicators.

Procedure for Treatment of Data

A comparison of the body image of adolescents with congenital heart disease and the body image of adolescents without congenital heart disease was made based on the number of Emotional Indicators present on the Draw-a-Person test. The Draw-a-Person test of each subject was scored for the presence of Emotional Indicators. A nonparametric test was needed to compare the scores because the population was not drawn from a normally distributed population (Siegel 1956:19). The Mann-Whitney U test was selected because of its usefulness in testing whether two independent groups have been drawn from the same population. It is a statistical test based on rank scale (1956:116-26).

The 0.05 level of confidence was used to determine the level of significance between the two groups of adolescents' drawings. The results of these statistical procedures appear in Chapter IV of this study.

Summary

This study was developed as a descriptive non-experimental research design which is concerned with the comparison of the body image of the adolescent with congenital heart disease to the body image of adolescents without congenital heart disease. The setting from which the population was selected was a children's hospital. Some of the data were collected in private homes. Subjects participating in the study were adolescents, ages twelve to nineteen years who were under medical supervision for congenital heart disease and those who had no known illness or condition requiring medical treatment at that time.

The tool utilized for this study was the Draw-a-Person test. Evaluations of the drawings were determined by the presence of Emotional Indicators. The drawings were scored by an experienced judge and the Mann-Whitney U test was used for analysis of the scores.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF FINDINGS

Introduction

The purpose of this study was to compare the body image of adolescents with congenital heart disease and adolescents without congenital heart disease. The analytical findings obtained from the Draw-a-Person test are presented by means of scores determined by the number of Emotional Indicators present in human figure drawings. One point is added to the initial score of 0 for each Emotional Indicator observed in a human figure drawing. DAP tests of adolescents with congenital heart disease and adolescents without congenital heart disease were compared. The age and sex factor of adolescents with congenital heart disease were also considered.

Presentation and Analysis of Data

DAP Test Scores

Examination of DAP Scores

The population of the study consisted of a total of thirty subjects, ages twelve to nineteen. There were two groups of fifteen subjects. Group A consisted of eleven junior volunteers and four hospital or home visitors

who were not under medical supervision for any reason. Group B consisted of fifteen adolescents with congenital heart disease. Twelve subjects in this group were out-patients at the time the test was administered, three were in-hospital patients at that time. All subjects in each group were asked to draw a picture of a person. The score was determined by the number of Emotional Indicators present on each drawing. Table 3 reflects the scores of both groups in this study.

TABLE 3
DAP SCORES OF GROUP A AND GROUP B

Score	Group A	Group B
0	11	8
1	4	3
2	0	2
3	0	0
4	0	2

Group A presented a total of four drawings out of a possible fifteen with a score of 1 or more. This is compared to seven drawings out of a possible fifteen in Group B which showed a score of 1 or more. Koppitz' theory is that when a human figure drawing shows none of the thirty

Emotional Indicators (a score of 0), there is no sign that the child has serious emotional problems. The presence of one Emotional Indicator (score = 1), is inconclusive; however, two or more indicators (score of 2, 3, 4, etc.), are suggestive of problems in adjustment and relationships (Koppitz 1968:42). In this study, Group A had no drawings with scores of 2 or more; Group B had four drawings with scores of 2 or more. The range of scores for both groups was 0 to 4. There was no score of 3.

Significance of DAP Scores

The Mann-Whitney U test was selected to find the difference between the two groups of subjects. It is a test based on rank scale and may be used when ordinal measurement has been achieved. This method of determining whether two groups have been drawn from the same population is the nonparametric alternative to the parametric t test (Siegel 1956:116-26). A nonparametric test was needed because the subjects' scores were not drawn from a normally distributed population (Siegel 1956:19).

To determine the level of significance by the Mann-Whitney test, all scores from both groups are ranked together. The rank of 1 is assigned to the lowest score. Tied scores are assigned the average of the tied ranks. The U value is calculated and standardized to obtain z , the

approximately normally distributed test statistic. In this study, $z = 1.4768$ which is not significant at the 0.05 level of confidence, but is significant at the 0.10 level of confidence. Therefore, the null hypothesis: There will be no difference between the score on the DAP test of adolescents with congenital heart disease and the score on the DAP test of adolescents without congenital heart disease, cannot be rejected at the 0.05 level of significance. However, consideration of the significance of the null hypothesis at the 0.10 level is basis for implications for further research which will be discussed in Chapter V.

Age and Sex Factors

Differentiation by Age

Table 4 describes the total population of the study and the number of subjects in each Group which fell into each age category. The discrepancy in ages may be observed from this chart. The average age of Group A was 16.87 years, and the average age of Group B was 14.07 years. This table also states the number of drawings with a score of 1 or more in each age group of the total population as well as in Group A and Group B.

The table compares the scores of each age category in Group A to the scores of the corresponding age category in Group B. In the twelve to fourteen age category, there was one

TABLE 4

DAP SCORES IN RELATION TO AGE

Age	Sample	No. of DAP with Score of 1 or More	Group A	No. of DAP with Score of 1 or More	Group B	No. of DAP with Score of 1 or More
12-14	10	4	1	0	9	4
15-17	15	6	9	3	6	3
18-19	5	1	5	1	0	0

subject in Group A and no drawings with a score of 1 or more. Group B had nine subjects and four of the drawings had a score of 1 or more. Three of those scores were 2 or more. In the fifteen to seventeen age category, Group A had nine subjects, three of whom had a score of 1 or more on the DAP test. Group B had six subjects. Three had a score of 1; one subject received a score of 4. In the late adolescence category, there were five subjects in the total population, all of whom were in Group A. Only one person had a DAP score of 1 or more.

Differentiation by Sex

Table 5 displays the number of drawings with one or more Emotional Indicators when categorized by the sex of the subject. In Table 5 the total population is subdivided

TABLE 5

DAP SCORES IN RELATION TO SEX

Sex	Total Sample	No. of DAP with Score of 1 or More	Group A	No. of DAP with Score of 1 or More	Group B	No. of DAP with Score of 1 or More
Male	13	3	6	1	7	2
Female	17	8	9	3	8	5

into male-female categories as are both groups. The number of drawings with a score of 1 or more when subdivided by the sex category is presented in this table. In Group A, there were six males, one with a score of 1 or more; and nine females, three with a score of 1 or more. Group B had seven males, two had scores of 2. Of eight females in Group B, three had a score of 1 and two received scores of 4. In Group B, 62.5% of the females scored 1 or more. This may be compared to 33% of the females in Group A with a score of 1 or more.

Additional Findings

Additional findings are of interest in relating scores of subjects in specific categories. Two major areas will be examined: 1) history of illnesses and 2) significant Emotional Indicators.

History of Illnesses

The following data are observed as groups of 1) adolescents who have been a patient in a hospital at some time, 2) adolescents who have had some type of surgery other than heart surgery, 3) adolescents who have had heart surgery, and 4) adolescents who have had heart surgery plus another type of surgical procedure though not necessarily at the same time. (Refer to Table 2.) Table 6 describes the scores of the total population and Group A and Group B when categorized by history of illnesses.

TABLE 6

DAP SCORES IN RELATION TO HISTORY OF ILLNESS

	Total	No. of Scores > 1	Group A	No. of Scores > 1	Group B	No. of Scores > 1
Patient	20	4	7	0	13	4
Surgery	6	0	5	0	1	0
Heart Surgery	9	3	0	0	9	3
Heart Surgery Plus Other	4	2	0	0	4	2

Of thirty subjects in the study, twenty have been a patient in a hospital at some time. Nine of these have had heart surgery. Two out of four subjects who have had heart

surgery plus another surgical procedure received scores of 2 or more on the DAP test. Six subjects have had a surgical procedure other than heart surgery. None of these subjects scored 2 or more. The seven subjects in Group A who had been patients received no scores of 2 or more. In Group B, there were thirteen subjects who had been patients, four of those had scores of 2 or more. Two subjects in Group B described minimal physical activity restrictions. Both received DAP scores of 0. No additional findings could be observed from the data obtained on the Participant Information sheet.

Significant Emotional Indicators

In Koppitz' validation study in 1966 (313-16), she identified eight Emotional Indicators which were statistically significant in the drawings of emotionally disturbed children. These occur so rarely in the drawings of well adjusted children that usually a score of 1 when it is one of these indicators is indicative of adjustment problems. If the score is based on the presence of indicators other than these eight, the score which indicates problem areas is 2 or more. The eight indicators are: poor integration; shading of body, limbs; slanting figure; tiny figure; bit figure; short arms; hands cut off; no neck.

Table 7 identifies the distribution of these eight Emotional Indicators in the drawings of adolescents in Group A

and Group B of this study. Significant Emotional Indicators occurred three times in Group A and seven times in Group B.

TABLE 7
SIGNIFICANT EMOTIONAL INDICATORS IN DAP TEST

Indicator	Group A	Group B	Total
Poor integration	0	0	0
Shading body, limbs	0	0	0
Slanting figure	0	0	0
Tiny figure	0	1	1
Big figure	2	1	3
Short arms	0	1	1
Hands cut off	0	1	1
No neck	1	3	4

Eight adolescents drew human figures with one or more Emotional Indicators. Three were in Group A. One subject in Group A drew two Emotional Indicators, one of which is in the significant group. In Group B, two subjects with a score of 4 drew two significant indicators each.

Summary

The purpose of this study was to compare the body image of adolescents with congenital heart disease and adolescents without congenital heart disease. In the Presentation and Analysis of Data, use of the Mann-Whitney

U test for determining the difference between two groups was described. Since a z score of 1.4768 was obtained, the following null hypothesis cannot be rejected at the 0.05 level of confidence. There will be no difference between the score on the DAP test of adolescents with congenital heart disease and the score on the DAP test of adolescents without congenital heart disease. However, at the 0.10 level of significance the null hypothesis may be rejected. This finding gives implications for further research.

Further observation of the DAP test scores was presented with the use of tables which were discussed in detail. The scores are also reviewed by age group and sex categories.

Additional findings include observations based on the subjects' histories of illnesses. Scores of DAPs from adolescents who have been a patient in a hospital, those who have had some type of surgery other than heart surgery, those who have had heart surgery, and those who have had heart surgery plus another surgical procedure were reviewed. Inclusion of significant Emotional Indicators on the drawings collected for this study provided another source of information.

The use of these findings is multi-directional. The recommendations, implications and conclusions based on the results of this study are discussed in Chapter V.

CHAPTER V

SUMMARY, RECOMMENDATIONS, CONCLUSIONS, AND IMPLICATIONS

Chapter V presents a short summary of this study. It includes recommendations for use of findings and for further research. Implications concerning body image of adolescents with congenital heart disease, and conclusions based on the data collected are outlined.

Summary

The purpose of this study was to compare the body image of adolescents with congenital heart disease and adolescents without congenital heart disease. The importance of body image to adolescents and its relationship to chronic illness was identified in the Background and Significance of this study. Subjects were obtained from out-patient records, in-hospital patients and visitors and junior volunteers at a non-proprietary children's hospital in Dallas, Texas. The over-all framework of the study was designed to be descriptive, non-experimental research.

The researcher reviewed the literature in the following areas: overview of studies of normal adolescent

development, concepts and development of body image, utilization of the Draw-a-Person test to determine body image, adolescents with chronic illness and their body image, and responsibilities of the health care team.

The instrument used in this study was the Draw-a-Person test. Subjects were given a sheet of white paper and a pencil and asked to "Draw a picture of a whole person." Information about the subject was obtained on a separate Participant Information form (Appendix C). The population consisted of a total of thirty adolescent subjects; fifteen in the group of adolescents without congenital heart disease, and fifteen in the group of subjects with congenital heart disease. Drawings were scored by an experienced judge. One point was given for the presence of each Emotional Indicator observed. The total number of points was added to determine the score. The range of scores in this study was 0 to 4.

A comparison of the scores of the two groups was made by the Mann-Whitney U test. The results of the analysis of the data revealed that the null hypothesis: there will be no difference between the score on the DAP test of adolescents with congenital heart disease and the score on the DAP test of adolescents without congenital heart disease is not rejected at the 0.05 level of

significance (but rejected at the 0.10 level of significance). Tables and charts in Chapter IV reviewed the test scores by categories of age and sex. Histories of illnesses of the participating subjects were also considered as factors which influence body image.

Following this summary, recommendations for further use in research are discussed. Implications of the results of the study and the conclusions drawn from the data collected are described.

Recommendations

The findings of this study have led to recommendations for nursing research. The following suggestions are offered with the intent of increasing knowledge and awareness of the importance of body image to the adolescent with congenital heart disease.

1. Further study of the Draw-a-Person test utilizing a larger sample.
2. Similar studies be conducted using a random sample of control subjects.
3. Similar studies be conducted matching ages of subjects in each group.
4. Further study of body image changes produced by illnesses and/or hospitalizations.

Implications

This study provides information regarding the importance of body image to adolescents with congenital heart disease. The implications which are discussed here are intended to promote further use of these findings in areas of nursing service and nursing education.

For Nursing Service

Body image changes are considered a normal part of transition from childhood to adulthood. Understanding of the alterations in body image which occur as a process of this growth and development in healthy adolescents will enhance planning the specialized care which supports the adolescent's search for identity. The nursing staff must have additional understanding of the effects which illnesses superimpose on a body image perception that may or may not already be in a state of change.

Use of the Draw-a-Person test can increase understanding of the effects of chronic illness on the body image. Results of this knowledge could be utilized to enhance the emotional support programs for the adolescent during short-term hospitalizations as well as throughout long-term out-patient care and follow-up. In addition, this tool might give insight into the concerns and fears that plague

the hospitalized adolescent. Because this is a tool which gives information regarding the feelings of the individual "at that moment," it is valuable as a projective measure which can reflect sudden and rapid alterations in body image and related emotional adjustments. This information should be available for the staff who is committed to giving nursing care to the "whole person." This care can only be complete if in addition to care for the adolescent's physical needs, consideration of his anxieties, concerns and fears is incorporated into his plan of care.

For Nursing Education

A foundation in understanding of physical and emotional health of adolescents, including body image concepts, will prepare nurses to assess needs, to plan, and to implement appropriate care. This process has the potential of enabling an illness to result in an opportunity for enriched growth instead of regression for the adolescent. Nursing personnel who are knowledgeable about body image can use their insight to focus on areas of strength and to build confidence in weaker areas of self-concept. It is nursing education that provides the critical opportunity for students to learn and for staff to develop an understanding of the concept of body image and its role in complete patient care.

One factor in body image development is one's interpretations of how others feel about his body. Educational processes of nursing should include formation of attitudes that are a positive influence on body image development.

With the advances of medical science more children with chronic illnesses are reaching adolescence. Nursing has an obligation in promoting a life which is meaningful to the adolescent. To be able to intervene effectively, the nurse must have knowledge of chronic illnesses and their potential for producing alterations in body image. In addition, an understanding of factors which are influential in an adolescent's self-acceptance should be incorporated into the total picture of adolescents with chronic illness.

The nurse who is prepared to assist the patient in learning to live with chronic illness needs a broad understanding of the many facets of long-term conditions. To wit, the child with congenital heart disease faces repeated diagnostic procedures, surgery and numerous hospitalizations. The nurse needs to know what implications these factors have for physical and emotional development. Certainly, the concept of body image must

be considered because of its importance in self-concept and personality development.

Nursing education can enhance nursing care by preparing nursing personnel and/or students to utilize patient management techniques which maintain or improve body image perceptions of the clients for whom they are responsible. One way of assessing body image alterations is through use of the DAP test and other projective tools which can be used quickly and efficiently in hospital and out-patient areas. These techniques will yield much needed information about the patient's concerns at that time. Nurses who are adequately acquainted with the DAP test can use it frequently. The drawings may be referred to a psychologist or other qualified member of the health team for evaluation. This additional information about the patient may be enriching if not essential to his care.

Conclusions

Based on the data collected and analyzed, the following conclusion is derived from this study:

The null hypothesis stating there will be no difference between the score on the Draw-a-Person test of adolescents with congenital heart disease and adolescents without congenital heart disease is rejected at the 0.10 level of significance, but not rejected at the 0.05 level.

A greater number of adolescents with congenital heart disease earn higher scores on the DAP test than do adolescents without congenital heart disease, thus indicating there are more alterations in body image in the former group.

Additional findings were observed in this study. The following were true for this sample, but may not be applicable to the general adolescent population. No attempt is made to generalize the data.

1. The scores of the DAP tests do not change notably with variations in age.

2. More females experience body image alterations than do males.

3. Having had surgical procedures other than heart surgery does not alter body image in either adolescents with congenital heart disease or in adolescents without congenital heart disease.

4. Adolescents who have had heart surgery had DAP scores of greater than 1 more frequently than did adolescents who had had another type of surgical procedure.

5. Adolescents who have had heart surgery plus another type of surgical procedure showed difficulty with body image perception more frequently than those who have had heart surgery alone, or other surgical procedures alone.

The concluding chapter of this study has summarized the purpose and design of the study. It offers recommendations for use of the findings through further research. Implications for the nursing profession concerning body image of adolescents with congenital heart disease have been presented. Based on the data collected and the results of the study, conclusions have been formulated and are included in this chapter.

APPENDIX A

SCORE SHEET--DRAW-A-PERSON TEST

Place a mark in the blank to the left of the number if the drawing contains the characteristic described.

Subject _____

Score _____

- | | |
|-------|----------------------------------|
| _____ | 1. Poor integration |
| _____ | 2. Shading face |
| _____ | 3. Shading body, limbs |
| _____ | 4. Shading hands, neck |
| _____ | 5. Gross asymmetry of limbs |
| _____ | 6. Slanting figure |
| _____ | 7. Transparencies |
| _____ | 8. Tiny figure, 2 inches or less |
| _____ | 9. Big figure, 9 inches or more |
| _____ | 10. Tiny head |
| _____ | 11. Crossed eyes |
| _____ | 12. Teeth |
| _____ | 13. Short arms |
| _____ | 14. Long arms |
| _____ | 15. Arms clinging to body |
| _____ | 16. Big hands |
| _____ | 17. Hands cut off |

- _____ 18. Legs pressed together
- _____ 19. Genitals
- _____ 20. Monster, grotesque figure
- _____ 21. Three figures
- _____ 22. Clouds, rain
- _____ 23. No eyes
- _____ 24. No mouth
- _____ 25. No body
- _____ 26. No arms
- _____ 27. No legs
- _____ 28. No feet
- _____ 29. No neck
- _____ 30. No nose

APPENDIX B

DEFINITIONS OF EMOTIONAL INDICATORS

Quality Signs

1. Poor integration of parts: One or more parts not joined to rest of figure, part only connected by a single line, or barely touching.
2. Shading of face: Deliberate shading of whole face or part of it, including "freckles," "measles," etc., an even, light shading of face and hands to represent skin color is not scored.
3. Shading of body and/or limbs.
4. Shading of hands and/or neck.
5. Gross asymmetry of limbs: One arm or leg differs markedly in shape from the other arm or leg. This item is not scored if arms or legs are similar in shape but just a bit uneven in size.
7. Tiny figure: Figure two inches or less in height.
8. Big figure: Figure nine inches or more in height.
9. Transparencies: Transparencies involving major portions of body or limbs. Single line or lines of arms crossing body not scored.

Special Features

10. Tiny head: Height of head less than one-tenth of total figure.
11. Crossed eyes: Both eyes turned in or turned out; sideway glance of eyes not scored.
12. Teeth: Any representation of one or more teeth.
13. Short arms: Short stubs for arms, arms not long enough to reach waistline.
14. Long arms: Arms excessively long, arms long enough to reach below knee or where knee should be.
15. Arms cling to body: No space between body and arms.
16. Big hands: Hands as big or bigger than face of figure.
17. Hands cut off: Arms with neither hands nor fingers; hands hidden behind back of figure or in pocket not scored.
18. Legs pressed together: Both legs touch with no space in between, in profile drawings only one leg is shown.
19. Genitals: Realistic or unmistakably symbolic representation of genitals.
20. Monster or grotesque figure: Figure representing nonhuman, degraded or ridiculous person; the grotesqueness of figure must be deliberate on part of the subject and not the result of immaturity or lack of drawing skill.

21. Three or more figures spontaneously drawn: Several figures shown who are not interrelated or engaged in meaningful activity: repeated drawing of figures when only "a" figure was requested.
22. Clouds: Any presentating of clouds, rain, snow or flying birds.

Omissions

23. No eyes: Complete absence of eyes; closed eyes or vacant circles for eyes are not scored.
24. No nose.
25. No mouth.
26. No body.
27. No arms.
28. No legs.
29. No feet.
30. No neck.

APPENDIX C

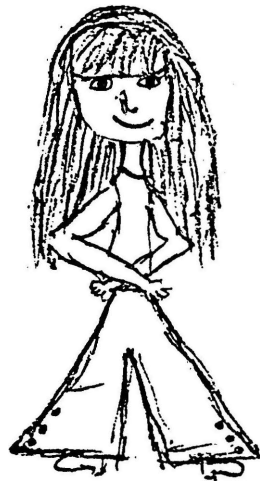
PARTICIPANT INFORMATION

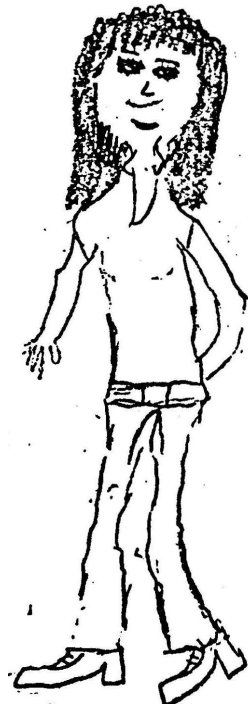
Please answer the following questions:

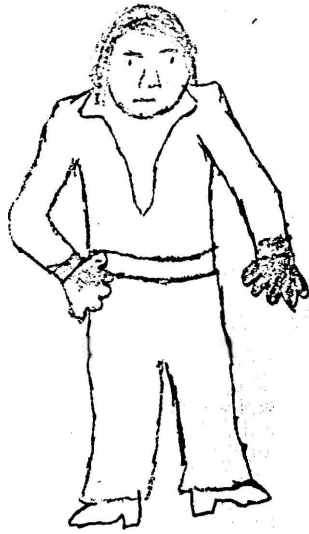
1. How old are you? _____
2. When is your birthday? _____
3. What grade are you in? _____
4. Male _____ Female _____
5. Are you under a doctor's care? Yes _____ No _____
If yes, for how long? _____
What is the reason (diagnosis)? _____
Are you now a patient in the hospital? Yes _____ No _____
6. Have you ever been in the hospital? Yes _____ No _____
If yes, how many times? _____
7. Have you ever had an operation? Yes _____ No _____
If yes, how many times? _____
For what reasons? _____
8. Do you have any activity restrictions? Yes _____ No _____
If yes, describe. _____
9. How many brothers and sisters do you have? _____
List the age and sex of each, including yourself.

APPENDIX D

DRAW-A-PERSON TEST

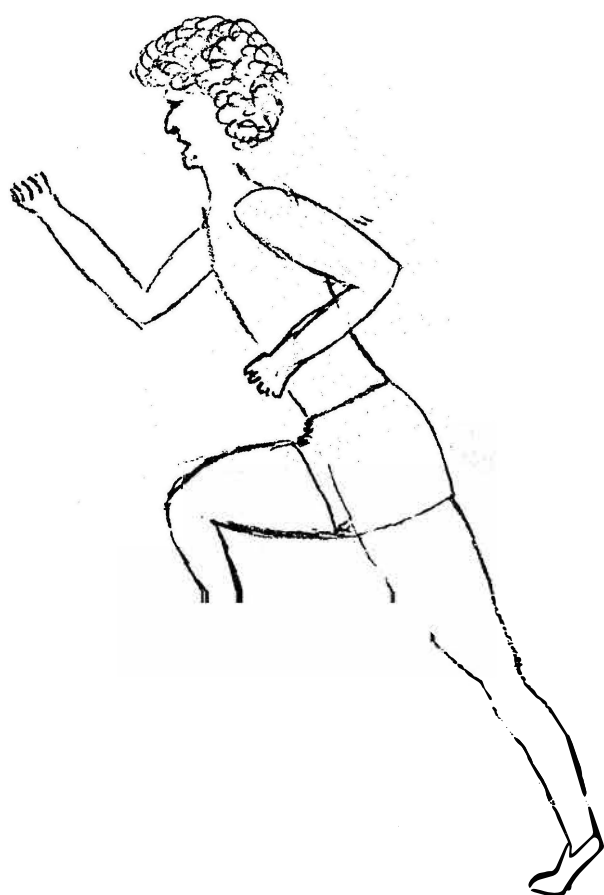


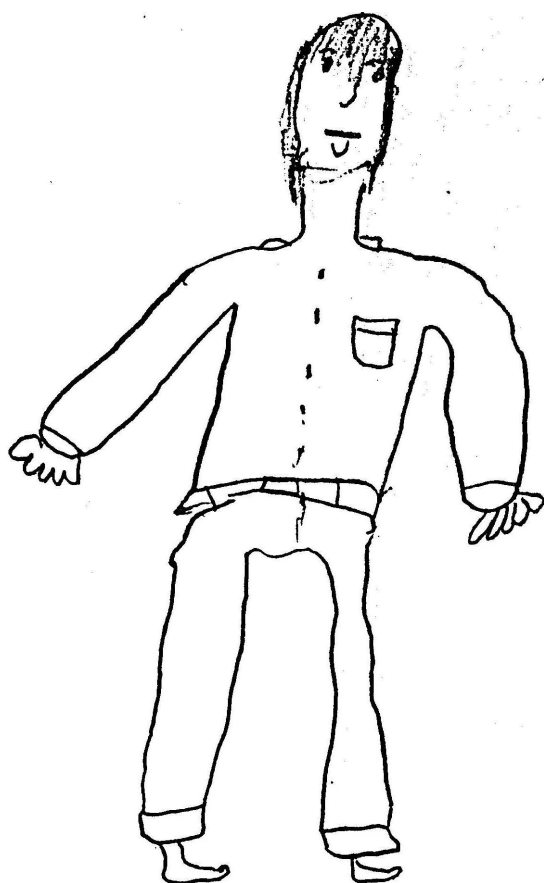


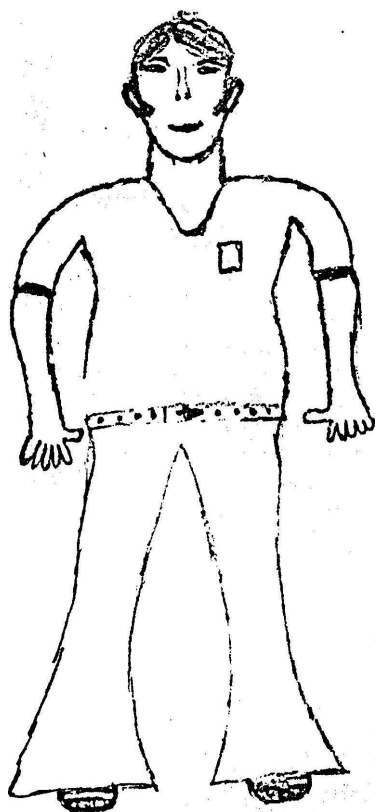


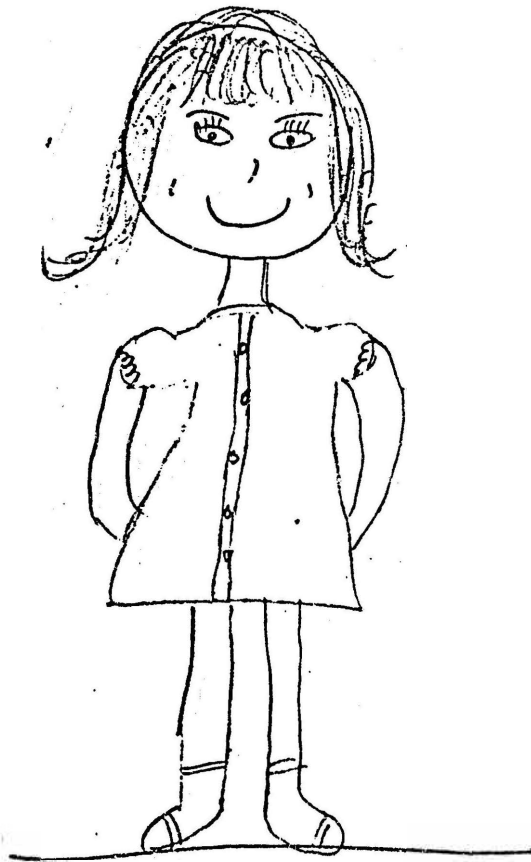








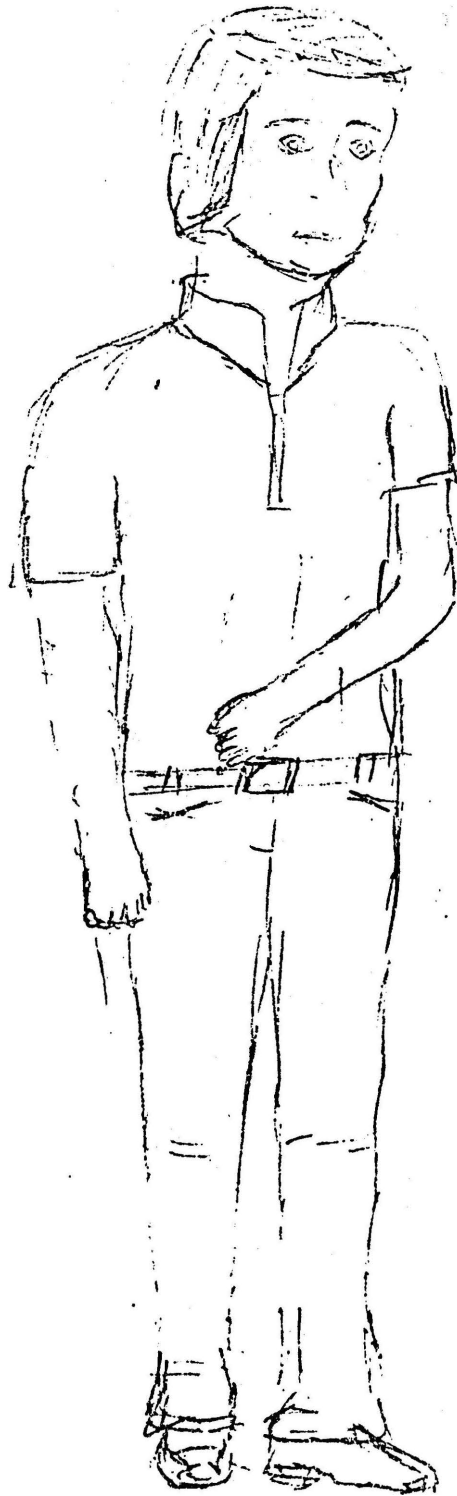


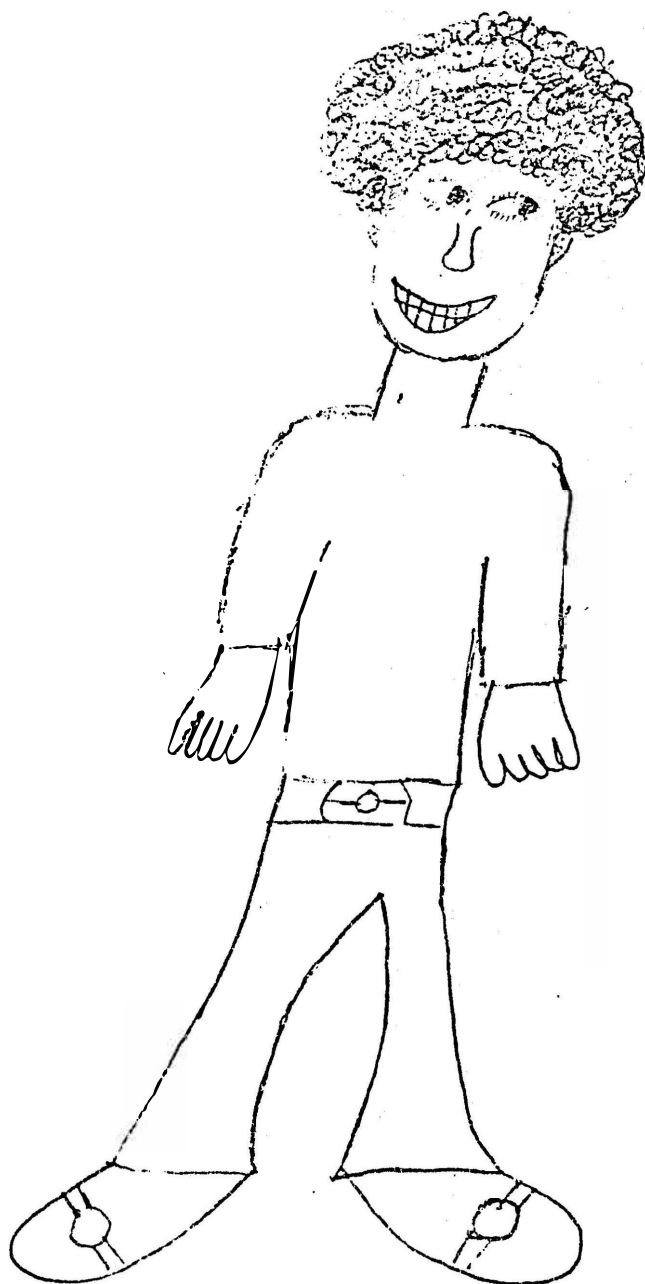


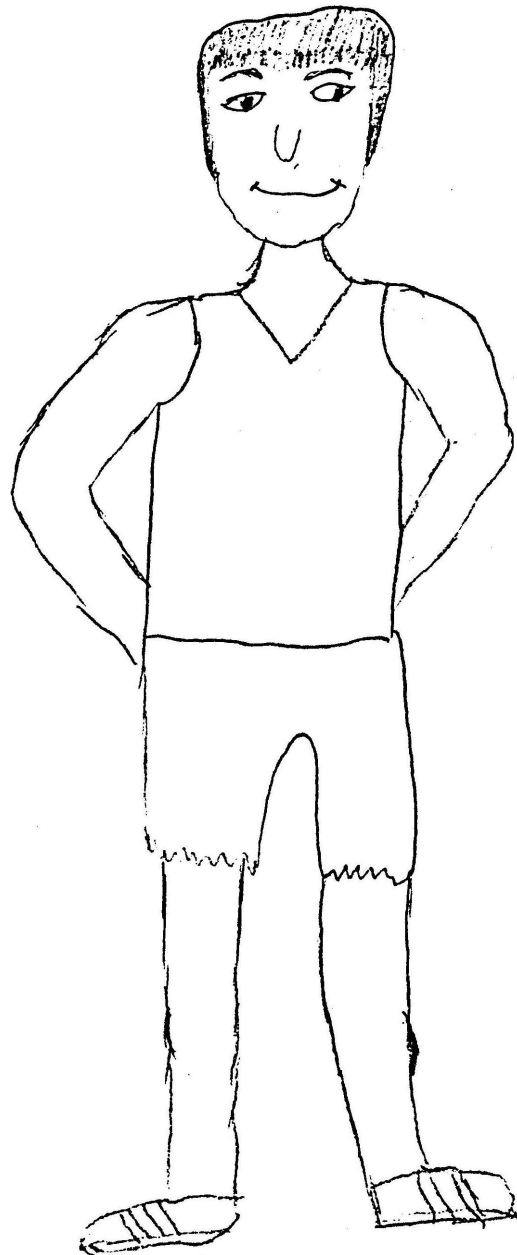


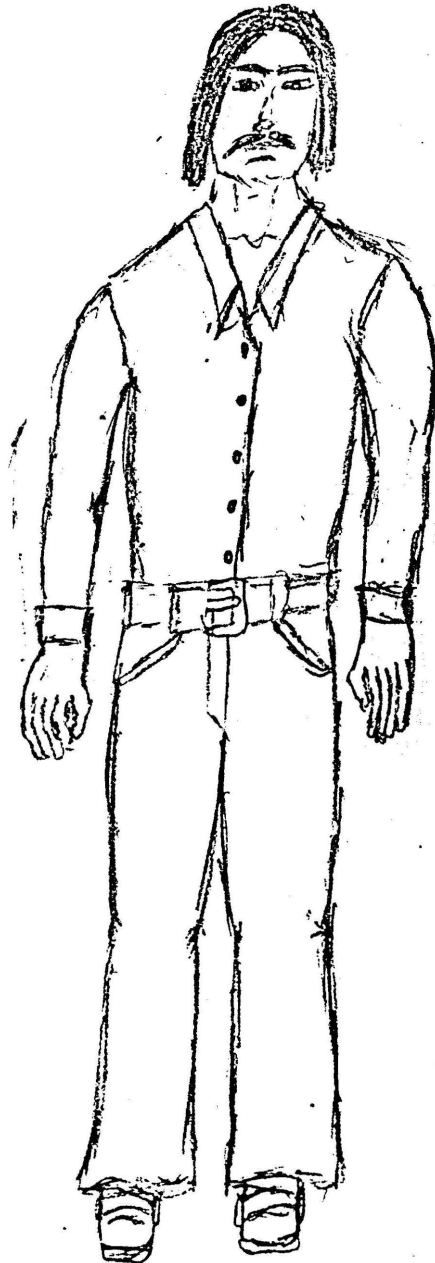


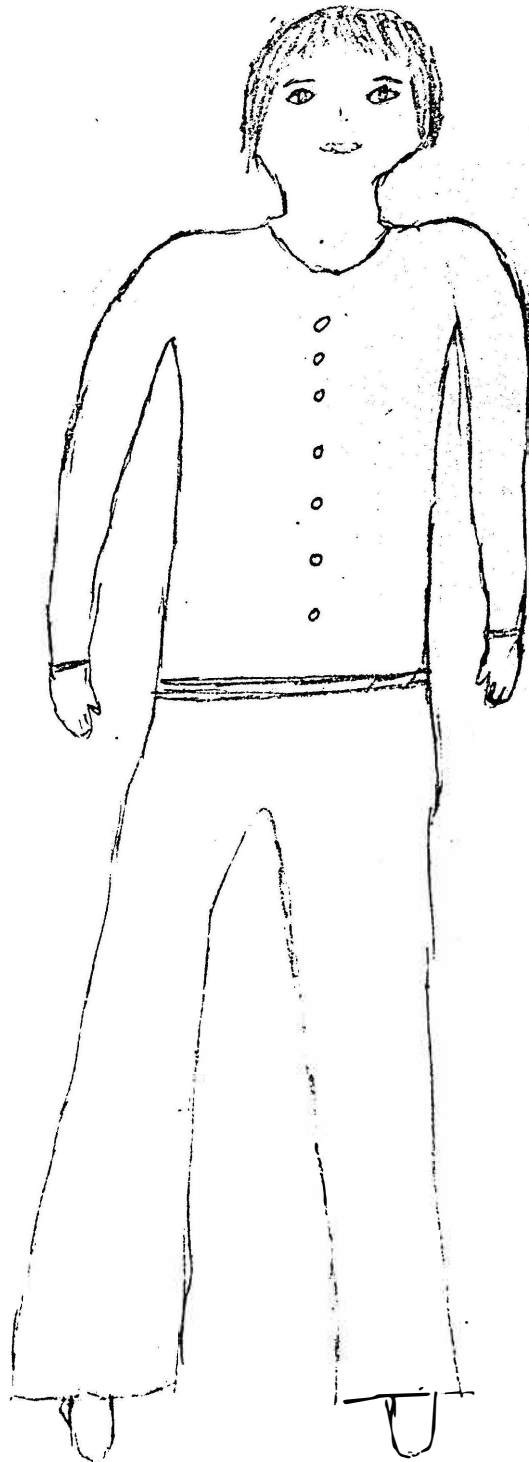
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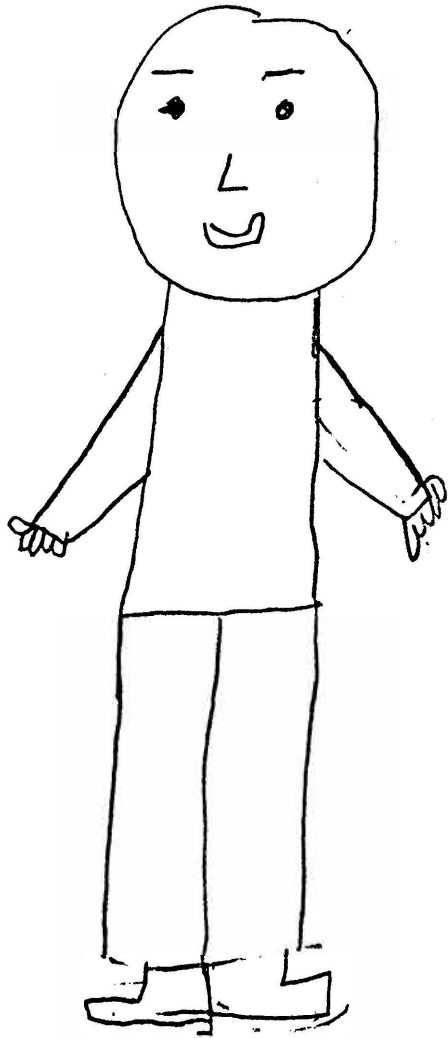


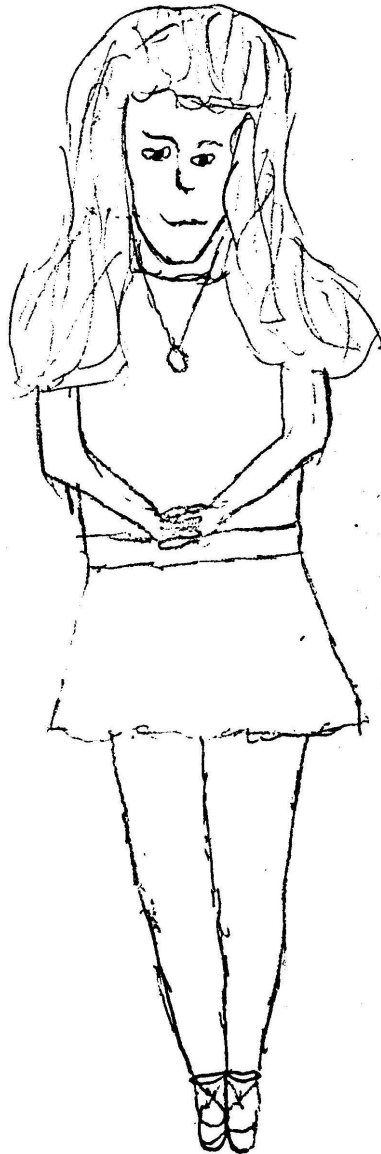


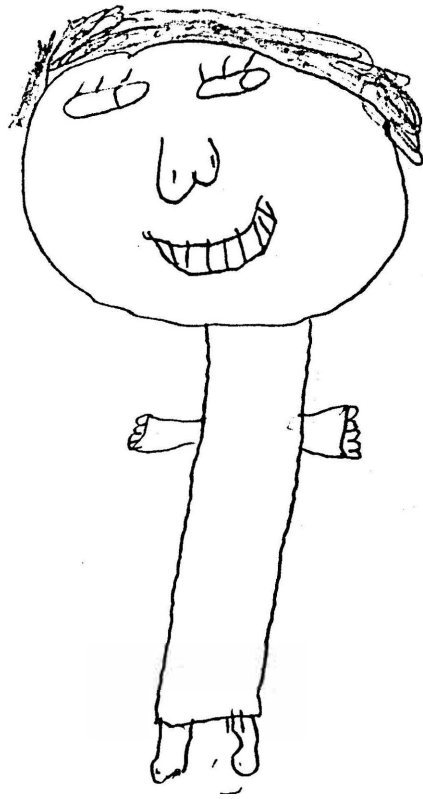




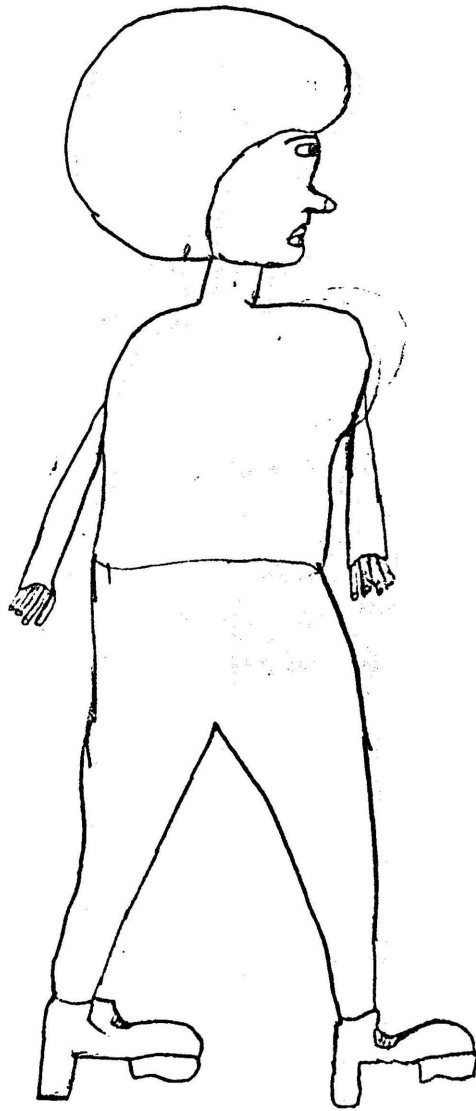




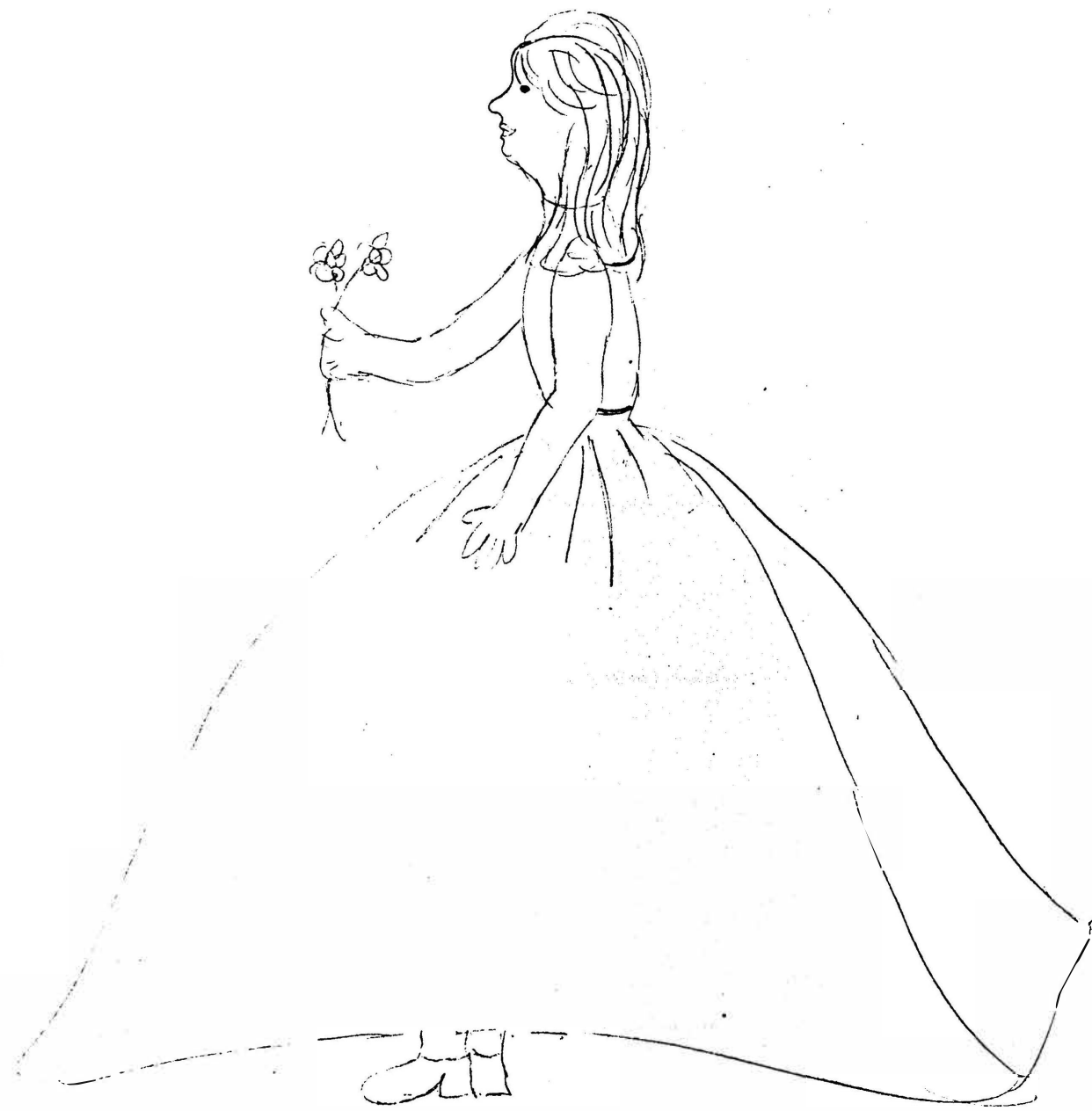




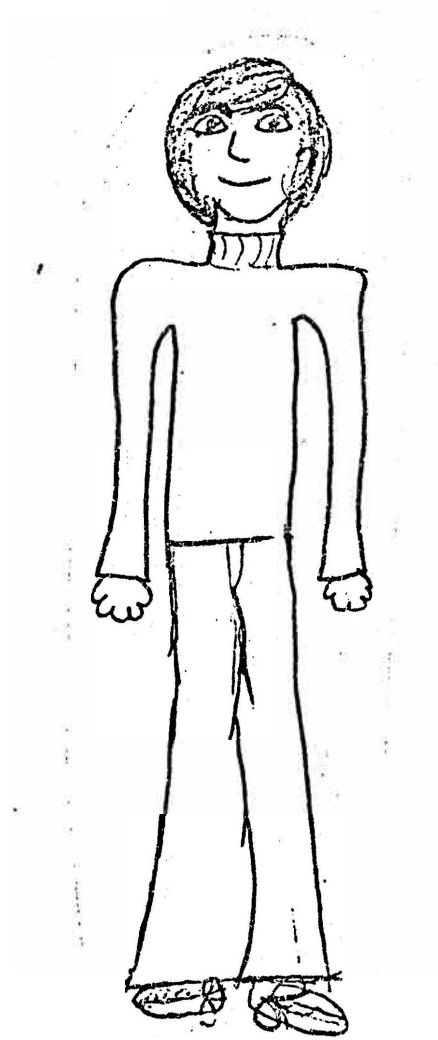
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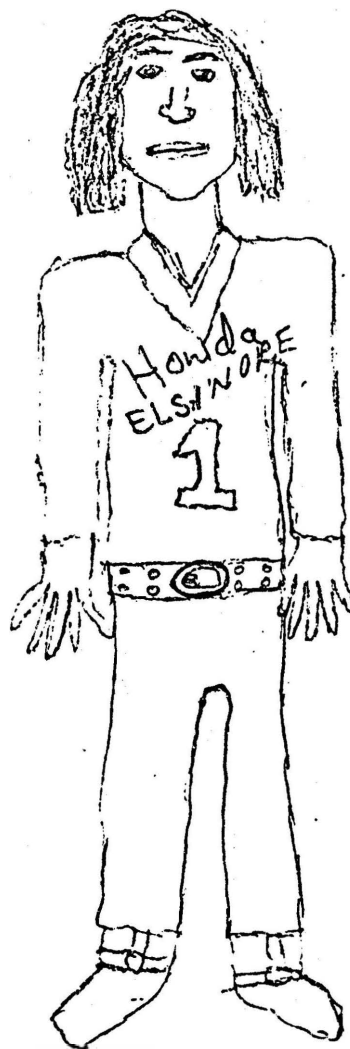


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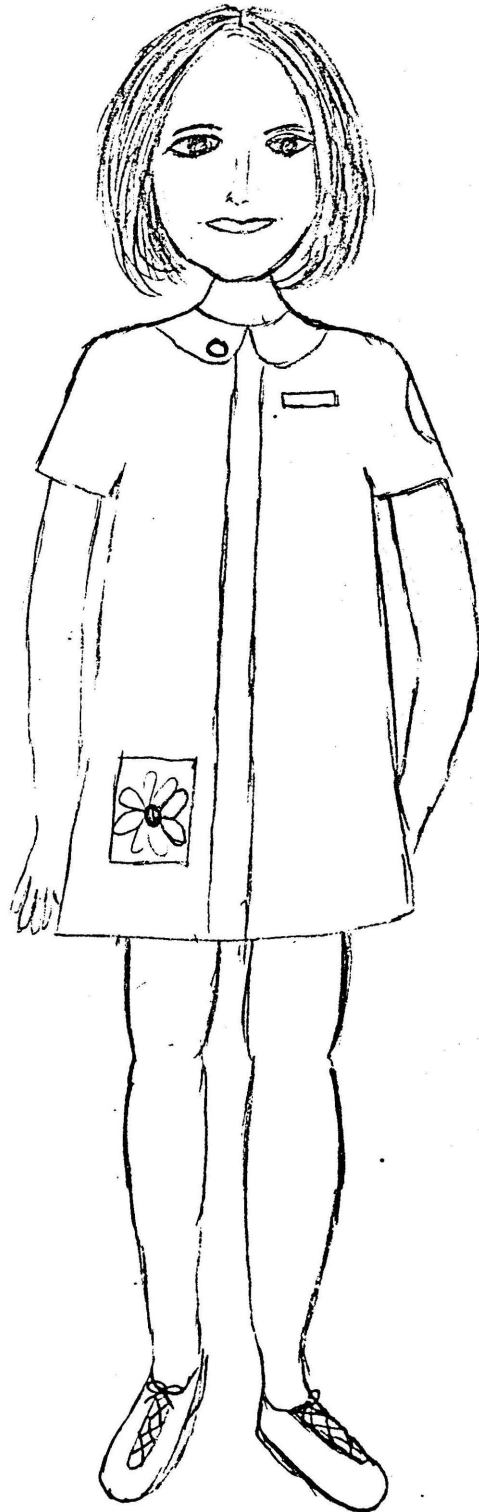


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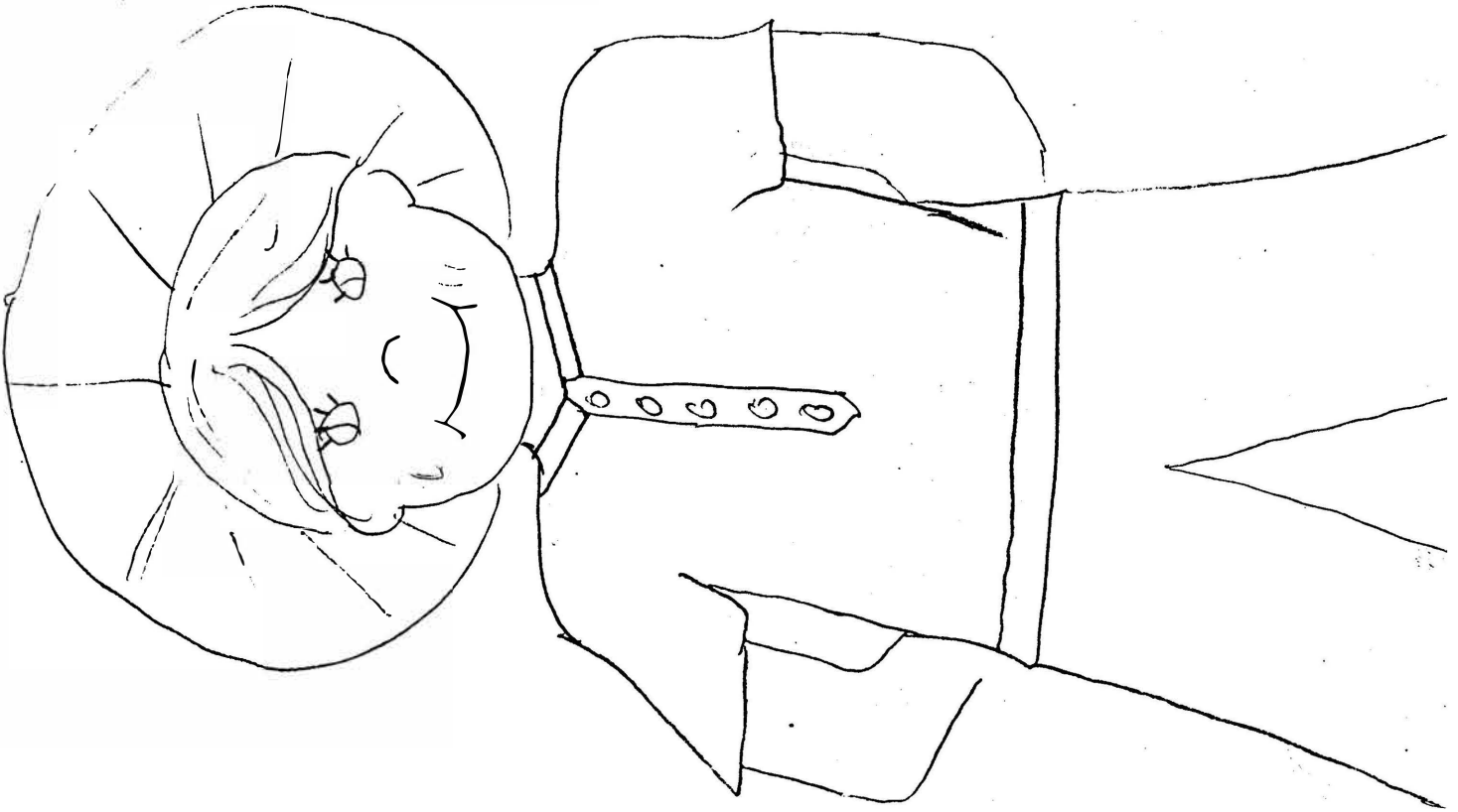




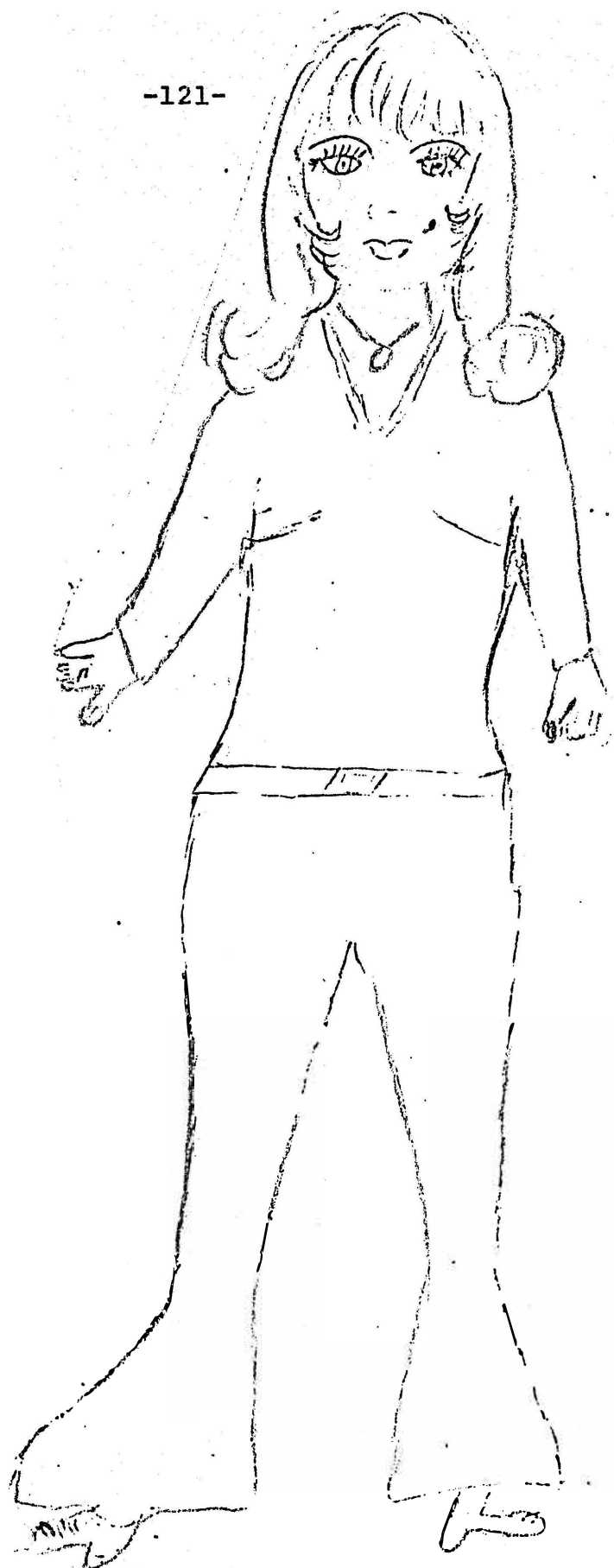
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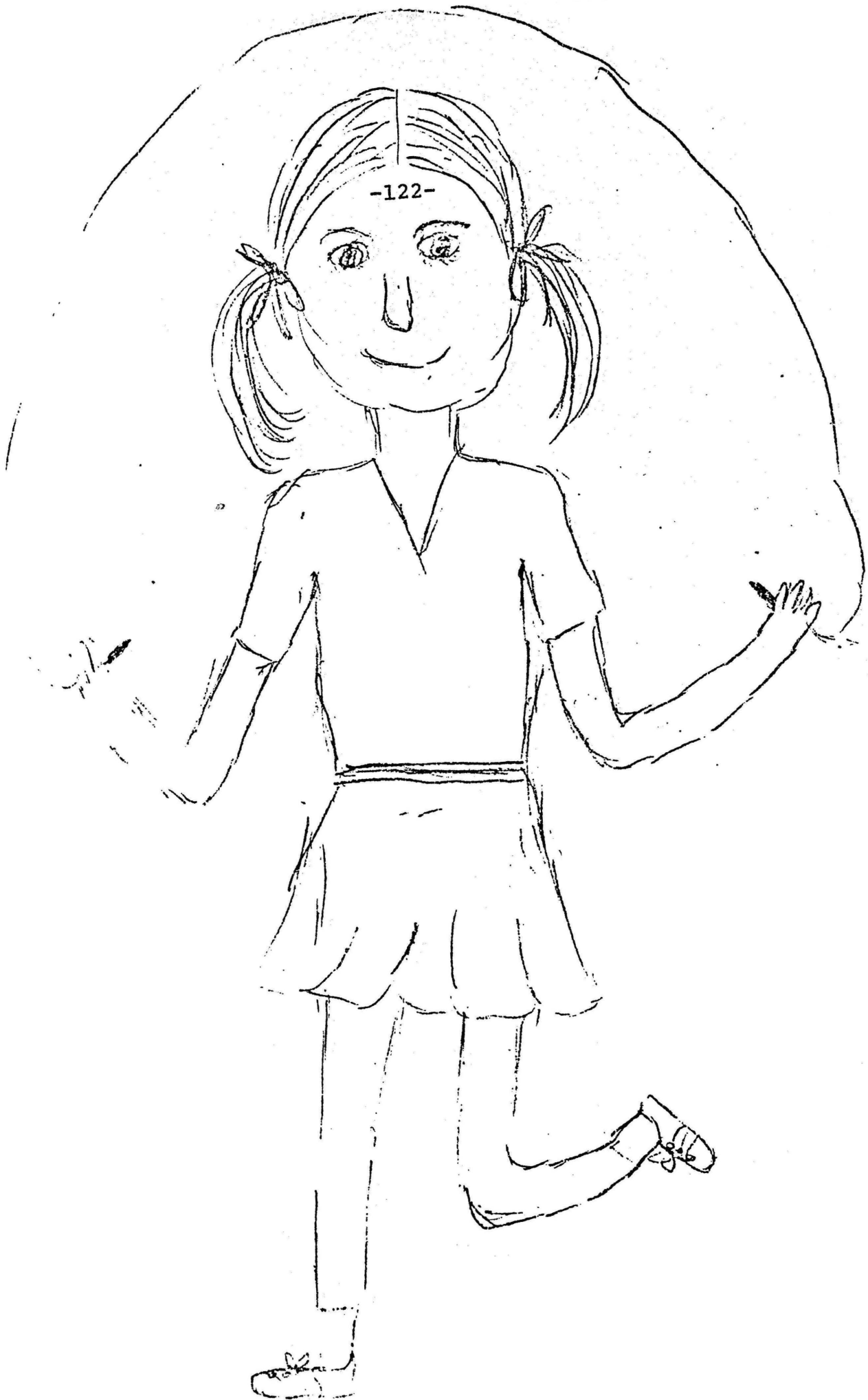






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TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS

DALLAS CENTER
1810 Inwood Road
Dallas, Tx. 75235

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

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE Children's Medical Center of Dallas, Texas

GRANTS TO Cheryl Conatser

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 problem of this study is to compare the body image of adolescents with congenital heart disease to adolescents without congenital heart disease.

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 June 11, 1974

Cheryl Conatser
Signature of student

Trude Aufhauser RN
Signature of Agency Personnel
Trude Aufhauser, RN, Director of Nursing
Corelia Kinnis
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.

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