A COMPARISON OF BODY IMAGE OF MENTALLY-RETARDED AND NONRETARDED CHILDREN AS PERCEIVED BY THEIR SIBLINGS

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We hereby recommend that the Thesis prepared under our supervision by Stephanie Wren Gage entitled "A Comparison of Body Image of Mentally-Retarded and Nonretarded Children as Perceived by Their Siblings"

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CHAPTER I

INTRODUCTION

The birth of a mentally-retarded child can provoke certain emotional response stages in a family. These emotional stages may lead to a serious crisis if the family cannot adequately cope with the situation. Shock and denial are often the initial reaction stages a family has when they discover that their newborn infant is mentally retarded. A family must be allowed to work through these stages so that they can then move to the next stage of frustration. The parents may ask many questions concerning why retardation occurred in their infant, and what it means for them and the infant in terms of the future. When parents become aware that their child is defective, they reach a turning point in dealing with their problem. Until this happens, they are not able to adequately handle the reality of the defect.

Having a mentally-retarded child presents a problem for the parents, the child, and the entire family that will never be completely resolved. A mentally-retarded child is apt to be disturbing to his siblings to some degree. Many parents are not able to handle the problem of sibling relationships between retarded and nonretarded children.

If the parents are accepting of the retarded sibling and the parents' attitude is one of comfortableness, it becomes easier for the older child to accept and enjoy the mentally-retarded sibling.

A child may become resentful of the retarded sibling because of the greater amount of attention he requires. Some children feel that the retarded sibling is interfering with their social lives because they are embarrassed to bring friends to the home. Older children may be expected to care for the retarded sibling much more than they would be expected to care for a normal sibling. Parents may expect a nonretarded child to help care for the younger retarded sibling because they are not comfortable with the fact that they have a defective child.

The reactions of a nonretarded child to mental retardation in the younger sibling are influenced by many factors. These can include the nature of the retardation, the developmental level of the child, how the child feels about his own self, and what he knows about mental retardation. Other factors can include the reactions of the older nonretarded child's family and peers to mental retardation and the degree of deviation from normal of the retardation. The older nonretarded child's perception of mental retardation may not easily be recognizable by

observation only. Human figure drawings have frequently been used as a way to determine how a child views body image because it may be easier to draw an image than describe it in words. This study attempted to demonstrate that the Draw-A-Person test can be used to help professionals determine how a nonretarded child perceives himself and his younger retarded or nonretarded sibling in terms of body image.

Statement of the Problem

The problem of this study was to determine how the older nonretarded child with a mentally-retarded sibling and the older child with a nonretarded sibling perceived their own body image and the body image of their sibling as identified by the Draw-A-Person test.

Purposes

The purposes of this study were to determine:

1. The body image of an older nonretarded child with a mentally-retarded sibling
2. The older nonretarded child's perception of his mentally-retarded sibling's body image
3. The body image of an older nonretarded child with a nonretarded sibling

4. The older nonretarded child's perception of his nonretarded sibling's body image

5. If there is a difference in the way the older child with a mentally-retarded sibling and the way the older child with a nonretarded sibling perceive their sibling's body image

Background and Significance

The term mental retardation has been used to describe many different levels of mental impairment. This impairment is severe enough so that it prevents the child from functioning intellectually as effectively as other children in his age group.

> More individuals suffer from mental retardation than from any other birth defect except diabetes. In the United States, approximately 3,000,000 to 5,000,000 persons have subnormal intelligence and 126,000 mentally retarded babies are born every year. Three persons in every 100 in this country are diagnosed as being mentally retarded . . . . (Apgar 1974, p. 350).

In the past many mentally-retarded children were placed in an institution early in their lives. The most recent trend has been to remove many of these patients from the institutions and return them to their homes (Doll 1976). Not only have more patients been returned to their homes from institutions, more families have been encouraged to care for the mentally-retarded child in their homes after

the birth of the child. Having the child in the home during infancy and early childhood has proven to be an important time for promoting a healthy adjustment of the parents and siblings to the mentally-retarded child's problems (Barnard and Erickson 1976). Studies have shown that children who were reared at home by their parents have higher IQ's than those who were placed in an institution at an early age (Apgar 1974).

The unexpected birth of a retarded child can be traumatizing to the parents and stressful to family relationships. It is necessary for the family to work together as a unit in order to effectively cope with the problems of rearing a retarded child. The presence of a retarded child in a family contributes to a personal-social conflict for all family members. It is important for the parents to face the "situation" realistically and to help other family members do the same. Barnard and Erickson (1976) researched families of retarded children. These authors found that when parents have to explain the birth of a mentally-retarded child to other siblings, it is a frustrating situation. Spock and Lerrigo (1965) were of the opinion that if parents conveyed an attitude of comfortableness toward all the children, it would be easier for the other children to accept the retarded child.

A retarded child is likely to be confusing to his siblings because of the demands the child has on the family. The retarded child is frequently placed as the focus around which a family operates. Siblings may become resentful if they do not understand and are not able to accept the child. If mental retardation is talked about openly in the family, it has been found that the other children are less likely to be upset by questions from their friends (Spock and Lerrigo 1965). Some older siblings may resent the retarded child because they think he is interfering with their social lives. This seems to occur because the siblings are afraid to bring friends into the home. Many parents do not know how to handle sibling relationships between the retarded and the nonretarded children. Gordon and Ullman (1956) recommended the following principles for parents when dealing with sibling relationships between the retarded and nonretarded children.

"1. All questions should be answered at the child's own level of development.
"2. The parents should take the initiative in introducing the problem through the use of analogy as well as direct information.
"3. Further unfolding of information should be gauged by the child's response and questions.
"4. The example should be set by parental activity rather than by verbalization with regard to the approach, handling, and general attitudes toward the retarded child" (Gordon and Ullman 1956, p. 161).

The degree of mental retardation and any physical manifestations are important factors in how the family members accept the child. It is probably more difficult for the parents of a child who looks "normal" to accept the fact that the child is retarded. It is often easier for parents to adjust to the fact that the child is retarded when the defect is more visible, such as in Down's syndrome.

Down's syndrome is "the single most common cause of mental retardation. It affects one in approximately six hundred babies" (Apgar 1974, p. 175). Among these individuals with Down's syndrome there is a considerable range of intellectual ability, but all are mentally retarded to some extent. In general, children with Down's syndrome are outgoing, active, cheerful, and friendly. These children can fit comfortably into the family if the family is accepting.

Each Down's syndrome child is an individual, but they all have similarities in physical appearance. They are usually shorter than average and stocky in build with thick necks and short flat heads. Children with Down's syndrome may have short stubby fingers, dry mottled skin, sparse fine hair, and prominent ears. Their eyes usually slant upward and frequently they have to wear glasses. Because of the obvious physical features of the Down's

syndrome child, it may be more difficult for his siblings to accept him. In a study by Siperstein and Gottlieb using Down's syndrome subjects, it was noted that the "competent and physically nonstigmatized children were rated more favorably than incompetent and physically stigmatized children" (children with Down's syndrome) (1977, p. 455).

Infancy and early preschool years have been recognized as critical times in a child's development. Erikson (1964) viewed these periods in a child's life as very important for future development of personality. During the first years of life a child learns to develop a sense of trust. For a newborn this requires physical comfort and the certainty that his needs will be met. The maternal-infant relationship is very important at this time. If the infant knows that his needs will quickly be met he soon develops a sense of trust. Between the years of two to four the child develops a sense of autonomy. There may be conflict if the parents are unable to let the child develop independence. About four and five years of age the child begins to use language and locomotion to help him expand his imagination. He begins to develop conscience and feelings of guilt.

In the course of growth and development, a child forms a concept of his body. Body image can be thought of

in terms of the image an individual has of his own body, but there is a continual interchange between our own body image and the body image of others (Schilder 1950).

> It is necessary for the child to have his own relatively stable and definite frame of reference for perception of himself in order to perceive others accurately and to test reality accurately (Blaesing and Brockhaus 1972, p. 597).

DiLeo (1973) concurred that in order to have a valid perception of others a concept of one's own body image was first essential. He found that this concept develops through a sequence of stages and the body image that is formed will be dependent on intrinsic and extrinsic forces. This includes the child's personal environment and the type of mothering the child earlier received.

If a person is insecure in his own body, this person will become defensive whenever confronted with bodies which are dissimilar; this suggests the possibility that his own body can be changed (Fisher 1974). An older sibling may find it difficult to accept the Down's syndrome child because of the child's projected body image. A sibling of a Down's syndrome child may also find it difficult to accept his own body image as being normal. The sibling may instead experience unwarranted guilt because of the mental retardation of the younger child. "An illness or handicap has

the potential to be detrimental to the emotional well-being of a child" (Parrish 1974, p. 100).

There was a limited amount of nursing literature related to body image before 1971, but since then an increasing amount of literature concerning body image has been produced by nurses. Nurses have found that the concept of body image is useful in understanding the patient and family and in planning appropriate intervention. Through this intervention nurses may be able to help a child or family possess or attain a realistic emotionally healthy image of themselves (Parrish 1974).

Human figure drawings have frequently been used as projective techniques in determining body image in children; it is easier for the child to draw an image than to verbally describe it. McElhaney (1969) proposed that a great amount of information could be obtained by using a figure drawing as a projective technique. He stated

> Many characteristics of a drawing reflect the individual's self-concept. Unconsciously he projects into his drawing a picture of himself from his own viewpoint, and his self-concept will determine to a great extent his behavior (1969, p. 3).

McElhaney also concurred that a person may draw one picture which reveals his self-concept and another which may represent his concept of some other person.

There was controversy as to what a human figure drawing actually projected. Berman and Laffal (1953) theorized that people tend to draw human figures with which they are familiar, specifically their own. DiLeo (1973) no longer thinks that a human figure drawing is a picture of the self. He now theorizes that children draw a picture of grownups because they are more interesting than themselves. Schilder (1950) questioned whether a human figure drawing of the same sex depicted a representative picture of the person drawing the figure, an idealized picture of this person, or a picture which had no relation to this person's body image at all. No one could say what the correct answer was, but most advocates of human figure drawings as projective techniques agreed that the drawing revealed much about the child himself and his attitudes toward others. A child can reveal a great deal about himself and his feelings about others in the way he draws and elaborates the figures (Gilbert 1969).

Burns and Kaufman (1972) used kinetic family drawings, which depicted a family in action, as projective techniques and proposed that these drawings told much about the child and the human condition. They found that these children have a freshness and naivete which is later lost with sophistication and conformity. DiLeo (1973) cautioned

that the examiner must be careful in evaluating children's drawings because it is easy to read more into a drawing than is written.

There are different ways to interpret a Draw-A-Person test using scales based on features present or absent at various stages of development. There are certain advantages as well as disadvantages to each scale. The Goodenough drawing test was developed by F. I. Goodenough in 1926. There are certain advantages to this test which have made it useful as a clinical and research tool. In a study by McCarthy (1944), the Goodenough drawing test was found to have the following advantages: (1) it can be used as an individual test or in testing a group, (2) only a pencil and paper and about ten minutes are needed to administer the test, (3) the person giving the test needs little training in administering tests, (4) since it requires no verbal responses, it is suitable for foreign or bilingual children, (5) it is reported to have a fair degree of validity, and (6) it is reported to have a high reliability.

McCarthy (1944) recognized that the test also had some disadvantages, one being that the test was difficult to score because the scoring required a lot of subjective decisions on the part of the examiner. She also found that another source of unreliability was that there may be a

change in the quality of the drawing if measured on two different occasions. McCarthy (1944) cautioned against using the test for individual diagnosis. Vane and Kessler (1964) studied the reliability of the Draw-A-Man test and concluded that the test had "value as a simple quick estimate of intelligence and a fairly good predictor of school achievement" (1964, p. 487).

The Goodenough Draw-A-Man test was revised in 1963 by Harris. Harris included a drawing of a woman in his revision. Vane (1967) suggested that the revision was less than adequate than the original since the "revision results in IQ's significantly lower than IQ's obtained on the Stanford-Binet scale and or by the original Goodenough method" (1967, p. 375). But many examiners have used the revised scale for research purposes since it is more current and has well-defined norms.

Koppitz (1968) compiled a list of thirty characteristics that may be found in human figure drawings and called these characteristics "Emotional Indicators." If two or more of these indicators were present in a drawing, she regarded the child as having some emotional problems. In a validation study by Koppitz (1966), the author found that human figure drawings of clinic patients (children with known emotional problems in a child guidance clinic) had a

higher incidence of emotional indicators than well-adjusted children.

When scoring a human figure drawing by whatever scale preferred, it is very important to have a knowledge of normal developmental features. Immaturity of a normally developing mind could be mistaken as abnormal. Piaget, well-known for his research in cognitive development of children, theorized that intellectual development takes place in stages. The child must begin at a stage of relatively simple thinking before he can progress to a more mature and more complex stage. Piaget (1973) called his stages sensorimotor (birth to two years), preoperational (two to seven years), and concrete operational (seven to eleven years). Piaget (1973) proposed that all children pass through the same sequence of development but at different rates. A child enters a new stage of development when new capabilities emerge but previously acquired behaviors and processes continue to occur. Each stage is the foundation for the next stage. In support of Piaget's theory of development, it is important to remember that in scoring a child's human figure drawing test, stages of normal intellectual development must be considered.

It was evident from the literature review that human figure drawings could be used as a means to better

understand a child and his development and to identify problems. Since no specific studies were found regarding how an older child perceived the body image of his mentally-retarded sibling, it seemed justifiable to do a study which might give some indication of these attitudes. Since more families are keeping their retarded children in the home, it is important for the nurse to identify attitudes of the siblings regarding the retarded child.

Hypotheses

To carry out the purposes of this study, the following null hypotheses were tested.

1. There will be no significant difference between the chronological age and the mental age of the older nonretarded child with a mentally-retarded sibling as indicated by his projected body image on the Draw-A-Person test (Group A)

2. There will be no Emotional Indicators, as defined by Koppitz, present on the Draw-A-Person test in which the older nonretarded child draws his perception of the body image of his mentally-retarded sibling (Group A)

3. There will be no significant difference between the chronological age and the mental age of the older

nonretarded child with a nonretarded sibling as indicated by his projected body image on the Draw-A-Person test (Group B)

4. There will be no Emotional Indicators, as defined by Koppitz, present on the Draw-A-Person test in which the older nonretarded child draws his perception of the body image of his nonretarded sibling (Group B)

5. There will be no significant difference between the scores on the Draw-A-Person test, which indicates how the older child perceives his own body image and the body image of his sibling of Group A and Group B

Definition of Terms

For the purposes of this study, the following terms were identified.

1. Body image--an individual's emotional concerns, feelings, and attitudes toward his own body and the bodies of others as measured by the Draw-A-Person test

2. Child--a young person of either sex no older than twelve years of age

3. Chronological age--the actual age of the child in years and months

4. Down's syndrome--a congenital condition associated with a chromosomal abnormality which is characterized

by physical malformations and some degree of mental retardation

5. Emotional Indicator--defined as a sign on a Human Figure Drawing when it meets the following three criteria:

> "1. It must have clinical validity, i.e., it must be able to differentiate between HFDs of children with and without emotional problems.
> "2. It must be unusual and occur infrequently on the HFDs of normal children who are not psychiatric patients, i.e., the sign must be present on less than 16% of the HFDs of children at a given age.
> "3. It must not be related to age and maturation, i.e., its frequency of occurrence on HFDs must not increase solely on the basis of the children's increase in age" (Koppitz 1968, p. 35).

6. Mental age--the approximate age the child attains on a Draw-A-Person test based on developmental levels

7. Mental retardation--mental impairment that is severe enough to prevent a child from functioning intellectually as effectively as other children in his age group

8. Nonretarded--a child who is able to function intellectually as effectively as other children in his age group

9. Older child or sibling--the participant in the study who falls within the five- to twelve-year age group, is nonretarded, and is the next older of the two siblings

used in each group within the defined age range. The siblings will have the same parents

10. Projective technique--a procedure for discovering a person's attitudes, motivations, and personality traits by observing his behavior in a situation that does not require a particular response, for example, a child's response to an empty sheet of paper and a pencil (English and English 1958)

11. Wilcoxon-Matched Pairs Signed-Ranks Test--a statistical test which utilizes information about the direction and magnitude of the differences with pairs (Siegel 1956)

12. Younger child or sibling--the subject of the participant's drawings who falls within the two- to eight-year age group, is nonretarded or retarded depending on his group in the study, and is the younger of the two siblings used in each group in the study. The siblings will have the same parents

Limitations

The study was conducted with regards to the following limitations.

1. A small sample size will limit generalization of findings

2. Findings will be specific only to the sample population studied

Delimitations

For the purposes of the study, the following delimitations were identified.

1. There will be nine subjects who have a younger retarded sibling in the home (Group A)

2. As a control group, there will be nine subjects who have a younger nonretarded sibling in the home (Group B)

3. Each younger sibling will have resided in the home setting since birth

4. The younger sibling with Down's syndrome will have only physical abnormalities common to those of Down's syndrome

5. The older sibling will fall within the five- to twelve-year age group, will be nonretarded, and will be the next older sibling of the child used in each group, within the defined age range

6. The younger sibling will fall within the two- to eight-year age group, will be retarded or nonretarded depending on his group, and will be the younger of the two siblings used in each group in the study

7. Each group will be matched as closely as possible for race-ethnic origin, approximate size of the family, ages of the two children, and socioeconomic status

8. The children from Group B will live in a community similar to the children in Group A

9. The participants will be tested in their home settings to help provide a more natural environment for the evaluation session

10. The participants in each group will come from intact two-parent families only. The siblings will have the same parents

Assumptions

For the purposes of the study, it was assumed that

1. The birth of a mentally-retarded child will provoke emotional response reactions in the family that could lead to a crisis if not adequately handled

2. Down's syndrome is a congenital condition which is characterized by physical malformations and some degree of mental retardation

Summary

The previously-discussed principles are described in more detail in Chapter II. Inferences are made about family attitudes and the defective child, body image--its concepts and development, and human figure drawings as projective techniques. Theories emerge throughout Chapter II that serve as a basis for constructing the hypotheses

in this study. Chapter III describes how the data are obtained and scored. The results and interpretation of the drawings and their significance is included in Chapter IV. Chapter V gives implications and direction for future study based on the findings of this study.

CHAPTER II

REVIEW OF LITERATURE

The birth of a retarded child can be extremely disruptive to the entire family structure. The parents must first deal with the shock which is evident when a defective child is born instead of the expected "normal" child. Frequently this is followed by denial of the handicap, which is a defense mechanism used to help the parents cope with the situation. Frustration may come later when the retarded child's limitations become more evident. A turning point occurs when the parents reach a stage of self-awareness, when they recognize that their child has a problem and that the family must utilize their resources to deal with this problem.

> Retardation is not simply a defect that occurs to or resides in an individual. Rather it is an event that involves and includes the total family unit, the school, and often parts of the larger community as well (Love 1973, p. 176).

Family Attitudes and the Retarded Child

The effect of the retarded child on his family has been recognized and explored frequently by experts over the years. But the effect that the retarded child has on his "normal" siblings has been studied to a much more limited

degree. This has become a more common area for exploration in the past twenty years since increasing numbers of retarded children are remaining in the home from birth. Farber (1960) recognized that the entry of a severely retarded child in the family could result in the arrested growth of normal family dynamics and that the siblings might suffer as the family tried to cope with the accompanying problems. Spock (1965) theorized that a retarded child was disturbing to his siblings to some degree, even when they affectionately accepted him. Barnard (1976) reported that it has been the ultimate responsibility of the parents to help the siblings understand and accept the retarded child. First, the parents must reach an understanding of their child's retardation and accept it before they can help the other siblings adjust to the situation.

The adjustment problems of the normal children could be of clinical concern for several reasons. Adams (1966) indicated the development of the normal child may suffer from emotional neglect. Because of the pressure of caring for a retarded child, family relationships and roles may become distorted and result in diminished opportunity for social contacts. The normal sibling in the family could help neutralize the parental disappointment of having a retarded child. Instead, parents of retarded children have

often devoted their time and attention to these children and failed to recognize the rewards that having a normal child could mean. As a result, the normal siblings have problems adjusting to the situation of having a retarded sibling. If the child had an informed and positive attitude about the retarded sibling, he could help promote the emotional and social development of the retarded child (Adams 1966).

One of the earliest studies reviewed on family relations was done by Schonell and Watts (1957). They interviewed fifty families with retarded children in the home. These children were not enrolled in any type of program outside the home. In each family, the authors found a lack of knowledge, an inability to formulate a program, and a plea for help. The authors described the effects of a retarded child on his family as producing economic, social, and emotional difficulties.

In the next year, Holt (1958) conducted a study with 201 families who had a mentally-retarded child. Information was collected by the use of an interview administered to the parents during a home visit. The author found that there were both practical and emotional problems associated in the care of a retarded child. The main problems of the parents were the child's need for constant

supervision, nursing care, and frequent attention during the night. Disappointment, guilt, shame, and a feeling of inadequacy were frequently observed emotional problems of the parents. Holt (1958) found that the siblings in the family often reacted to the retarded child with resentment because of the lack of attention the sibling received and the shame and embarrassment the retarded sibling caused (this was determined to some extent by the parent's own adjustments). Infrequently, it was reported that the normal sibling had begun imitating the retarded child.

Farber (1959), who became a primary researcher in sibling relationships, studied the effect of the severely retarded child on his family. He reported that the sex of the retarded child and the social status of the family made little difference in the adjustment of the normal sibling but that the most important factor was the degree of dependence of the retarded child. He suggested that

> Most children can adapt themselves to the presence of a retarded brother or sister and that they tend to adopt the attitudes of their parents toward the family situation. Only when they are pushed aside or expected to assume maturity and responsibility beyond their years are they likely to suffer serious consequences (1959, p. 24).

In 1960 Caldwell and Guze studied the adjustment of families to retarded children, sixteen of whom were living

at home and sixteen who lived in an institution. Thirty-two siblings were interviewed with open-ended questions which related to their adjustment to the situation and were administered a brief vocabulary test and a scale of manifest anxiety. The results disclosed that when the retarded child lived at home, his normal sibling was aware of his problem sooner and the normal sibling had received satisfactory explanations to the cause and consequences of the defect. The normal children with the retarded siblings at home believed that the retarded siblings were more aware of their condition than the normal children whose retarded siblings were in an institution. The home children felt that the ideal place for their retarded siblings was at home while the children with siblings in an institution wanted them to remain there.

Graliker, Fishler, and Koch (1962) interviewed twenty-one teenage siblings of sixteen retarded children, ages ten months to five-and-one-half years, to determine the effect of the retarded brother or sister living in the home in terms of school, social, and family life. The results showed that the teenagers were leading normal lives with adequate peer relationships and social outlets which suggested that the presence of the young retarded

child in the home did not have an adverse effect on these siblings.

Farber (1963) conducted a study of children with retarded siblings to determine if their life goals would be affected. He selected eighty-three boys and girls, aged ten to sixteen, and asked them to rank a series of life goals in terms of the goal's importance. Examples of these goals included "be highly respected as a community leader" and "be devoted to a worthwhile cause." As a result of his findings, Farber theorized that "sustained interactions with the retarded sibling comes to be regarded as a duty by the normal sibling" (1963, p. 96). Most of the children who had sustained interactions with their retarded siblings ranked devotion of their own lives to a worthwhile cause and making a contribution to mankind as high goals.

A group experience of ten adolescents with retarded siblings was described by Schreiber and Feely (1965) in their article. This group was formed to help the adolescents discuss some of their common concerns and feelings about having a retarded sibling. Many adolescents in the group expressed feelings of jealousy, hostility, resentment, and the belief that they were not loved as much as the retarded child. Several felt guilt because of their "normalcy." Kaplan and Fox (1968) also organized a group

experience as a preventive-therapeutic program for eleven normal adolescent siblings of retardates. These children served as volunteers for retardates at a center as a means of helping them better express and accept their feelings.

Schild (1966) recognized problems which children with retarded siblings frequently faced. The normal child often became the target of high parental expectations to compensate for parental disappointment about the retarded child. Sometimes the parents became overwhelmed by the care of the retarded child and did not meet the needs of the normal child. Normal siblings also had to deal with peer reactions. The normal sibling had to explain the retarded child to his peers and this could result in embarrassment and resentment.

Frequently the retarded child became the pivotal force around which the family functioned. The normal siblings, especially those who were older, were often expected to assume some of the responsibility in the care of the retarded child. Grossman (1972) conducted an exploratory study over a five-year period using eighty-three college students, from community or private universities, who had a retarded sibling. There was a control group of sixty-six students with normal siblings who were matched for their academic year level, the number

of children in the family, the birth order and sex of the sibling, and the family's religion. A semistructured interview was used along with tests which included the Weschler Adult Intelligence Scale, an Information Test, and a Test Anxiety Question. Grossman found that the women, especially the ones who were older than the retarded sibling, provided more care than the men. Older siblings usually coped more adaptively than younger siblings, because younger siblings were more deprived of parental attention. The sex of the retarded child made a difference in that the participants were more embarrassed when the retarded sibling was of the same sex. Women from larger families coped better, possibly as a result of having more people to share the responsibility (Grossman 1972).

Robinson and Robinson (1976) reported that normal older sisters in the family assumed the majority of the burden of the care of the retarded child in the home. The older sisters were more adversely affected by the presence of the retarded sibling in the home than the older brothers. This was because the older sisters had to assume part of the responsibility of caring for the retarded sibling such as baby-sitting and taking over part of the housework. Fowle (1968) compared the marital integration and sibling role tensions in families with retarded children. She used

two samples of thirty-five families each. The Farber Index of Marital Integration and the Sibling Role Tension Index, both written instruments, were administered along with an interview. The results showed no significant difference in the two samples in marital integration but there was significant difference in the role tension of these siblings, especially the oldest female sibling.

In 1966, F. Adams examined the attitudes of forty adolescents with a retarded brother and matched this group with adolescents with normal brothers on the criteria of age, sex, school grade, family income, relative intelligence, and religion. Both groups were given the SRA Youth Inventory and scores from a Personal Questionnaire devised by the writer. Attitudes in a variety of areas including school, vocation, interpersonal relationships, and home were surveyed. The results implied that the presence of the retarded child in the home did not adversely affect the attitudes of the adolescent sibling. Male siblings seemed to show a poorer adjustment than female siblings in interpersonal relationships in the home. Adolescents with retarded siblings in the home did not seem to be adversely influenced by them.

Attwell and Clabby (1971) suggested that if parents accepted the retarded child, the siblings would too. The "experience of growing up with a retarded sibling always has

some effect on the other children in the family and often may be a source of continuing psychological difficulty" (Kaplan and Fox 1968, p. 500). As a result, the child may suffer a lowered self-concept.

Body Image--Concepts and Development

During the process of growth and development, a child begins to form a concept of his body.

> The child's concept of his body image is a primary indicator of his degree of personality organization and ego strength. It is necessary for the child to have his own relatively stable and definite frame of reference for perception of himself in order to perceive others accurately and to test reality adequately (Blaesing and Brockhaus 1972, p. 597).

The concept of body image can be useful clinically as a means of summarizing the attitudes people have about their bodies. The concept of one's body image has been formed as a result of all present and past multi-sensory experiences and memories. It can be described as a dynamic entity that is continually altered by new experiences and perceptions.

Several authors have tried to define body image. A classic definition by Schilder is ". . . the picture of our own body which we form in our mind, that is to say, the way in which our body appears to ourselves" (1935, p. 11). It is a combination of impression, perception, action, and expression. Fisher and Cleveland (1968) called body

image a psychological experience which resulted because of the person's feelings and attitudes toward his body. Blaesing and Brockhaus defined body image as the "picture a person has in his mind of his own body, that is, the way his body appears to him" (1972, p. 602). A person's body image is definitely related to his self-concept. Weininger, Rotenburg, and Henry (1972) believed that a person must meaningfully organize his sensory experiences in order to develop a good body image.

Kolb (1975) reported in his study on disturbances in body image, that body image is formed as a result of multi-sensory input to the brain but that it can be influenced by verbal and nonverbal remarks from others as well. He found that the influence of attitudes of the family on the development of disturbed body images had been basically neglected in study. He believed that satisfactory social adjustment of those with a defect depended greatly upon the family and cultural attitudes toward the defect. Kolb (1975) found that when a family is accepting of the defect, there is a greater possibility for development of body image without personality disorder. A person's concept of his body can affect his relations with others as a result of his opinion of his personality.

According to Piaget (1954), as a child progresses through stages of growth and development, his body

perception is modified and extended in relation to his current body structure. At the same time his ability to conceptualize an experience and interpret reality undergoes change. Schilder (1950) theorized that the infant discovers the objective world through his own body by external tactile and internal stimuli. Blaesing and Brockhaus (1972) based their view of the development of body image on Erikson's (1964) stages of development as follows. The development of body image begins during infancy (the first year of life). At this age the infant learns to develop a sense of trust or mistrust, depending on how he is cared for and to what degree his needs are met. If an infant receives adequate tactile and vestibular stimulation and develops a sense of trust, he will be well equipped for the next stage in developing a good self-concept which, in turn, will influence his body image.

The toddler stage, from one to three years of age, becomes an important stage in the development of body image. During this period many growth changes are occurring and the child's body image is continuously modified. Parents become very significant people and their acceptance of the child will greatly influence the development of his body image. During this period, the child learns how to manage his body and manipulate his environment. If this is not

achieved, he may experience helplessness, guilt, and feelings of inadequacy (Erikson 1964).

From three to six years the child enters the preschool stage. Sex-typing and sex-role identification are important during this period, and the way he handles this stage will determine how he feels about his own sex and both sexes throughout his life. The next stage is that of the school-age child (six to twelve). The child is learning to interact with peers, is developing academic skills, and continues to establish a sex role identification. If the child is handicapped or chronically-ill during this period, he may view himself as inferior to other children (Blaesing and Brockhaus 1972). Body image and self-concept continue to change with maturation and as perceptions are confirmed throughout the life cycle.

Several studies have been done to measure body image. Secord and Jourard (1953) conducted a study using forty-five male and forty-three female college students to determine the degree of satisfaction or dissatisfaction a person has toward his body. Scales to determine body cathexis and aspects of feelings about self were administered along with a homonym test of anxiety-related body cathexis and a psychological test of security--insecurity. The results indicated that feelings about the body are

analagous with feelings about self. The study also disclosed that negative feelings about the body are associated with anxiety and insecurity.

Jourard and Remy (1957) performed a study to determine a subject's satisfaction with his body and the importance of his body in his psychological life. Fifty-one female and forty-eight male college students were given a body and self-cathexis questionnaire. The results revealed that women have more highly differential body images than men, and that in women the differential of self-concept and body image is equivalent. Differentiation was defined as the "subject's recognition and differential response to the various parts of which the total self is comprised" (Jourard and Remy 1957, p. 63). The results of the study also indicated that men and women do not differ in the degree of self-concept differentiation and that men differentiate their body image to a lesser degree than their self-concept.

Perkins (1958) was interested in factors that influence change in a child's self-concept. The researcher used 251 fourth- and sixth-grade students and administered an instrument which measured self- and ideal-self-concepts. He found that self--ideal self-congreuencies were generally greater in girls than in boys.

Kurtz (1969) also found sex differneces in body attitudes in a study of eighty-nine male and eighty female undergraduate students. The author measured thirty different body concepts and found that women liked their bodies better than men, and women also knew more clearly what they liked and disliked about their bodies. These studies seemed to indicate that a person's attitudes and expectations about his body are related to his sex.

Various studies have been reported concerned with body image in handicapped or chronically-ill people. In 1964 Richardson, Hastorf, and Dornbusch studied the effects of a physical disability on a disabled child's self-concept. These authors interviewed 107 handicapped children between the ages of nine and eleven. The children were asked to "Tell me about yourself." The results revealed that

> Physical functional restrictions, imposed by the handicap, its psychological impact, the deprivation of social experience, and the limitations on involvement in the social world . . . would lead to an impoverishment of the child's category usages pertaining to interpersonal relations (Richardson and Hastorf 1964, p. 906).

The body attitudes of chronically-ill children were evaluated by Kurtz and Hirt (1970) using a Body Attitude Scale to assess overall the children's attitudes toward appearance. Twenty chronically-ill and twenty normal females were used and the results predicted that alterations in physical health are related to alterations in body image.

The self-concept of institutionalized retarded girls was compared to normal children in grades three, six, and ten by Piers and Harris (1964). A wide range self-concept test was administered and the results indicated that institutionalized retarded girls had a lower self-concept than the public school sample. Weininger, Rotenberg, and Henry (1972) studied spina bifida children, eight in instutitutions and eight at home with eight normal children used as a control. The children were asked to complete the make-a-person task in which they were to combine various materials resembling body parts. The institutionalized children showed a more distorted view of body image than the other two groups. These studies seemed to indicate that the development of body image is affected by the environment.

Before 1971 there was a limited amount of literature produced by nurses concerning body image. Since that time an increasing amount has been published. Nurses have found that the body image of the child is influenced by the attitudes of others around him when he is hospitalized for extended periods of time. Nurses have written articles regarding body image of patients after myocardial infarction (Smith 1972), of the patient with a colostomy (Gallagher 1972), and of the obese person (Craft 1972). The development

of body image in the adolescent has become recognized as an important topic (Dempsey 1972). Rubin (1968) theorized that the loss or threat of a loss of a functional activity which has been integrated into the system is a loss or threat of loss of self. Riddle (1972) proposed that nursing intervention could be derived from a theory of body image to assist patients in overcoming threats to the body image.

In the review of the literature on body image, there were no studies found that revealed how a person perceived another person in terms of body image. Also, there was no literature uncovered that indicated the influence that a handicapped or chronically-ill child or adult could have on the body image of another family member. Several of the readings described body image as an individual concept. However, Schilder stated that

> There is . . . a constant giving and taking so that it is true that many parts of body images are common to persons who see each other, meet each other, and are in an emotional relation to each other (1950, p. 25).
>
> Consequently, the body image is not based just on the perception of one's own body but to some extent on visual perception of the bodies of others (1950, p. 30).

DiLeo (1973) concurred that a person must have a concept of his own body image before he can have a valid perception of others.

Human Figure Drawings as Projective Techniques

One means of assessing body image is through the use of projective techniques such as the Draw-A-Person test. This test can indicate the positive or negative feelings a person can have towards his body. Burns and Kaufman (1972) reported that children's drawings reveal much about the child and the human condition because of the freshness and naivete of the drawings that is later lost to conformity. Human figure drawings have frequently been used as projective techniques to determine exterior body image. It is easier for a child to draw a mental image than to try to verbally describe it.

McElhaney (1969) indicated that a great amount of information could be obtained by using the human figure drawing as a projective technique. The author proposed that the drawings could be used to estimate intelligence and reflect an individual's self-concept. He suggested that a person "projects into his drawing a picture of himself from his own viewpoint, and his self-concept will determine to a great extent his behavior" (1969, p. 3). McElhaney also indicated that when a person is requested to draw a human figure, he may draw one picture that reveals his self-concept and another which may disclose his concept of another person.

> In the natural course of learning to draw, all children pass through the same stages of development. These stages may vary from child to child or overlap like waves in the sea (Kellog and O'Dell 1967, p. 13).

Piaget (1973) studied the development of intelligence in children and theorized that there are four major stages of mental development. According to Piaget's theory the stages begin at a level of relatively simple thinking and progress to more complex and mature stages. Piaget called the first stage sensorimotor (birth to two years) when the child learns that objects exist and can be viewed from different perspectives. In the next stage of development, preoperational (two to seven years), the child develops language and learns to represent objects by symbols. During this period of time the child experiences a variety of sensory phenomena which he acts upon, assimilates, and conceptualizes. The nature of these experiences will determine the form which the child draws during this period because his impressions are vivid and persistent. The very first experiences a child has with a pencil or crayon come after he develops object recognition and early in the process of the formation of concepts. The development of the child's drawing is coordinated with the development of verbalized concepts, understood as cognition (Piaget 1973). Since language seems to be closely related to the child's

ability to draw, it can be assumed that drawing is primarily a cognitive process.

Between the ages of seven to eleven, the child enters the concrete operational stage. Before this stage the child forms concepts of concrete objects that have been directly experienced. Until age seven or eight, the child takes things at face value. During this stage the child begins to relate his thinking to imagery. This helps the child's understanding of reality because he is now able to view events more accurately. The next stage, formal operations, occurs when the child's intellectual processes become more advanced and he is able to conceptialize relationships as well as objects. He is able to think using the rules of logic necessary for higher order abstractions. The drawing test at this time ceases to show increments and is no longer an index of the child's continued growth of intellectual maturity.

"Children's drawings represent objects as they perceive them . . . ." (Harris 1963, p. 163). They never portray objects as they exactly appear. Instead they select, modify, and add what they may perceive. Piaget (1966) hypothesized that perception does not extend beyond the preoperational level. During this period, material may be defectively perceived and must be corrected by mental

operation so that defective knowledge does not result. The ability to correct defectively perceived information varies with each child according to intelligence. This defective information may be reflected in drawings, especially of younger children, since they draw what they perceive.

The child's maturing concept of objects and of his own self-image is reflected in the increasing complexity of his drawings. When scoring a child's drawing, a knowledge of normal developmental sequences is essential so that immaturity in a drawing is not necessarily considered deviant. DiLeo (1973) stressed that the scorer must be careful in evaluating children's drawings because it is easy to read more into the drawings than is written. Hammer and Piotrowski (1965) agreed and found that the examiner's personality has been demonstrated to affect the interpretation of the human figure drawing.

There was controversy in the literature as to what the human figure drawing actually projected. Berman and Laffal (1953) theorized that a person would draw a figure with which he was most familiar, namely his own. DiLeo (1973) indicated that children were more interested in grownups than themselves so they usually drew pictures of adults. Harris stated "there is little evidence that the human figure drawing is in fact a drawing of the self,

presented directly or indirectly, overtly, or covertly" (1963, p. 67). Schilder (1950) questioned whether a drawing of the same sex depicted a representative picture, an idealized picture, or a picture with no relation to the person's body image at all. In 1959 Hammer reported that "most drawings are neither one nor the other, but actually represent a fusion of both the realistic perceptions of one's self and the ego ideal" (1959, p. 32).

Several studies have been done to determine what the human figure drawing projects. In 1953 Berman and Laffal studied thirty-nine drawings by neuropsychiatric patients to determine the relationship between the body type of the patient and the body type of the figure drawn by them. The results indicated that there was a significant correlation between the body type of the subjects and the figures drawn by them. The writers theorized that the figure drawing is a projection of the body image. Kotkov and Goodman (1953) selected 101 obese and ideal weight women to study. The women were divided into two groups--obese and ideal weight--and matched for age, educational level, Intelligence Quotient, marital status, and career versus housewife. The women were asked to draw a person, and the results signified that there was a direct projection of body image into the drawings.

Hammer and Kaplan (1964) were interested in the reliability of sex of the first figure drawing by children. The researchers used the Draw-A-Person tests of 1,276 school-aged children. The children were asked to draw a person. The tests were repeated one week later, and the children were asked to draw a person of the opposite sex of the first drawing. The results indicated that "when a child draws a self-sex figure first this tends to be reliable, but when a figure of the opposite sex is drawn first, this is not reliable" (Hammer and Kaplan 1964, p. 252). No justification inference concerning sexual identification could be made.

In 1965 Schmidt and McGowan utilized human figure drawings on thirty persons with visible physical disabilities and thirty persons without visible physical disabilities. The drawings were randomized and presented to three groups of judges chosen specifically for the study and grouped according to certain qualifications. The judges sorted the pictures into two groups of "disabled" and "normal." The results showed that the human figure drawings by the physically disabled could be distinguished from the drawings of the "normal" under the conditions of the study.

Ludwig (1969) was also interested in determining if there was a relationship between self-image and the Draw-A-Person test. He used fifty eighth- and ninth-grade boys. Ludwig administered a physical-self test to explore the

boy's feelings about their physical abilities, and then rated the Draw-A-Person test of the boys to the physical-self test. The boys were divided into a negative and a control group and were asked to perform physical tasks. The negative group was told that their performance would be compared to other boys and the control group was told there would be no comparison of abilities. After the tasks, the negative group received negative feedback. Ludwig found that the relationship between self-esteem and performance on the Draw-A-Person was altered when a threatening situation (comparison of ability) was introduced. When there was a threat to self-esteem (negative feedback), the lowered self-esteem was reflected in the drawings.

Vane and Eisen (1965) researched the Draw-A-Person test as a predictor of school adjustment of kindergarten children. Drawings were obtained from 662 kindergarten children from five years three months to six years five months. The same children were rated by their teachers on a nine-item behavior-rating scale. "The results indicated that there were at least four signs which identify a fairly high percentage of children who show poor adjustment in kindergarten" (Vane and Eisen 1965, p. 690). These four signs were grotesque figure, no body, no mouth, and/or no arms. Vane (1968), an advocate of human figure drawings as projective techniques, later developed a Kindergarten Test

to evaluate the intellectual and academic potential along with the behavior adjustment of young children. One of the subtests she used was similar to the man subtest of the Goodenough and Goodenough-Harris Draw-A-Person test.

The Goodenough Draw-A-Man test was developed by Florence Goodenough in 1926. It has been used extensively to examine the intellectual status of young children. The test has also been used to study personality and adjustment problems along with character defects. McCarthy (1944) studied the reliability of the Goodenough drawing test by administering the Draw-A-Person to 386 school children on two occasions one week apart. The drawings were scored three times by examiners. McCarthy (1944) found the test to have the following advantages: (1) it can be administered to a group or as an individual test, (2) only a pencil and paper are required for the test, (3) the test only takes about ten minutes, (4) it requires little or no training on the part of the person administering the test, (5) it is suitable for foreign or bilingual children ages three to ten since it requires no verbal response, (6) it is reported to have a fair degree of validity, and (7) it is reported to have a high reliability. McCarthy (1944) also recognized the following disadvantages: (1) it is difficult to score because scoring requires a lot

of subjective judgment by the examiner, and (2) there may be a change in the quality of the drawings if they are measured on two different occasions. As a result of the study, McCarthy cautioned the use of the scale for individual diagnosis because of the subjectivity of the scoring and the variability in individual diagnosis.

Vane and Kessler (1964) also studied the reliability and validity of the Goodenough Draw-A-Man test by administering the test to 112 elementary school children each year for four years. The authors found that correlations with the Stanford Binet and Achievement Tests results were considerable. As a result, Vane and Kessler concluded that the test was a "simple, quick estimate of intelligence and a fairly good predictor of school achievement" (1964, p. 488) especially at the kindergarten level.

Harris (1963) revised the Goodenough Draw-A-Man test in order to re-evaluate the Goodenough scoring points and to re-standardize the test. Harris' revision extended the test to older groups and added a drawing of a woman and a self-drawing. The revised scale was re-standardized with well-defined norms. Vane (1967) evaluated the revision by selecting 336 Draw-A-Man tests which had previously been scored with the Goodenough system, and rescored them using the Goodenough-Harris system. Vane found the revision

> less than adequate than the original. The revision results in IQ's significantly lower than IQ's obtained on the Stanford Binet Scale and or by the original Goodenough method (Vane 1967, p. 377).

The author stated that Harris ignored developmental differences at the lower ages. Koppitz, however, stated that

> There is no doubt that those who are primarily interested in obtaining a Mental Age or IQ score from HFDs can use the Goodenough-Harris scoring method with a reasonable degree of confidence (1968, p. 2).

Koppitz (1968) theorized that it was possible for some of the items on human figure drawings to have projective as well as developmental importance. The author speculated that a child's human figure drawing reflected not only his developmental level but his attitude toward himself and important others in his life. His drawings could reflect his fears, anxieties, and concerns at the moment. Instead of reflecting a child's body image, Koppitz assumed that the drawing reflected his "current stage of mental development and his attitudes and concerns at the given moment, all of which will change in time due to maturation and experience" (1968, p. 4). As a result of this hypothesis, Koppitz developed a human figure drawing test which would disclose Developmental Items related to the child's age and level of maturation, and Emotional Indicators related to the child's attitudes and concerns. In a validation study

by Koppitz (1966) the author administered the human figure drawing test to seventy-six pairs of public school children matched for age and sex and seventy-six patients in a child guidance clinic. The results supported the hypotheses and revealed that Emotional Indicators occurred more often on the human figure drawings of the children from the child guidance clinic than on the drawings of the well-adjusted public school children. As a result, Koppitz (1968) developed a human figure drawing test with thirty developmental items and thirty Emotional Indicators.

Each author has his own theory as to what the human figure drawing actually projects and how significant it can be in terms of intellectual and personality assessment. Machover stated

> It is clear from the study of drawings of handicapped persons that the relation between body handicap and projection in the drawings is not a simple one. In the attitude toward a handicap there is the mediation of the whole personality. Drawings, as sensitive instruments recording realistic or shining self evaluations, must be analyzed in the light of the whole personality (1953, p. 262).

Hellersburg (1950) reported that most projective techniques are used to reveal the deeper dynamics of the personality and the person's relation to his environment. Gilbert (1969) theorized that a person's drawings tell much about himself and his attitudes toward others. Swenson (1957)

called the Draw-A-Person test a "gross indicator of 'level of adjustment'" (1957, p. 463). DiLeo summarized the significance of the child's drawing as a projective technique by stating that a child's drawings revealed ". . . more than words can tell, they are valuable aids to understanding the child and his problems." They reveal his ". . . thoughts and feelings" (1970, p. 379).

It was the intent of this review of literature to focus around the following areas: Family Attitudes and the Defective Child, Body Image--Concepts and Development, and Human Figure Drawings as Projective Techniques including a theoretical framework based on Piaget's theory of intellectual development. The studies and works of many authors were reported which described the interrelationship of family attitudes and the child and the development of body image. The studies also reviewed the relationship between human figure drawings as projective techniques of body image and personality. The studies indicated that families are affected by the birth of a retarded child, and this child has the potential to cause conflicts in the normal social development of the sibling. This conflict can be revealed by a study of human figure drawings, which in some authors' opinions, reveal much about the body image of the child. Other researchers reported that the

conflicts would be revealed in a child's drawings as a reflection of the child's anxieties and concerns. It was indicated by the majority of the writers that human figure drawings could be used to reveal much about the child and his problems.

Since increasing numbers of families are keeping their retarded children at home, it has become more and more important for nurses to help families identify attitudes regarding the retarded child and to learn to deal with these attitudes constructively. This review of the literature presented an overview of studies done to help identify these attitudes.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This chapter describes the type of research designed to compare the body image of mentally-retarded and nonretarded children as perceived by their older siblings. The settings from which the subjects were selected are identified and the method of selection and description of the population are included. The Draw-A-Person tests used to collect the data are discussed as evaluative tools. The procedure for collection of data and procedure for treatment of data are described.

Setting

All data for this study were collected in each participant's home to provide the most natural environment for the evaluation session. The participants were tested in a room in the home where they were comfortable. The child usually chose a table and chair or sat on the floor and used a low table to draw his pictures. The investigator asked that the television and/or radio be turned off to minimize distractions. The parents and siblings were allowed to remain in the room during the testing but were

asked to remain quiet while the child was drawing. Most of the parents chose to remain in the room and were curious to see the finished drawings.

Population

The population was determined by using a purposive sampling of children whose retarded siblings had been evaluated at the University Affiliated Center located in a metropolitan area greater than 900,000 persons in the Southwestern United States. This was an interdisciplinary student training center that provided diagnostic and referral services for developmentally disabled children. All of the retarded siblings of the participants had been evaluated at the University Affiliated Center and had been diagnosed as having Down's syndrome. This group was designated as Group A. The participants in Group A were within the five- to twelve-year age group and were the next older sibling of the child used in the study in each group, within this defined age range. Each of the participants in Group A had a younger sibling with Down's syndrome within the two- to eight-year age range. A total of nine families was selected. Six of these families were Caucasian and three were Hispanic.

As a control, a group of participants were purposively chosen from two schools located within the

metroplex area. Six of the Caucasian participants were purposively selected from a public elementary school located in a community on the outskirts of a city greater than 400,000 persons located in a metropolitan area in the Southwestern United States. The three Hispanic control participants were selected from a parochial school located in a city greater than 900,000 persons in a metropolitan area in the Southwestern United States. The participants in this group had a nonretarded younger sibling. This group was designated as Group B.

Through the assistance of teachers and the principals of the schools, the two groups were matched as closely as possible in relation to race/ethnic origin, approximate size of the family, ages of participants and younger siblings, and socioeconomic status. These matchings were made by the investigator by utilizing the Hollingshead Two Factor Index of Social Position (appendix J). The participants in each group were members of intact, two-parent families and the siblings had the same parents. There were nine participants in each group. Agency permission for the use of names of clientele was obtained before the data were collected (appendix D).

Tool

Data for this study were collected by using a demographic data sheet (appendix E) for the parents of the participants and the Draw-A-Person test (Harris 1963, Koppitz 1968) for the child participants. The demographic data sheet was given to the parents of the participants in both Group A and Group B to help match the two groups as closely as possible. The parents were asked to complete the demographic data sheet at the same time that the participants were being administered the Draw-A-Person tests. The Draw-A-Person tests were administered to each participant in the study and were evaluated by an educational specialist at a diagnostic and evaluation facility for developmentally disabled children. Names of the participants and the families were not visible on the drawings to help prevent biasing by the scorer. The drawings were scored by the educational specialist using the Goodenough-Harris scoring system to determine the developmental level of maturation of the drawings (Harris 1963) (appendices F and G, parts 1 and 2). The Draw-A-Man point scale and the Draw-A-Woman point scale were both used to score the drawings since the participants and siblings of the participants were of both sexes. The educational specialist had frequently administered the Goodenough-Harris

Draw-A-Person test as part of the evaluative process at the University Affiliated Center. By using this scoring system, an approximate mental age was obtained.

Each of the drawings were also judged by a master's prepared nurse interested in children's art and skilled in scoring Koppitz's Emotional Indicators (Koppitz 1968) (appendix H, parts 1 and 2). According to Koppitz, the presence of Emotional Indicators can reflect a child's anxieties, concerns, and attitudes. Koppitz stated that the presence of "two or more Emotional Indicators on a human figure drawing are highly suggestive of emotional problems and unsatisfactory interpersonal relationships" (1968, p. 42). Each participant was asked to draw a picture of himself and a picture of the younger retarded or nonretarded sibling.

Collection of Data

All of the parents of the selected participants, except one, were contacted by telephone by the investigator of the study. One family did not have a telephone so the investigator contacted the family in the home. An explanation of the study was given to determine if the family was interested in participating in the study. All of the families contacted, except two, showed interest in the study and an appointment was made for a home visit by

the investigator. The two families who were not interested had personal conflicts which prevented them from participating in the study.

Before the drawings were obtained, during the home visit, the study was explained to the parents orally (appendix C, part 2). After the oral presentation, the parents were asked if they had further questions before they signed the oral informed consent agreement. The parents in Group A and Group B were given separate letters that briefly explained their role in the study (appendices A and B) and the investigator included a telephone number where she could be reached if the parents had further questions. The parents were then asked to read the written informed consent agreement (appendix C, part 1) and questions were answered before the parents signed this agreement. Each participant and his family was guaranteed anonymity in the study. The investigator introduced herself to each participant and informed the child that the purpose of the drawings was to collect more information about brothers and sisters. The parents and children were also made aware that they could withdraw from participation in the study at any time.

The evaluation consisted of the following steps.

1. The parents and siblings of the participant were allowed to remain in the room if they desired, but

were asked to remain quiet so as not to cause bias in the drawings by offering suggestions or criticism

2. The investigator gave each child participant a plain white sheet of paper, eight-and-one-half by eleven inches, and a number two pencil with an eraser. The paper was placed in front of the child with the eleven-inch side perpendicular to the edge of the table. The pencil was placed on top of the paper pointing away from the child. Rotation of the paper was not encouraged or discouraged

3. The child was asked to "Draw a whole picture of yourself. Make sure it is a whole picture and not a stick figure or a cartoon figure"

4. No bias was interjected by the investigator as to whether the picture was "right" or "wrong." Praise was used as an incentive such as "You're doing a good job"

5. The investigator did not encourage or discourage erasures

6. When the child appeared to be finished, the investigator asked the child if he was finished drawing. At that time the investigator asked the child to explain certain parts of the picture that were not clear. Notes of this discussion were recorded on a separate sheet of paper

7. Following the procedure described, each participant was then asked to "Draw a whole picture of 'Johnny'

(the younger retarded or nonretarded sibling). Make sure it is a whole picture and not a stick figure or a cartoon figure"

8. The investigator labeled each picture with a number that indicated who drew the picture, and if it was a picture of the self or the younger sibling. No names of participants and/or family were visible on the drawings

9. After the participant had finished the two Draw-A-Person tests, the investigator collected the demographic data sheets and the signed consent agreements from the parents in Group A and Group B

10. Each drawing was evaluated at a later time by judges familiar with the Goodenough-Harris scoring system (Harris 1963) and Koppitz's Emotional Indicators (Koppitz 1968) as was explained under the subsection Tool.

In order to insure that the test was administered in the same way each time, the investigator took a written copy of the previously-mentioned steps to use as a guide when administering the test (appendix I).

Treatment of Data

The data obtained from the self-drawings of the older nonretarded children were analyzed using the Wilcoxon Matched-Pairs Signed Ranks Test (Siegel 1966) to determine if there was a significant difference between the

chronological age of the participant and the mental age he was assigned by the Goodenough-Harris scoring system (Harris 1963). A frequency distribution was utilized to describe the number of Emotional Indicators present in each of these drawings.

A frequency distribution was also utilized to describe the data collected including the number of Emotional Indicators present in the drawings by the older nonretarded child of his younger retarded or nonretarded sibling. To analyze the significance of differences between the frequency of Emotional Indicators of Group A and Group B, the chi-square test was utilized.

Summary

This study was developed as a descriptive research investigation which was concerned with the comparison of body image of mentally-retarded children as perceived by their older siblings. The setting used for the collection of data was the private homes of the participants. The subjects participating in the study were purposively selected from the files at the University Affiliated Center. Two parent families with an older child between the ages of five and twelve, inclusive, and with a Down's syndrome child between the ages of two and eight, inclusive, were selected for the study. The control group was selected from a public

school in a community on the outskirts of a city greater than 400,000 persons and a parochial school in a city greater than 900,000 persons located in the same metropolitan area in the Southwestern United States. The two groups were matched for race/ethnic origin, approximate size of family, ages of participants and younger siblings, and socioeconomic status.

The tools utilized for this study were the Draw-A-Person tests by Goodenough-Harris (Harris 1963) and Koppitz (1968). Evaluations of the drawings were determined by the presence of Emotional Indicators and the developmental level of maturity of the drawings. The drawings were scored by experienced judges and the Wilcoxon Matched-Pairs Signed Rank Test (Siegel 1966) and a frequency distribution were used to analyze the data collected from the drawings. To analyze the significance of differences between the frequency of Emotional Indicators of Groups A and B, the chi-square test was utilized.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to compare the body image of mentally-retarded and nonretarded children as perceived by their older siblings. The analytical findings are presented by means of scores determined by the chronological and mental ages achieved on the self drawings and the number of Emotional Indicators present on all the drawings. The frequency of Emotional Indicators present on the Draw-A-Person tests of the children with mentally-retarded siblings and the children with normal siblings were compared.

Eighteen children of both sexes between the ages of five and twelve, inclusive, were included in this study. The children were divided into two groups, depending on whether they had a younger sibling between the ages of two and eight, inclusive, who was mentally retarded (Group A) or normal (Group B). Demographic data of the two groups are given in table 1. The two groups were matched as closely as possible for variables including race/ethnic origin, size of family, ages of participants and siblings, and the socioeconomic status of the family. There was no

significant difference between the two groups for any of these variables.

TABLE 1

DEMOGRAPHIC DATA--GROUP A AND GROUP B

Item	Group A (N = 9)	Group B (N = 9)
Race		
Caucasian	5	6
Hispanic	3	3
Marital Status Intact	9	9
Mean Age of Participant	107 mo.	112 mo.
Sex		
Male	6	7
Female	3	2
Mean Age of Sibling	58 mo.	60 mo.
Sex		
Male	7	7
Female	2	2
Mean Size of Family	5.5	5.6
Mean Social Index	Class III	Class III
Religious Preference		
Protestant	4	6
Catholic	5	3

Each child participant was first asked to draw a picture of himself. These drawings were later scored by an educational specialist who used the Goodenough-Harris (Harris 1963) scoring system to determine a mental age from the

quality of the drawing. Table 2 reflects the chronological age in months of each subject in Groups A and B compared to the mental age the participant obtained on the self-drawing.

TABLE 2

SELF-DRAWINGS SCORED BY GOODENOUGH-HARRIS SCALE

Number of Subject	Chronological Age (Months)	Mental Age (Months)
Group A		
01	78	88
03	112	136
05	101	80
07	139	140
09	128	74
11	124	125
14	97	74
16	99	84
17	85	60
	Mean=107	Mean= 95.7
Group B		
19	97	118
22	130	140
23	104	100
26	127	122
27	141	146
29	100	72
31	81	86
33	99	77
35	129	173
	Mean=112	Mean=114.9

The Wilcoxon Matched-Pairs Signed Ranks test was utilized to analyze the differences in the chronological age and mental age values acquired on the self-drawings. This statistical test was used because it utilizes information about the direction and magnitude of differences with pairs (Siegel 1956). The Wilcoxon T, which is the absolute value of the smaller of the two sums of the negative ranks and the positive ranks, of Group A was thirteen. Using the table of critical values of T in the Wilcoxon Signed-Ranks Test (Siegel 1956), the level of significance was greater than .05. This indicated no significant difference between the chronological age and the mental age of the self-drawings of the children in Group A. This supported the null hypothesis which stated that there would be no significant difference between the chronological and mental ages of the children in Group A.

The self-drawings from Group B were analyzed in the same manner and the Wilcoxon T was nineteen. The level of significance of this value was greater than .05, which also indicated no significant difference between the chronological age and mental age of the self-drawings of the children in Group B. The null hypothesis which stated that there would be no significant difference between the chronological and mental ages of the children in Group B was also supported.

The child was then requested to draw a picture of the younger sibling. The self-drawings and drawings of the siblings were scored for the presence and absence of Emotional Indicators (Koppitz 1968). Koppitz's theory is that there is no sign of serious emotional problems when a child's drawings show no Emotional Indicators (a score of 0). The presence of one Emotional Indicator (a score of 1) is inconclusive and not necessarily a sign of emotional problems. Two or more Emotional Indicators (a score of 2, 3, 4) are highly suggestive of problems in emotional adjustment and relationships (Koppitz 1968, p. 42). Table 3 reflects the frequency of Emotional Indicators as divided by self and sibling drawings for each group.

TABLE 3

FREQUENCY OF EMOTIONAL INDICATORS

Score	Group A		Group B	
	Drawing of Self	Drawing of Sibling	Drawing of Self	Drawing of Sibling
0	2	2	4	4
1	5	4	3	2
2	1	1	1	2
3	1	1	1	1
4	0	1	0	0

In this study, there were two self-drawings in Group A with two or more indicators. There were three drawings of the siblings with two or more indicators. The scores ranged from zero to four. In Group B, there were also two self-drawings with two or more indicators, and three sibling drawings with two or more Emotional Indicators. These scores ranged from zero to three. These scores did not support the null hypotheses which stated that there would be no Emotional Indicators present on the drawings of the siblings in either Group A or Group B.

To determine if there was a significant difference between the scores on the Draw-A-Person tests of the two groups, the investigator compared the number of Emotional Indicators present on the self-drawings and the number of indicators of the sibling drawings to determine if there were more, the same, or fewer indicators present on the self-drawings as compared to the sibling drawings. The number of indicators of the self-drawings as compared to the sibling drawings of Group A and Group B were also compared. Table 4 relates the results as computed using the chi-square. These data support the null hypothesis that there will be no significant difference between the scores on the Draw-A-Person tests of the two groups.

TABLE 4

NUMBER OF EMOTIONAL INDICATORS ON SELF-DRAWINGS COMPARED TO SIBLING DRAWINGS

	Group A	Group B
More Emotional Indicators Than Sibling	2	2
Same or Fewer Emotional Indicators Than Sibling	7	7
	N = 9	N = 9

In addition to the data collected to support or reject the hypotheses, the frequency of significant Emotional Indicators of the two groups was compared. Koppitz (1966) identified eight Emotional Indicators in her validation study that were considered statistically significant. These indicators occurred so rarely in drawings of well-adjusted children that the presence of one is indicative of adjustment problems. The eight significant indicators are as follows: poor integration, shading of body and/or limbs, slanting figure, tiny figure, big figure, short arms, cut off hands, and omission of neck (Koppitz 1966, pp. 313-316).

Significant Emotional Indicators are distributed according to self and sibling drawings of the two groups in table 5.

TABLE 5

SIGNIFICANT EMOTIONAL INDICATORS

Indicator	Group A		Group B		Total
	Drawing of Self	Drawing of Sibling	Drawing of Self	Drawing of Sibling	
Poor Integration	2	3	0	0	5
Shading Body, Limbs	0	0	1	1	2
Slanting Figure	0	0	0	0	0
Tiny Figure	1	2	1	2	6
Big Figure	1	0	0	1	2
Short Arms	1	2	0	1	4
Hands Cut Off	1	2	0	0	3
No Neck	0	0	0	0	0

Significant Emotional Indicators occurred six times in the self-drawings of Group A and nine times in the drawings of the siblings. In Group B, significant Emotional Indicators occurred only two times in the self-drawings and five times in the drawings of the siblings. "Poor integration of body parts," the most frequently used indicator in Group A, was noted five times. Koppitz stated that poor integration may be "associated with one or several of the following: instability, a poorly integrated personality,

poor coordination, or impulsitivity" (1968, p. 56). "Tiny figure" was used six times by both groups (three in each). Koppitz believed that this indicator reflects "extreme insecurity, withdrawal, and depression" (1968, p. 59).

Summary

The purpose of this study was to compare the body image of mentally-retarded and nonretarded children as perceived by their older siblings. The use of the Wilcoxon Matched-Pairs Signed Ranks test, for determining the difference in the chronological and mental ages of the participants, was described. The level of significance was greater than .05 in each group which indicated no significant difference in the chronological and mental ages obtained on the drawings in either Group A or Group B. A frequency distribution was utilized to describe the number of Emotional Indicators present in each of the drawings. The null hypotheses which stated that there would be no Emotional Indicators in the sibling drawings were not supported.

The frequency of Emotional Indicators of the two groups was compared using the chi-square test. Comparing the self-drawings to the sibling drawings in each group showed no significant difference in the number of indicators that were more, the same, or fewer in the drawings. The

frequency of significant Emotional Indicators of each group was included to provide more information about the drawings.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

This chapter includes a short summary of this research study and the conclusions that were made based on the data collected. The implications are useful for any nurse interacting with families who have children. Recommendations for use of the findings and for further research are included.

Summary

The purpose of the study was to compare the body image of mentally-retarded and nonretarded children as perceived by their older siblings. The importance of family attitudes concerning the retarded child was explained in the Background and Significance along with a brief overview of body image and human figure drawings. The population studied was obtained from past records at the University Affiliated Center, a diagnostic and evaluation center for developmentally-disabled children. The participants had a younger sibling who was diagnosed as having Down's syndrome (Group A). The control group was obtained from a public school and a parochial school located within a metropolitan

area in the Southwestern United States (Group B). The framework of this study was nonexperimental and descriptive.

The review of literature focused around the following areas: Family Attitudes and the Defective Child, Body Image--Concepts and Development, and Human Figure Drawings as Projective Techniques including a theoretical framework based on Piaget's theory of intellectual development

The tool used in the study was the Draw-A-Person adapted from Goodenough-Harris (Harris 1963) and Koppitz (1968). Subjects were given a plain white sheet of paper and asked to "Draw a whole picture of yourself." After the subject finished his drawing, he was asked to "Draw a whole picture of 'Johnny'" (the younger retarded or nonretarded sibling). The parents were asked to complete a demographic data sheet (appendix E). There was a total of eighteen participants in the study, nine with a younger sibling who had Down's syndrome (Group A) and nine with a normal younger sibling (Group B). An educational specialist who had frequently administered the Goodenough-Harris Draw-A-Person test as part of the evaluative process at a diagnostic and evaluation center, scored the self-drawings using the Goodenough-Harris (Harris 1963) scoring system and a master's prepared nurse, who was interested in children's art and

skilled in scoring Koppitz's Emotional Indicators, scored all the drawings utilizing Koppitz's Emotional Indicators.

A comparison of the chronological age and the mental age achieved by the participants on the self-drawings, in both groups, was made using the Wilcoxon Matched Pairs Signed-Ranks test. The results revealed that there were no significant differences between the two values. The level of significance was greater than .05. A frequency distribution was utilized for the number of Emotional Indicators presented in the self-drawings and the drawings of the siblings. Using the chi-square, the frequency of Emotional Indicators of both groups was compared as to whether there were more, the same, or less indicators on the self-drawings as compared to the sibling drawings. There was no significant difference. In addition, significant Emotional Indicators were included to provide another source of information.

Conclusions

The reason that there was no significant difference between the chronological age and the mental age achieved through the drawings may have been due to the small size of the sample ($N = 18$). The small sample size may have prevented a significant difference between the frequency of Emotional Indicators of the two groups used in the study.

The frequency of two or more Emotional Indicators in the self-drawings of Group A was two and three in the sibling drawings. In Group B there were also two self-drawings with two or more indicators and two sibling drawings. This would seem to indicate that children with younger retarded siblings are as well adjusted as children with younger nonretarded siblings as reflected by the frequency of Emotional Indicators on their human figure drawings. This may be due to the fact that the retarded child in the study had lived in the home all his life. This would give the sibling a chance to understand the child and his retardation better than if the child had lived in an institution from birth. Another factor that may influence the child's acceptance of the retarded child is the parent's own acceptance of the child. This factor was not explored in the study but numerous studies have shown that a sibling's acceptance of the retarded child is influenced by the parent's attitudes. The amount of attention that the retarded child receives may affect the normal sibling's feelings for this child. If the normal sibling is rejected, he may resent the retarded child because of the attention he receives. These are questions that were not explored but would indicate further implications for study.

The following were true for this sample, but may not be applicable to the general population.

1. There was no significant difference between the chronological age and the mental age of the self-drawings of the group with the younger retarded sibling and the group with the younger nonretarded sibling. This may imply that older children with retarded siblings do not have an alteration in their own body image

2. There were Emotional Indicators present on the self and sibling drawings of both groups, but there were no differences between the two groups of the frequency of two or more indicators on the drawings. This may indicate that the presence of a younger retarded child, who has been in the home from birth, does not cause the normal sibling problems in adjustment or in interpersonal relationships when compared to a child with a normal younger sibling

3. In both Group A and Group B, there were two self-drawings that had more Emotional Indicators than the sibling drawings. This was not a significant difference. The presence of a younger retarded child in the home may not be a significant reason for increased anxiety in the normal child as evidenced by his self-drawings when compared to a child with a normal younger sibling

4. Group A had six significant Emotional Indicators on the self-drawings and nine on the sibling drawings. Group B had two significant Emotional Indicators on self-drawings and five on the sibling drawings. No conclusions can be drawn with this small sample, but further implications for study are suggested

Implications

The implications for this study are directed toward any nurse who works with families who have children. The results can be incorporated for use with both families who have normal children and those with a retarded child in the family. The birth of a child, especially a defective child, has the potential to cause problems with the older siblings. The older child may become jealous of the new sibling as a result of the extra attention the sibling requires. The attitude of the parent toward the new child and the parent's need to understand the estrangement the older child may be experiencing are important in the emotional well-being of the older child and his future adjustment to the new sibling. The birth of a defective child does not have to be a traumatic experience for the older child if the parents handle the situation well. The parents must be counseled to consider the needs of the older child and to realistically handle his demands. The nurse in a clinic, a pediatrician's

office, or hospital setting may have the opportunity to counsel parents about sibling relationships. The results of this study seem to imply that the addition of a child to the family unit does not have to have an adverse affect on the older sibling. In this small sample, the children did not seem to be adversely affected by the younger child in the family (retarded or nonretarded) at least as was reflected through their drawings. The nurse can use drawings as a way to detect a child's feelings and concerns that he may have difficulty verbally expressing. These drawings should be scored and interpreted by a nurse who is skilled in scoring children's drawings. These drawings can be used to identify areas of strength and/or concern in sibling attitudes.

Recommendations

The findings of this study have led to recommendations for nursing research. The following recommendations are made to help increase the awareness of family attitudes toward the defective child as evidenced by human figure drawings.

Further study of the use of the Draw-A-Person test to identify a sibling's perceived body image, using a larger sample is needed. Identification of a child's previous knowledge about his sibling's retardation would be useful

when interpreting results of human figure drawings. This could be accomplished through the development of an interview tool for the parents.

The sample selected for this study included representatives from only the Caucasian and Hispanic races. A larger sample might make it possible to have a wider variety of socioeconomic classes and race. The sex and the age of the children used in the study may have an important influence on the results of the study. Further study controlling the sex and the age of the children used is needed.

It would be of interest to have older children draw pictures of their retarded siblings who have been institutionalized from birth to determine if the absence from the home would have an effect on the older children's perception of their sibling's body image. Drawings of siblings with physical handicaps might reveal more information.

The eight significant Emotional Indicators were only briefly explored in this study. Another study using a larger sample to test these indicators might be more significant.

APPENDIX A

WRITTEN EXPLANATION OF STUDY (PARENTS GROUP A)

Dear Parents:

I am a Registered Nurse graduate student at Texas Woman's University in Dallas. I am involved in doing research relative to sibling relationships, especially in families in which the younger sibling has been diagnosed as having Down's syndrome. I presently work at the diagnostic and evaluation center at _____ and it was here that I acquired your name as a possibility to use in my study. I am requesting that you read that Informed Consent Agreement form and sign it in the presence of a witness. It is necessary for you to sign this form in order that your child may participate in the study.

I appreciate your support and cooperation in my study.

Sincerely,

Stephanie Wren Gage, R.N.

Enclosure

APPENDIX B

WRITTEN EXPLANATION OF STUDY (PARENTS GROUP B)

Dear Parents:

I am a Registered Nurse graduate student at Texas Woman's University in Dallas and am involved in doing research relative to sibling's relationships, especially in families in which the younger sibling has been diagnosed as having Down's syndrome. In order for my study to have significance, I must have a control group of children with normal younger siblings to participate in the study. I purposively selected your child's name from the school records at _____ school because your demographic information, for example, race/ethnic origin, socioeconomic status, the size of your family, and the ages of your children, most closely match the participants in the other group. I am requesting that you read the Informed Consent Agreement form and sign it in the presence of a witness. It is necessary for you to sign this form in order that your child may participate in the study.

I appreciate your support and cooperation in my study.

Sincerely,

Stephanie Wren Gage, R.N.

Enclosure

APPENDIX C

PART 1--INFORMED CONSENT AGREEMENT

PART 2--ORAL PRESENTATION OF STUDY

INFORMED CONSENT AGREEMENT

We (I) _____ and _____ do hereby consent to the use of the results of two (2) Draw-A-Person tests by _____ in a report concerned with sibling relationships in families especially those with younger siblings who have been diagnosed as having Down's syndrome.

Stephanie Wren Gage has informed us (me) that no names, photographs, or otherwise identifying information will be used without our written approval and we (I) fully understand the following:

1. Two (2) Draw-A-Person tests will be administered. These are pencil and paper tests.

2. There will be no physical discomfort which comes from writing the test. The test usually lasts from ten to thirty minutes.

3. The benefits to be expected from the testing are a possible increase in information available for health professionals when dealing with sibling relationships.

Stephanie Wren Gage has explained the testing procedure to _____ and has agreed to answer any inquiries that we (I) may have concerning the procedure. She has informed us (me) that we (I) might contact her at telephone number 481-4232.

_____ Signature of Mother

or

_____ Signature of Father

_____ Witness

_____ Date

TEXAS WOMAN'S UNIVERSITY

(Form B--Oral presentation to subject)

Consent to Act as a Subject for Research and Investigation:

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

Signature Date

Witness Date

Certification by Person Explaining the Study:

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

Signature Date

Position

Witness Date

ORAL PRESENTATION OF STUDY

My study is concerned with the way an older child in a family with a retarded or nonretarded brother or sister sees his own body image and the body image of this sibling. Body image is the child's emotional concerns, feelings, and attitudes toward his own body and the bodies of others. I intend to measure this by having your child draw two Draw-A-Person tests, one of himself and one of his younger siblings. The Draw-A-Person test is a paper-and-pencil test that requires about ten to thirty minutes for the child to complete. There will be no physical discomfort involved. Your child will be given a piece of paper and pencil and will first be asked to draw a picture of himself. He will do this without suggestions from his parents and myself. After he has completed this drawing, he will be asked to draw a picture of his younger brother or sister which I have selected to use in the study. The Draw-A-Person test will be used in this study because it is easier for a child to draw an image than to describe it verbally. A child can reveal a great deal about himself and his feelings about others in the way he draws and elaborates human figure drawings. These drawings will later be scored using the Goodenough-Harris system which tells what features should be present on the drawing at a certain age. The pictures

will also be scored using Koppitz's Emotional Indicators, which may reflect a child's anxieties, concerns, and attitudes.

Your child and family will remain anonymous in this study except to myself. No one besides myself will know the identity of anyone participating in the study. If you are interested in the results of the study you may call me at my home (817-481-4232) during the summer. I would be glad to discuss the results with you at that time. Thank you very much for allowing your child to participate in my study. I hope that as a result of my study, there will be an increase in information available for health professionals when dealing with relationships between brothers and sisters.

APPENDIX D

AGENCY PERMISSION

Appendix IV

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS

DALLAS CENTER
1810 Inwood Road
Dallas, Texas 75235

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

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE University of Mental Health Center

GRANTS TO Stephanie Wren Gage

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:

A Comparison of Body Image of Mentally Retarded and Nonretarded Children as Perceived by their Siblings

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 March 24, 1978

Donna N. Neal
Signature of Agency Personnel

Stephanie Wren Gage
Signature of student

Tommie L. Wallace
Signature of Faculty Advisor

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

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS

DALLAS CENTER
1810 Inwood Road
Dallas, Texas 75235

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

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____ _____

GRANTS TO Stephanie Wren Gage

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:

A Comparison of Body Image of Mentally Retarded and Nonretarded Children as Perceived by their Siblings

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3. The agency (wants) (does not want) a conference with the student when the report is completed.
4. The agency is (willing) (unwilling) to allow the completed report to be circulated through interlibrary loan.
5. Other: _____

_____

_____

Date May 25, 1978

Signature of Agency Personnel

Stephanie Wren Gage
Signature of student

Tommie L. Wallace
Signature of Faculty Advisor

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

TEXAS WOMAN'S UNIVERSITY
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1130 M.D. Anderson Blvd.
Houston, Texas 77025

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE _____ _____

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

_____

_____

Date May 11, 1978

_____
Signature of Agency Personnel

Stephanie Wren Gage
Signature of student

Tommie L. Wallace
Signature of Faculty Advisor

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

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APPENDIX E

DEMOGRAPHIC DATA SHEET

DEMOGRAPHIC DATA SHEET

Please fill in the proper data:

	Natural Parent's Names	Birthdate	Education	Occupation/Job Title
1.				
	Address:			

2. Marital Status (circle one):

   Married Divorced Separated Widowed Single

3. Race/Ethnic Background (circle one):

   Caucasian Negro Oriental Hispanic Indian Other_____

4. Religious Preference (circle one):

   Catholic Protestant Jewish Other_____

5. Number of children in family_____

   Name, birthdate, and sex of each child in family:

Name	Birthdate	Sex

You may use the back of the paper if you need more spaces.

Date:_____

APPENDIX F

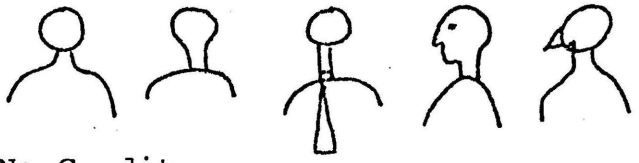
PART 1--REQUIREMENTS FOR SCORING THE DRAW-A-MAN SCALE

PART 2--SHORT SCORING GUIDE: MAN POINT SCALE

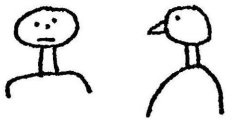
REQUIREMENTS FOR SCORING THE DRAW-A-MAN SCALE*

ITEM		DESCRIPTION
1.	Head present	Any clear method of representing the head. Features alone, without any outline for the head itself, are not credited for this point.
2.	Neck present	Any clear indication of the neck as distinct from the head and the trunk. Mere juxtaposition of the head and the trunk is not credited.
3.	Neck, two dimensions	Outline of neck continuous with that of the head, of the trunk, or of both. Line of neck must "flow" into head line or trunk. Neck interposed as pillar between head and trunk does not get credit unless treated definitely to show continuity between neck and head or trunk or both, as by collar, or curving of lines.
4.	Eyes present	Either one or two eyes must be shown. Any method is satisfactory. A single indefinite feature, such as is occasionally found in the drawings of very young children is credited.

Credit



No Credit



*From Children's Drawings as Measures of Intellectual Maturity by Dale B. Harris, copyright 1963 by Harcourt Brace Jovanovich, Inc. Reprinted and reproduced with their permission (appendix K).

5. Eye detail: brow or lashes

Brown, lashes, or both shown.

6. Eye detail: pupil

Any clear indication of the pupil or iris as distinct from the outline of the eye. Both must appear if both eyes are shown.

7. Eye detail: proportion

The horizontal dimension of the eye must be greater than the vertical dimension. This requirement must be fulfilled in both eyes if both are shown; one eye is sufficient if only one is shown. Sometimes in profile drawings of a high grade, the eye is shown in perspective. In such drawings any triangular form approximating the following examples is credited.

Credit

8. Eye detail: glance

Full Face: The eyes obviously glancing. There must be no convergence or divergence of the two pupils, either horizontally or vertically.

Credit

Profile: The eyes must either be shown as in the preceding point, or, if the ordinary almond form is retained, the pupil must be placed toward the front of the eye rather than in the center. The scoring should be strict.

9. Nose present

Any clear method of representation. In "mixed profiles" the score is plus even though two noses are shown.

10. Nose, two dimensions

Full Face: Credit all attempts to portray the nose in two dimensions, when the bridge is longer than the width of the base or tip.

Credit

No Credit

Profile: Credit all crude attempts to show the nose in profile, provided tip or base is shown in some manner. Do not credit simple "button."

Credit

No Credit

11. Mouth present

Any clear representation.

12. Lips, two dimensions

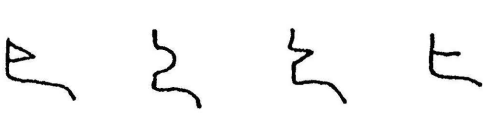
Full Face: Two lips clearly shown.

Credit

Profile:

Credit

No Credit



13. Both nose and lips in two dimensions

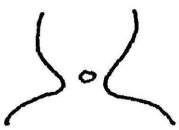
Bonus point when items 10 and 12 are passed. See preceding items for accepted forms.

14. Both chin and forehead shown

Full Face: Both the eyes and mouth must be present, and sufficient space left above the eyes to represent the forehead; below the mouth to represent the chin. The scoring should be rather lenient. Where neck is continuous with face, placement of mouth with respect to narrowing of lower portion of head is important. The sketches below illustrate mouth placement.

Credit

No Credit



15. Projection of chin shown; chin clearly differentiated from lower lip

Full Face: Modeling of chin must be indicated in some way, as by a curved line below the mouth or lip, or point of chin indicated by appropriate facial modeling, or dot or line placed below mouth near lower limit of face. Beard obscuring chin does not score. Note: Distinguish carefully from item 16. There must be an attempt to show a "pointed" chin to credit this item. The point is credited most frequently in profiles.

Credit

Items 15 and 16

Item 15 but not 16

Item 16 but not 15

16. Line of jaw indicated

Full Face: Line of jaw and chin drawn across neck but not squarely across. Neck must be sufficiently wide, and chin must be so shaped that the line of the jaw forms a well-defined acute angle with the line of the neck. Score strictly on the simple oval face.

Credit

ACUTE ANGLES

No Credit

Profile: Line of jaw extends toward ear

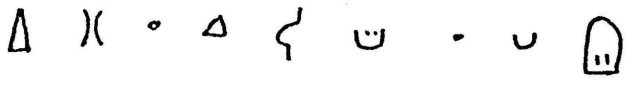
Credit

17. Bridge of nose

Full Face: Nose properly placed and shaped. The base of the nose must appear as well as the indication of a straight bridge. Placement of upper portion of bridge is important; must extend up to or between the eyes. Bridge must be narrower than the base.

Credit

No Credit



Profile: Nose at angle with face, approximately 35-45 degrees. Separation of nose from forehead clearly shown at eye.

Credit

No Credit

18. Hair I

Any indication of hair, however crude.

19. Hair II

Hair shown on more than circumference of head and more than a scribble. Nontransparent, unless it is clear that a bald-headed man is portrayed. A simple hairline across the skull on which no attempt has been made to shade in hair does not score. If any attempt has been made, even in outline or with a little shading, to portray hair as having substance or texture, the item scores.

Credit

No Credit

20. Hair III

Any clear attempt to show cut or styling by use of side burns, a forelock, or conformity of base line to a "style." When a hat is drawn, credit the point if hair is indicated in front as well as behind the ear, or if hairline at back of neck or across forehead suggests styling.

21. Hair IV

Hair shaded to show part, or to suggest having been combed, or brushed, by means of directed lines. Item 21 is never credited unless Item 20 is; it is thus a "high-grade" point.

Credit

No Credit

22. Ears present

Any indication of ears.

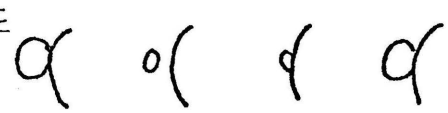
23. Ears present: proportion and position

The vertical measurement must be greater than the horizontal measurement. The ears must be placed somewhere within the middle two-thirds of the head.

Full Face: The top of the ear must be separated from the head line, and both ears must extend from the head.

Credit

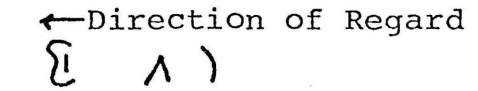
No Credit



Profile: Some detail, such as a dot, to represent the aural canal must be shown. The shell-like portion of the ear must extend toward the back of the head. (Some children, especially retarded boys tend to reverse this position, making the ear extend toward the face. In such drawings this item is never credited.)

Credit

No Credit



24.	Fingers present	Any suggestion of fingers, separate from hand or arm. In drawings by older children, where there is a tendency to "sketch," credit this point if any suggestion of fingers occurs.
25.	Correct number of fingers shown	Both hands necessary if both hands are shown. Credit this point in "sketchy" drawings by older children, even though five digits may not be definitely discerned.
26.	Detail of fingers correct	"Grapes" or "sticks" do not score. Length of individual fingers must be distinctly greater than width. In well-executed drawings, where hand may appear in perspective, or where fingers are indicated by "sketching" credit this point. Credit also those cases in which, because the hand is obviously clenched, only the knuckles or part of the fingers appear. This last will occur only in high-quality drawings where there is considerable use of perspective.
27.	Opposition of thumb shown	Fingers must be indicated, with a clear differentiation of the thumb from the fingers. Scoring should be very strict. The point is credited if one of the lateral digits is definitely shorter than any of the others (compare especially with the little finger), or if the angle between it and the index finger is not less than twice as great as that between

any two of the other digits, or if its point of attachment to the hand is distinctly nearer to the wrist than that of the fingers. Conditions must be fulfilled on both hands if both are shown. Fingers must be present or indicated; "mitt" hand does not score, unless figure is definitely in winter garb, wearing mittens.

Credit

No Credit

28. Hands present

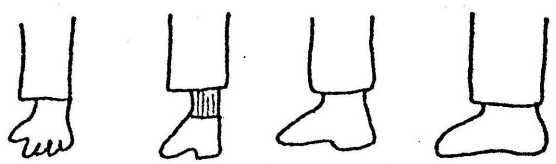
Any representation of the hand, apart from the fingers. When fingers are shown, a space must be left between base of fingers and edge of sleeve or cuff. Where no cuff exists, arm must broaden in some way to suggest palm or back of hand as distinct from wrist. Characteristic must appear on both hands if both are shown.

Marginal Credit

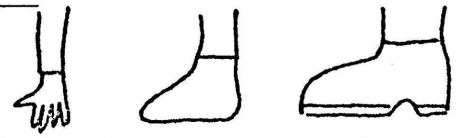
29. Wrist or ankle shown

Either wrist or ankle clearly indicated as separate from sleeve or trouser. A line across the limb to indicate the end of sleeve or trouser, although credited in item 55, is not sufficient here.

Credit



No Credit



30. Arms present

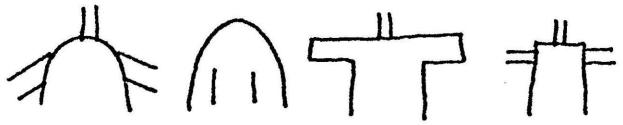
Any method of representation clearly intended to indicate arms. Fingers alone are not sufficient, but the point is credited if any space is left between the base of the fingers and that part of the body to which they are attached. The number of arms must also be correct, except in profile drawings when only one arm may score.

31. Shoulders I

Full Face: A change in the direction of the outline of the upper trunk which gives an effect of concavity rather than convexity. The point is scored rather strictly. The ordinary elliptical form is never credited, and the score is always minus unless it is evident that there has been a recognition of the abrupt broadening out of the trunk below the neck which is produced by the shoulder blade and the collar bone. A perfectly square or rectangular trunk does not score, but if the corners have been rounded, the point is credited.

Credit

No Credit



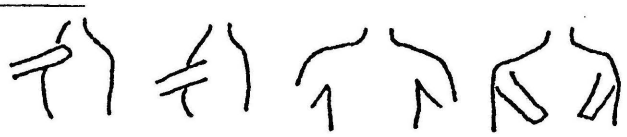
Profile: The scoring should be somewhat more lenient than in full-face drawings, since it is more difficult to represent the shoulders adequately in the profile position. A profile drawing, in this connection, should be understood to mean one in which the trunk, as well as the head, is shown in profile. If the lines forming the outline of the upper parts of the trunk diverge from each other at the base of the neck in such a way as to show the expansion of the chest, the point is credited.

32. Shoulders II

Full Face: Score more strictly than previous item. Shoulders must be continuous with neck and arms, and "square," not drooping. If arm is held from the body, the armpit must be shown

Profile: Shoulder joint in approximately correct position. Arm must be represented by double line.

Credit



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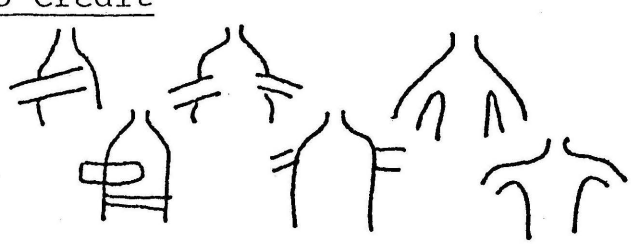
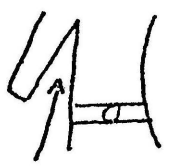


33. Arms at side or engaged in activity

Full Face: Young children generally draw the arms stiffly out from the body. Credit this point when at least one arm is down at the side, making an angle of no more than 10 degrees with the general vertical axis of the trunk, unless the arms are engaged in some definite activity, such as carrying an object. Credit when hands are in pockets, on hips, or behind back.

Credit



10° or less

Profile: Credit if hands are engaged in definite activity, or if upper arm is suspended even though forearm is extended.

34. Elbow joint shown

There must be an abrupt bend (not a curve) at approximately the middle of the arm. One arm is sufficient. Modeling or creasing of the sleeve is credited.

Full Face:

Credit

Profile:

Credit

No Credit

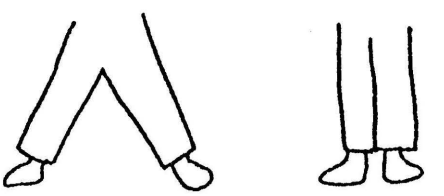
35. Legs present

Any method of representation clearly intended to indicate the legs. The number must be correct: two in full-face drawings; either one or two in profiles. Use commonsense rather than a purely arbitrary scoring. If only one leg is present, but a rough sketch of a crotch is included, showing clearly what the child has in mind, score the item. On the other hand, three or more legs or a single leg without logical explanation should be scored minus. A single leg to which two feet are attached is scored plus. Legs may be attached anywhere to the figure.

36. Hip I (crotch)

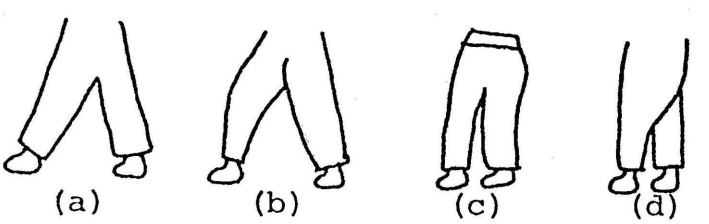
Full Face: Crotch indicated. This is most frequently shown by inner lines of the two legs meeting at point of junction with the body. (Young children usually place the legs as far apart from each other as possible, and this never scores.)

Credit



Profile: If only one leg shows, buttock must be shaped.

Credit



37. Hip II

Preceding item earned with credit to spare. Drawing gives a better idea of the hip than required for passing preceding item. Examples (b) and (d) on item 36 are credited here also; (a) and (c) are not.

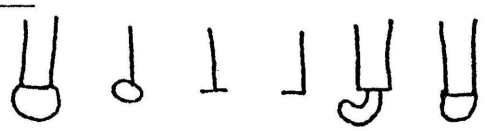
38. Knee joint shown

There must be, as in the case of the elbow, an abrupt bend (not curve) at about the middle of the leg, or, as is sometimes found in very high-quality drawings, a narrowing of the leg at this point. Knee-length trousers are not sufficient. Crease or shading to indicate knee is scored plus.

39. Feet I: any indication

Feet indicated by any means: two feet in full-face, one or two in primitive profile. Young children may indicate feet by attaching toes to the end of the leg. This is credited.

Credit



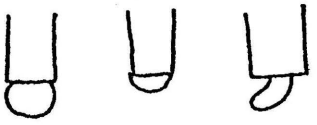
40. Feet II: proportion

The feet and legs must be shown in two dimensions. Feet must not be "clubbed;" that is the length of the foot must be greater than its height from sole to instep. The length of the foot must not be more than one third or less than one-tenth the total length of the leg. The item is also credited in full-face drawings in which the foot is shown in perspective, longer than wide, provided the foot is separated in some way from the rest of the leg, and not merely indicated by a line across the leg.

Full Face:

Credit

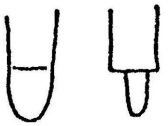
No Credit



41. Feet III: heel

Any clear method of indicating the heel. In full-face drawings, credit the item arbitrarily when the foot is shown below, provided there is some demarcation between the foot and the leg. In the profile, the instep must be indicated.

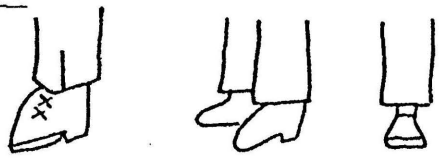
Credit



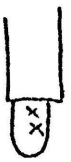
42. Feet IV: perspective

Foreshortening attempted in at least one foot.

Credit



No Credit



43. Feet V: detail

Any one item of detail such as lacing, tie, strap, or shoe sole indicated by a double line.

44. Attachment of arms and legs I

Both arms and both legs attached to the trunk at any point, or arms attached to the neck, or at the juncture of the head and the trunk when the neck is omitted. If the trunk is omitted, the score is always zero. If the legs are attached elsewhere than to the trunk, regardless of the attachment of the arms, the score is zero. If only one arm or leg is shown, either in full-face or in profile drawings, credit may be given on the basis of the limb that is shown. If both arms and legs are shown, the members of each pair must be attached approximately symmetrically. Arms attached to the legs score zero.

45. Attachment of arms and legs II

Legs attached to trunk, and arms attached to the trunk at the correct point. Do not credit if arm attachment occupies one-half or more of the chest area (neck to waist). When no neck is present, the arms must definitely be attached to the upper part of the trunk.

Full Face: When item 31 is plus, the point of attachment must be exactly at the shoulders. If item 31 is zero, the attachment must be exactly at the point which should have been indicated at the shoulders. Score very strictly, especially in those cases where item 31 is zero.

Profile: Do not credit if both the lines delineating the arm extend from the outline of the back, or if the point of attachment either reaches the base of the neck, or falls below the greatest expansion of the chest line.

46. Trunk present

Any clear indication of the trunk, either one or two dimensional. Where there is no clear differentiation between the head and the trunk, but the features appear in the upper end of a single figure, the point is scored plus if the features do not occupy more than half the length of the figure; otherwise, the score is zero, unless a cross line has been drawn to indicate the termination of the head. A single figure placed between the head and the legs is always counted as a trunk, even though its size and shape may suggest a neck rather than a trunk. (This ruling is based on the fact that, when questioned, a number of children whose drawings showed this peculiarity, called the part a trunk.) A row of buttons extending down between the legs is scored zero for trunk but plus for clothing, unless a cross line has been drawn to show the termination of the trunk.

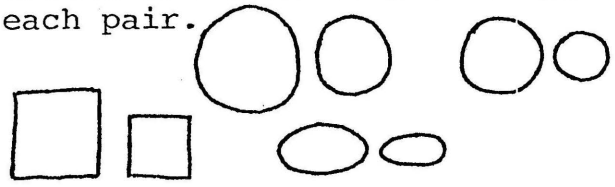
47. Trunk in proportion two dimensions

Length of the trunk must be greater than breadth. Measurement should be taken at the points of greatest length and of greatest breadth. If the two measurements are equal, or so nearly so that the difference is not readily determined, the score is zero. In most instances the difference will be great enough to be recognized at a glance, without actually measuring.

48. Proportion: head I

Area of the head not more than one-half or less than one-tenth that of the trunk. Score rather leniently. See below for a series of standard forms of which the first

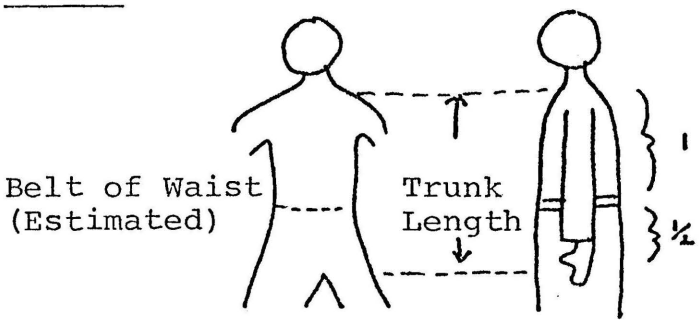
is double the area of the second in each pair.



49. Proportion: head II

Head approximately one-fourth trunk area. Score strictly, over one-third or under one-fifth fails the item. Where crotch is not shown, as in some profiles, consider belt or waist at about two-thirds down total trunk length.

Credit



50. Proportion: face

Full Face: Length of head greater than its width. Should show a general oval shape.

Profile: Head definitely elongated, face longer than "dome" of skull.

51. Proportion: arms I

Arms at least equal to the trunk in length. Tips of hands extend to middle of hip but not to knee. Hands need not necessarily extend to or below the crotch, especially if legs are unusually short. In full-face drawings, both hands must so extend. Score by relative lengths, not position, of arms.

52.	Proportion: arms II	Arms taper; forearm narrower than upper arm. Any tendency to narrow the forearm except right at the wrist is credited. If both arms show clearly, tapering must occur in both.
53.	Proportion: legs	Length of the legs not less than the vertical measurement of the trunk nor greater than twice that measurement. Width of either leg less than that of the trunk.
54.	Proportion: limbs in two dimensions	Both arms and legs shown in two dimensions. If the arms and legs are in two dimensions, the point is credited, even though the hands and feet are drawn in linear dimension.
55.	Clothing I	Any clear representation of clothing. As a rule the earliest forms consist of a row of buttons running down the center of the trunk, or of a hat, or of both. Either alone scores. A single dot or small circle placed in the center of the trunk is practically always intended to represent the naval and should not be credited as clothing. A series of vertical or horizontal lines drawn across the trunk (and sometimes on the limbs as well) is a fairly common way of indicating clothing, and should be so credited. Marks to indicate pockets or sleeve-ends also get credit.
56.	Clothing II	At least two articles of clothing (as hat and trousers) nontransparent; that is, concealing the part of the body which they are supposed to cover. In scoring this point it must be noted that a hat which is merely in contact with the top of the head but does not cover any part of it is <u>not</u>

credited. Buttons alone, without any other indication of the coat, are not credited. Two of the following must be present to indicate coat: sleeves, collar or neckline, buttons, or pockets. Trousers must be clearly intended by belt, fly, pockets, cuff, or any separation of feet or leg from bottom of trouser leg. Foot as an extension of leg does not score, when a line drawn across the leg is the only way of indicating the separation of foot and leg.

57. Clothing III — Entire drawing free from transparencies of any sort. Both sleeves and trousers must be shown as distinct from wrists or hands and legs or feet.

58. Clothing IV — At least four articles of clothing definitely indicated. The articles should be among those in the following list: hat, shoes, coat, shirt, collar, necktie, belt, trousers, jacket, sport shirt, overalls, socks (pattern). Note: shoes must show some detail, as laces, toe cap, or double line for the sole. Heel alone is not sufficient. Trousers must show some features, such as fly, pockets, cuffs. Coat or shirt must show either collar, sleeves, pockets, lapels, or distinctive shading, as spots or stripes. Buttons alone are not sufficient Collar should not be confused with neck shown merely as insert. The necktie is often inconspicuous and care must be taken not to overlook it, but it is not likely to be mistaken for anything else.

59.	Clothing V	Costume complete without incongruities. This may be a "type" costume (e.g., cowboy, soldier) or costume of everyday dress. If the latter, it should be clearly recognized as appropriate, e.g., sport shirt on man, cap appropriate to hunting outfit, overalls for farmer. This is a "bonus" point, and must show more than necessary for item 58.
60.	Profile I	The head, trunk, and feet must be shown in profile without error. The trunk may not be considered as drawn in profile unless the characteristic line of buttons has been moved from the center to the side of the figure, or some other indication, such as the position of the arms, pockets, or necktie shows clearly the effect of this position. The entire drawing may contain one, but not more than one of the following three errors: 1. One body transparency, such as the outline of the trunk showing through the arm. 2. Legs not in profile. In a true profile at least the upper part of the leg which is in the background must be concealed by the one in the foreground. 3. Arms attached to the outline of the back and extending forward.
61.	Profile II	The figure must be shown in true profile, without error or any body transparency.
62.	Full face	(Include partial profile, where attempt is to show figure in perspective.) All major body parts in proper location and correctly joined unless hidden by perspective or other clothing.

Essential items: Legs, arms; eyes, nose, mouth, ears; neck, trunk; hands and feet. Parts must be in two dimensions. Feet may be in perspective, but not in profile, unless they turn "out" in opposite directions.

63. Motor coordination: lines

Look at the long lines in arms, legs, and trunk. Lines should be firm, well-controlled and free from accidental wavering. A few long lines may be retraced or erased. The drawing need not achieve very smoothly "flowing" lines to earn credit. Young children sometimes "color in" with their pencils; examine carefully the fundamental lines of their drawings. Older children frequently use a "sketching" technique readily distinguishable from the uncertain, wavering lines resulting from immature coordination. If the general effect is that of firm, sure lines showing that the pencil was under control, credit the item. The drawing may be quite immature and still score on the point.

64. Motor Coordination: junctures

Look at the juncture points of lines. They must meet cleanly without a marked tendency to cross or overlap, or leave gaps between the ends. A drawing with a few lines is scored more strictly than one with frequent changes in direction of line. A "sketchy" drawing is ordinarily credited even though the junctures of lines may seem uncertain, since this is a characteristic confined almost entirely to drawings of a mature type. Some erasures may be allowed.

65.	Superior motor coordination	This is a "bonus" point for good pencil work on details as well as at the character of the major lines. All lines should be firmly drawn, with correct joining. Pencil work in fine detail--facial features, small items of clothing, etc.--indicates a good control of the pencil. Scoring should be quite strict. Erasures and/or redrawing invalidate this item.
66.	Directed lines and form: trunk outline	Outline of head must be drawn without obviously unintentional irregularities. The point is credited only in drawings where the shape has developed beyond the first crude circle or ellipse. In profile drawings, a simple oval to which a nose has been added does not score. Scoring should be rather strict; the contour of the face must be developed as a unit, not by adding parts.
67.	Directed lines and form: trunk outline	Same as for the preceding item, but here with reference to the trunk. Note that the primitive "stick," circle, or ellipse does not score. The body lines must shown an attempt to follow an intentional deviation from the simple ovoid form.
68.	Directed lines and form: arms and legs	Arms and legs must be drawn without irregularities, as in the above item, and without tendency to narrowing at the points of junction with the body. Both arms and legs must be in two dimensions.
69.	Directed lines and form: facial features	Facial features must be symmetrical in all respects. Eyes, nose, and mouth must be shown in two dimensions.

		Full Face: The features must be appropriately placed, regular and symmetrical, giving a clear appearance of the human form. Profile: The eye must be regular in outline and located in the forward one-third of the head. The nose must form an obtuse angle with the forehead. The scoring should be strict; a "cartoon" nose is not credited.
70.	"Sketching" technique	Lines formed by well-controlled short strokes. Repeated tracing of long line segments is not credited. "Sketching" technique appears in the work of some older children and almost never occurs under age eleven or twelve.
71.	"Modeling" technique	"Lines" or shading must indicate one or more of the following: garment creases, wrinkles or folds, other than trouser press; fabric; hair; shoes; "coloring in;" or background features.
72.	Arm movement	Figure must express freedom of movement in both shoulders and elbows. One arm suffices. Credit hands on hips or in pockets, if both shoulders and elbows are apparent. A definite activity need not be indicated.
73.	Leg movement	Freedom of movement portrayed both in hips and knees of figure.

Source: Harris 1963, pp. 248-263.

SHORT SCORING GUIDE*

Man Point Scale

1. Head present
2. Neck present
3. Neck, two dimensions
4. Eyes present
5. Eye detail: brow or lashes
6. Eye detail: pupil
7. Eye detail: proportion
8. Eye detail: glance
9. Nose present
10. Nose, two dimensions
11. Mouth present
12. Lips, two dimensions
13. Both nose and lips in two dimensions
14. Both chin and forehead shown
15. Projection of chin shown; chin clearly differentiated from lower lip
16. Line of jaw indicated
17. Bridge of nose
18. Hair I
19. Hair II
20. Hair III
21. Hair IV
22. Ears present
23. Ears present: proportion and position
24. Fingers present
25. Correct number of fingers shown
26. Detail of fingers correct
27. Opposition of thumb shown
28. Hands present
29. Wrist or ankle shown
30. Arms present
31. Shoulders I
32. Shoulders II
33. Arms at side or engaged in activity
34. Elbow joint shown
35. Legs present

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36. Hip I (crotch)
37. Hip II
38. Knee joint shown
39. Feet I: any indication
40. Feet II: Proportion
41. Feet III: heel
42. Feet IV: perspective
43. Feet V: detail
44. Attachment of arms and legs I
45. Attachment of arms and legs II
46. Trunk present
47. Trunk in proportion, two dimensions
48. Proportion: head I
49. Proportion: head II
50. Proportion: face
51. Proportion: arms I
52. Proportion: arms II
53. Proportion: legs
54. Proportion: limbs in two dimensions
55. Clothing I
56. Clothing II
57. Clothing III
58. Clothing IV
59. Clothing V
60. Profile I
61. Profile II
62. Full face
63. Motor coordination: lines
64. Motor coordination: junctures
65. Superior motor coordination
66. Directed lines and form: head outline
67. Directed lines and form: trunk outline
68. Directed lines and form: arms and legs
69. Directed lines and form: facial features
70. "Sketching" technique
71. "Modeling" technique
72. Arm movement
73. Leg movement

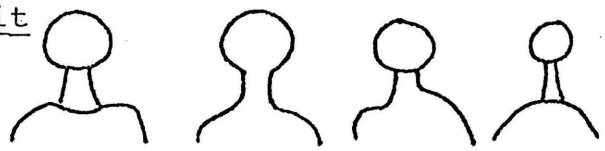
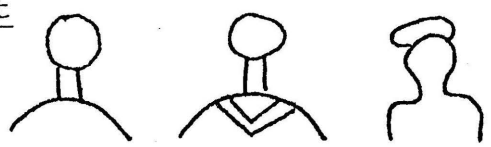
Source: Harris 1963, p. 275.

APPENDIX G

PART 1--REQUIREMENTS FOR SCORING THE DRAW-A-WOMAN SCALE

PART 2--SHORT SCORING SCALE: WOMAN POINT SCALE

REQUIREMENTS FOR SCORING THE DRAW-A-WOMAN SCALE*

ITEM	DESCRIPTION
1. Head present	Any clear method of representing the head. Features alone, without any outline for the head itself, are not credited for this point.
2. Neck present	Any clear indication of the neck as distinct from the head and the trunk. Mere juxtaposition of the head and the trunk is not credited.
3. Neck, two dimensions	Outline of neck continuous with that of the head, of the trunk or of both. Line of neck must "flow" into head line or trunk line. Neck interposed as pillar between head and trunk does not get credit unless treated definitely to show continuity between neck and head or trunk or both, as by collar, or curving of lines.
	Credit 
	No Credit 
4. Eyes present	Either one or two eyes must be shown. Any method is satisfactory.

*From Children's Drawings as Measures of Intellectual Maturity by Dale B. Harris, copyright 1963 by Harcourt Brace Jovanovich, Inc. Reprinted and reproduced with their permission (appendix K).

A single indefinite feature, such as is occasionally found in the drawings of very young chilren, is credited. Credit also, in mature drawings attempting perspective, any indication of the eye by contour of the profile, as:

5. Eye detail: brow or lashes

Brow, lashes or both shown

Full Face:

Credit

Profile:

Credit

No Credit

6. Eye detail: pupil

Pupil shown. Credit any clear indication of the pupil or iris as distinct from the outline of the eye. Both pupils must appear if both eyes are shown

7. Eye detail: proportion

The horizontal measurement of the eye must be greater than the vertical dimension. This requirement must be fulfilled in both eyes if both are shown; one eye is sufficient if only one is shown. In profile drawings, any triangular forms which approximate the example below are credited.

Profile:

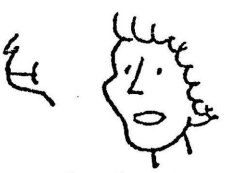
Credit

No Credit

8. Cheeks

Cheeks modeling or "shading" on cheeks or at mouth corners. Credit also "cosmetic cheeks"--circular spots on cheeks. In drawings which attempt perspective, credit any indication in contour of face.

Credit



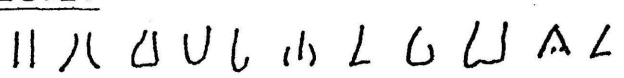
9. Nose present

Any clear method of representation. In "mixed profiles," the score is plus even though two noses are shown.

10. Nose, two

Full Face: Credit all attempts to portray the nose in two dimensions, when the bridge is longer than the width of the base or tip.

Credit



No Credit

Profile: Credit all crude attempts to show the nose in profile, provided tip or base is shown in some manner. Do not credit simple "button."

No Credit

11. Bridge of nose

Full Face: Nose properly placed and shaped. The base of the nose must appear as well as the indication of a straight bridge. Placement of upper portion of bridge is important; must extend up to or between the eyes. Bridge must be narrower than the base.

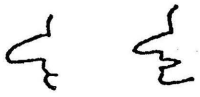
Credit

No Credit

Profile: Nose at angle with face, approximately 45 degrees. Separation of nose from forehead clearly shown at eye.

Credit 

No Credit



12. Nostrils shown

Any attempt to portray nostrils as holes, dots, or to show "wings."

Credit

No Credit

13. Mouth present

Any clear representation.

14. Lips, two dimensions

Full Face:

Credit

Profile:

Credit

No Credit

15. "Cosmetic Lips"

Any clear attempt to show "Cupid's bow." Score based on the outer shape. Two lips need not be shown.

Credit

16. Both nose and lips in two dimensions

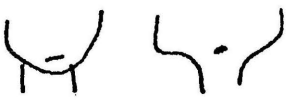
Bonus point given when both items 10 and 14 are passed.

17. Both chin and forehead shown

Full Face: Sufficient space must be left above the eyes to represent the chin. The scoring should be rather lenient. Where neck is continuous with face, placement of mouth with respect to narrowing of lower portion of head is important.

Credit

No Credit



Profile: The point may be credited when the eyes and mouth are omitted, if the outline of the face shows clearly the limits of the chin and forehead. Score leniently if forehead is covered by hat brim; more strictly if covered by hair.

18. Line of jaw indicated

Full Face: Line of jaw and chin drawn across neck but not squarely across. Neck must be sufficiently wide, and chin must be so shaped that the line of the jaw forms a well-defined acute angle with the line of the neck. Score strictly on the simple oval face.

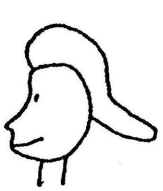
Credit

Acute Angles

Profile: Line of jaw extends toward (but not all the way to) the ear or across the neck.

Credit

No Credit



19. Hair I

Any indication of hair, however crude.

20. Hair II

Scribble closely conforming to head, or

Full Face: Shaped masses suggesting braids or locks each side of face.

Credit

Profile: Mass dependent in back.

Credit

21. Hair III

Style suggested by identation at temple, or bangs, or shaped at lower ends, or both. General "style" achieved. Distinctly better design than Item 20.

22. Hair IV

Use of directed lines to indicate a part, texture, or combing. Superior style achieved.

Caution: Score strictly; superior style may be achieved with outline sketching, but this does not score. Directed lines to indicate hair texture must appear, and be better than "coloring in."

23. Necklace or earrings

Any clear indication. Distinguish necklace from neckline or collar of dress. Earrings without ears (which may be concealed by hair) should be credited.

24. Arms present

Any method of representation clearly intended to indicate arms. Fingers alone are not sufficient, but the point is credited if any space is left between the base of

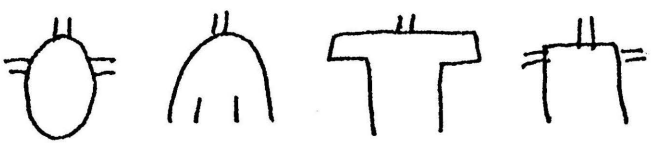
the fingers and that part of the body to which they are attached. The number of arms must be correct, except in profile drawings when only one arm may score.

25. Shoulders

Full Face: A distinct change in the direction of the upper part of the trunk, which gives the effect of a "rounded corner." The ordinary elliptical form is never credited. There must be an abrupt broadening of the trunk below the neck, which then turns downward into the arms or sides of the trunk. Square corners fail.

Credit

No Credit



Profile: Somewhat more lenient where the trunk as well as the head is shown in profile. If the lines that form the upper part of the trunk diverge from each other at the base of the neck so as to show the expansion of the chest, credit the point.

26. Arms at side (or engaged in activity or behind back)

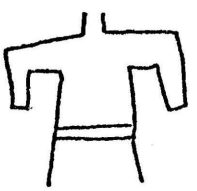
Full Face: Young children generally draw the arms held stiffly out from the body. Credit this point when at least one arm is shown at the side, making an angle of no more than 10 degrees with the

general vertical axis of the trunk, unless the arms are engaged in some definite activity, such as carrying an object. Credit when hands are placed on hips or behind the back.

Credit

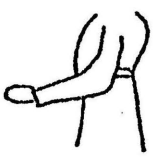
10° or less

No Credit



Profile: Credit if hands are engaged in definite activity, or if upper arm is suspended, even though forearm is extended.

Credit



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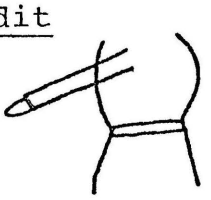
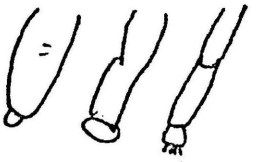


27. Elbow joint shown

There must be an abrupt bend (not a curve) at approximately the middle of the arm. One arm is sufficient. Modeling or creasing of the sleeve is credited.

Full Face:

Credit



Profile:

Credit

No Credit

28. Fingers present

Any indication of fingers. Mitt hand does not score even if thumb is shown.

29. Correct number of fingers shown

If both hands are shown, the correct number on each is necessary, unless there is a clear attempt to portray hand activity which would conceal the correct number. Credit drawings produced by older children who try "sketching" techniques, even though five digits may not be definitely discerned.

Credit

30. Detail of fingers correct

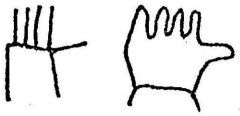
"Grapes" or "sticks" do not score. Length of individual fingers must be distinctly greater than width. In well-executed drawings, where hand may appear in perspective, or where fingers are indicated by "sketching," credit this point. Credit also those cases in which, because the hand is

obviously clenched, only the knuckles or part of the fingers appear. This last will occur only in high-quality drawings where there is considerable use of perspective.

31. Opposition of thumb shown

A clear differentiation of the thumb from the fingers. Scoring should be very strict. The point is credited if one of the lateral digits is definitely shorter than any of the others (compare especially with the little finger), or if the angle between it and the index finger is not less than twice as great as that between any two of the other digits, or if its point of attachment to the hand is distinctly nearer to the wrist than that of the fingers. Conditions must be fulfilled on both hands if both are shown, unless hand is grasping something; one hand is sufficient if only one is shown. Five digits are necessary for thumb to score. Fingers must be present or indicated; "mitt" hand does not score unless subject is definitely shown in winter garb, wearing mittens.

Credit



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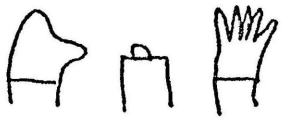


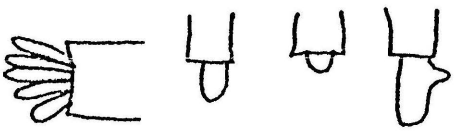
32. Hands present

Any representation of the hand, apart from the fingers. When fingers are shown a space must be

left between base of fingers and edge of sleeve or cuff. Where no cuff exists, arm must broaden in some way to suggest palm or back of hand as distinct from wrist. Characteristic must appear on both hands if both are shown. "Mitt" hand with thumb does not score unless figure obviously is wearing mittens.

Credit

No Credit



Marginal Credit

33. Legs present

Any representation clearly intended to indicate the legs. There must be two legs in full-face drawings, and either one or two, in profiles. Credit where long skirt hides legs or feet.

34. Hip

Full Face: The principal axes of the legs must form a distinct angle. The distance between the ankles must be greater than the distance between the inner surfaces of the legs at the skirt line, and the differnece must be more than can be accounted for by contours of the calf and ankle. Do not credit in the case of a long gown.

Credit

(ANGLE)

No Credit

(PARALLEL)

Profile: Credit when legs from angle, as in walking. Credit in standing figure, when one leg is shown, or when two appear in true profile.

Credit

35. Feet I: any indication

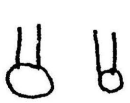
Feet indicated by any means: two feet in full-face; one or two in profile. In the case of a long gown, credit this item.

36. Feet II: proportion

Full Face: Feet must be longer than wide, or drawn in perspective.

Credit

No Credit



Profile: Horizontal dimension of fore-part of foot must be greater than vertical dimension. In the case of a long gown, credit only when foot is indicated in some way, as by the tip appearing beneath the edge of the gown, etc.

Credit

No Credit

37. Feet III: detail

Foot or shoe must show some ornamentation, such as a buckle, tie, strap, or sole. In the case of a long gown, do not credit unless foot is shown.

38. Shoe I: "feminine"

Credit any clear attempt to depict a feminine shoe as opposed to "brogan:" or other thick, solid shoe. Note especially attempts to depict slender toe or arch, high heel, open toe, or straps. If heel is crucial point, it should be at least one-third of total height of shoe at that point. Shoe must be marked off from leg, either by line or by profile shaping. In the case of a long gown, credit only when shoe is shown.

Credit

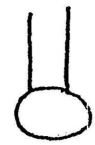
39. Shoe II: style

Shoe must be clearly feminine and "styled," i.e. clearly a pump, tie, open toe, wedgie, saddle-shoe, etc. In the case of a long gown, credit only when clearly shown.

40. Placement of feet appropriate to figure

Full Face: Feet turned "in" or "out," or in perspective. Do not credit primitive feet.

No Credit

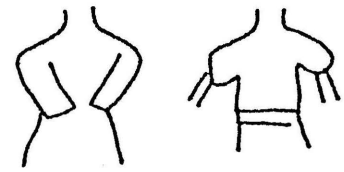


Profile: Credit both feet turned in direction of head. Do not credit when feet are absent, except where long gown hides feet.

41. Attachment of arms and legs I

Both arms and legs attached to the trunk at any point or arms attached to the neck, or at juncture of head and trunk when neck is omitted. Do not credit if either arms or legs are missing. Credit where dress hides legs and/or feet. If the trunk is omitted, the score is always zero. If the legs are attached elsewhere than to the trunk, regardless of the attachment of the arms, the score is zero. If only one arm or leg is shown, either in full-face or profile drawings, credit may be given on the basis of the limb that is shown. If both arms and legs are shown, the members of each pair must be attached approximately symmetrically. Credit where long dress hides legs and/or feet. Be careful to distinguish this item from item 25.

Credit



42. Attachment of arms and legs II

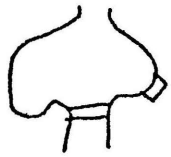
Arms attached to the trunk at the correct position. Legs attached to the bottom of the trunk or skirt and not continuous with vertical line or drape of the skirt. Credit this point if both feet and legs are hidden by long gown

Legs:

Credit

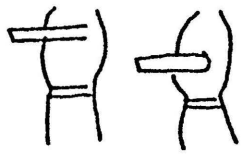
No Credit

Arms: Full Face: Where item 25 is failed, attachment must be exactly at the point where the shoulders should have been indicated. Score very strictly, especially when item 25 is zero. Do not credit if arms at their place of attachment occupy as much as one-half or more of the distance from the neck to the waist. The following sketch illustrates when item 41 but not item 42 scores:



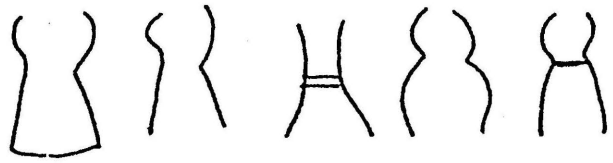
(See also item 25, a e,h, for examples which credit item 41 but not item 42.)

Arms: Profile: The attachment of the arms must be indicated at a point approximately on the median line of the trunk, at a short distance below the neck, this point coinciding with the broadening of the trunk which indicates the chest and shoulders. If the arms extend from the line which outlines the back, or if the point of attachment reaches the base of the neck, or falls below the greatest expansion of the chest, the point is not credited. Credit item 41 but not item 42.



43.	Clothing indicated	Clothing indicated by buttons or pockets on the simple ellipse, triangle, or trapezoid figure. Credit if there is definitely a skirt, even if no buttons or pockets are shown.
44.	Sleeve I	Indicated by any means.
45.	Sleeve II	Indicated by more than a simple cross line. Must shown button, cuff, double line, puffed sleeve (long or short), or sleeve definitely wider than the arm which protrudes from it. Where a strap or strapless gown is clearly indicated, credit both items 44 and 45. When hands are so placed that possible cuff is hidden, do not credit unless short sleeve is clearly indicated. Note: Be careful not to confuse bracelet or wristwatch with sleeve.
46.	Neckline I	Any dress line at neck other than that produced by chin or jaw. Any crude single line, straight or semi-circular. Distinguish carefully from necklace.
47.	Neckline II: collar	Collar indicated. Neckline must be "V'd" or definitely shaped in some other manner.
48.	Waist I	Whether or not a belt is shown, the direction of the body contour must change perceptibly at and/or below the waist. If no belt or waist is drawn, a gentle, continuous curve does not score; there must be an abrupt change in body line.

Credit



No Credit

49. Waist II

A distinct belt (two lines), sash, sweater, or blouse hem must be indicated by means better than a single horizontal line.

50. Skirt "modeled" to indicate pleats or draping

Irregular hemline is not sufficient; lines shading, or sketching must appear.

Credit

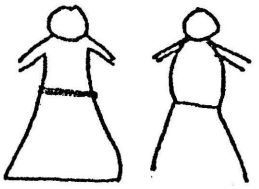
51. No transparencies in the figure

There must be a garment on the figure that is clear and complete. Clothing must show neckline, sleeves, skirt, hem, or slacks. No body lines may show through clothes that would ordinarily conceal them.

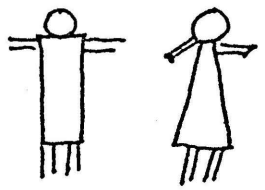
52. Garb feminine

Young Children (under 8): Skirt must be a distinct feature, and the body must appear in two distinct segments.

Credit



No Credit



Older Children (8 and over): Credit any dress or skirt. Where slacks, breeches, or overalls are shown, credit only if the style of blouse or pants is distinctly feminine, apart from hair, face, or breast indication. Slacks may be judged by absence of fly and by placement of pockets.

53.	Garb complete, without incongruities	Garb must contain all these elements: shoes, sleeves (hands must protrude), dress and neckline or sleeves, or skirt and blouse (or jacket). Expections: Slacks, blue jeans, sports garb, formal dress which may obscure shoes. These are credited.
54.	Garb a definite "type"	Types may include: formal gown, sports garb (shorts, slacks), "school garb," "dress up," house dress (should include apron), or "suit" (jacket and skirt).
55.	Trunk present	Any clear indication of the trunk, either one or two dimensional.
56.	Trunk in proportion, two dimensions	Length of trunk greater than breadth. In drawings by younger children, where the trunk may not be clearly differentiated from the skirt, judge body area as including skirt.
57.	Head-trunk proportion	Young Children (under 8): Score in relation to body area, excluding head when no differentiation between waist and terminus

of trunk or no indication of skirt is shown.

Older Children (8 and over): Credit drawings that indicate a garment but do not suggest a waistline, if the head is no larger than one-fourth or smaller than one-eighth of the body (including garment) area.

Profile: Score more leniently. Judge more on the length of head in relation to the length of the chest area. If two lengths are about equal, or if head is the shorter length but not less than one-fourth the chest length, credit the item.

58. Head: proportion

Full Face: Length of head greater than its width. Should show a general oval shape.

Profile: Same requirement as full-face drawing, but exclude hair in estimating width.

59. Limbs: proportion

Length of arms and legs greater than width. When arms score, credit the item even if feet are concealed by long dress.

60. Arms in proportion to trunk

Both arms longer than length of trunk from shoulder (or base of neck) to waist, but not more than twice this length.

Young Children (under 8): Arms must be equal to body length.

Older Children (8 and over): Credit drawings that portray dress or skirt if arm length is at least half of dress length (shoulder to hem of skirt) but not as long as hem.

61.	Location of waist	This item evaluates child's ability to locate the waist. Waist located below one-third of total length of figure crown to toe, but not below one-half of total length. (Crown is considered the top of the head, including hair but not hat.) Waistline must be indicated by belt, or by some distinct change in body contour. Do not credit when trunk and dress are indicated by uninterrupted curve, with no indication of waistline.
62.	Dress area	Dress area below waist must be as large or larger than trunk area above waist but not more than twice as large (three times as large in profile). Credit if formal gown is clearly represented. For slacks, include the area occupied by the legs but not the feet. Define as waist a waistline however indicated, or estimate location from an obvious narrowing of body, or widening of hips. Do not credit in drawings by young children showing no trunk or body contours.
63.	Motor coordination: junctures	All lines meet cleanly, without overlap or intervening space. Emphasis is on the juncture of lines, regardless of the character of lines.
64.	Motor coordination: lines	Lines are firm, cleanly made, continuous and "controlled." If "sketchy" judge the basic character of the body lines created by the shorter pencil strokes. Both curved and straight lines must be handled with assurance. Do not credit in a drawing with extensive redrawing and erasures.

65. Superior motor coordination

Credit this point in all cases where item 64 is achieved without redrawing or erasures, and where the total effect of lines is neat, clean, and "sure."

66. Directed lines and form: head outline

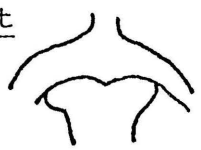
The drawing must show the contours of the head and/or face. Simple circle or ellipse to which projecting features have been added does not score.

No Credit

67. Directed lines and form: breast

Any attempt, by modeling or by contour, to indicate the feminine breast. In full-face drawings, credit strapless gown if top is curved.

Credit

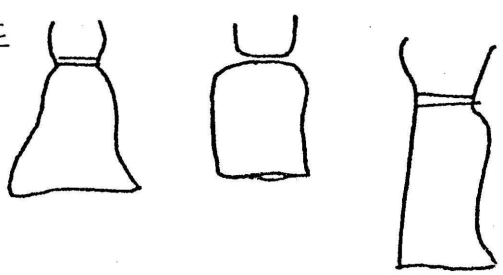


68. Directed lines and form: hip contour

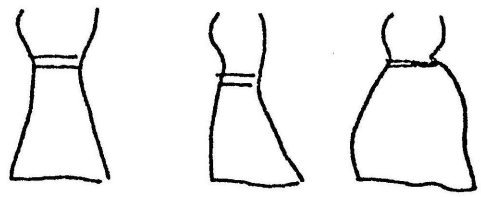
Full Face: Hips indicated by distinct convexity below waistline. This must occur on both sides. Note that wide, uniformly curved bell-shaped flaring skirt does not score.

Profile: Convexity must be indicated over hips and buttocks.

Credit



No Credit



69. Directed lines and form: arms taper

Wrist and/or forearm distinctly narrower than upper arm. Credit the point whether achieved by narrowing of sleeve or by shaping the bare arm. Where long, full sleeves are clearly indicated, credit this item.

70. Directed lines and form: calf of leg

Leg shaped better than a taper. Definite calf must be shown. Score strictly.

71. Directed lines and form: facial features

Facial features must be symmetrical in all respects. Eyes and mouth must be shown in two dimensions; nose may be indicated by dots.

Full Face: Features must be appropriately placed, regular and symmetrical, giving a clear appearance of the human form.

Profile: The eye must be regular in outline and located in the forward one-third of the head. The bridge of the nose must form an obtuse angle with the forehead. The scoring should be strict; a "cartoon" nose does not get credit.

Source: Harris 1963, pp. 276-291.

SHORT SCORING GUIDE*

Woman Point Scale

1. Head present
2. Neck present
3. Neck, two dimensions
4. Eyes present
5. Eye detail: brow or lashes
6. Eye detail: pupil
7. Eye detail: proportion
8. Cheeks
9. Nose present
10. Nose, two dimensions
11. Bridge of nose
12. Nostrils shown
13. Mouth present
14. Lips, two dimensions
15. "Cosmetic lips"
16. Both nose and lips in two dimensions
17. Both chin and forehead shown
18. Line of jaw indicated
19. Hair I
20. Hair II
21. Hair III
22. Hair IV
23. Necklace or earrings
24. Arms present
25. Shoulders
26. Arms at side (or engaged in activity or behind back)
27. Elbow joint show
28. Fingers present
29. Correct number of fingers shown
30. Detail of fingers correct
31. Opposition of thumb shown
32. Hands present
33. Legs present
34. Hip
35. Feet I: any indication

---

*From Children's Drawings as Measures of Intellectual Maturity by Dale B. Harris, copyright 1963 by Harcourt Brace Jovanovich, Inc. Reprinted and reproduced with their permission (appendix K).

36. Feet II: proportion
37. Feet III: detail
38. Shoe I: "feminine"
39. Shoe II: style
40. Placement of feet appropriate to figure
41. Attachment of arms and legs I
42. Attachment of arms and legs II
43. Clothing indicated
44. Sleeve I
45. Sleeve II
46. Neckline I
47. Neckline II: collar
48. Waist I
49. Waist II
50. Skirt "modeled" to indicate pleats or draping
51. No transparencies in the figure
52. Garb feminine
53. Garb complete without incongruities
54. Garb a definite "type"
55. Trunk present
56. Trunk in proportion, two dimensions
57. Head-trunk proportion
58. Head: proportion
59. Limbs: proportion
60. Arms in proportion to trunk
61. Location of waist
62. Dress area
63. Motor coordination: junctures
64. Motor coordination: lines
65. Superior motor coordination
66. Directed lines and form: head outline
67. Directed lines and form: breast
68. Directed lines and form: hip contour
69. Directed lines and form: arms taper
70. Directed lines and form: calf of leg
71. Directed lines and form: facial features

Source: Harris 1963, p. 292.

APPENDIX H

PART 1--SCORING MANUAL FOR THIRTY EMOTIONAL INDICATORS ON HUMAN FIGURE DRAWINGS OF CHILDREN

PART 2--LIST OF EMOTIONAL INDICATORS ON HUMAN FIGURE DRAWINGS OF CHILDREN

SCORING MANUAL FOR THIRTY EMOTIONAL INDICATORS ON HUMAN FIGURE DRAWINGS OF CHILDREN*

All Emotional Indicators are considered valid for boys and girls age five to twelve unless otherwise indicated. The item is scored as normal until the child has reached the age of his sex as indicated in parentheses.

Quality Signs

1. Poor integration of parts--(Boys 7, Girls 6): 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--(Boys 9, Girls 8): Shading of body and/or limbs

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

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

6. Slanting figures--Vertical axis of figure tilted by fifteen degrees or more from the perpendicular

7. Tiny figure--Figure two inches or less in height

8. Big figure--(Boys and Girls 8): Figure nine inches or more in height

---

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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 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 clinging to body--No space between body and arms

16. Big Hands--Hands as big or bigger than face or 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 drawing only one leg is shown

19. Genitals--Realistic or unmistakable 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 child and not the result of his 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: drawing of a boy and a girl or the child's family is not scored

22. Clouds--Any presentation 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--(Boys 6, Girls 5)

25. No Mouth

26. No Body

27. No Arms--(Boys 6, Girls 5)

28. No Legs

29. No Feet--(Boys 9, Girls 7)

30. No Neck--(Boys 10, Girls 9)

Source: Koppitz 1968 pp. 331-333.

LIST OF EMOTIONAL INDICATORS ON HUMAN FIGURE DRAWINGS OF CHILDREN*

All Emotional Indicators are considered valid for boys and girls age five to twelve unless otherwise noted. The item is scored as normal until the child has reached the age of his sex as indicated in parentheses.

Quality Signs

Poor Integration of Parts of Figure (Boys 7, Girls 6)

Shading of Face

Shading of Body and/or Limbs (Boys 9, Girls 8)

Shading of Hands and/or Neck (Boys 8, Girls 7)

Gross Asymmetry of Limbs

Slanting Figure, Axis of Figure Tilted by Fifteen Degrees or More

Tiny Figure, Two Inches High or Less

Big Figure, Nine Inches or More in Height (Boys and Girls 8)

Transparencies

Special Features

Tiny Head, Head Less Than One-tenth of Total Figure in Height

Crossed Eyes, Both Eyes Turned In or Out

---

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Teeth

Short Arms, Arms Not Long Enough to Reach Waistline

Long Arms, Arms Long Enough to Reach Knee Line

Arms Clinging to Side of Body

Big Hands, Hands as Large as Face of Figure

Hands Cut Off, Arms Without Hands or Fingers (Hidden Hands not scored)

Legs Pressed Together

Genitals

Monster or Grotesque Figure

Three or More Figures Spontaneously Drawn

Clouds, Rain, Snow

Omissions

No Eyes

No Nose (Boys 6, Girls 5)

No Mouth

No Body

No Arms (Boys 6, Girls 5)

No Legs

No Feet (Boys 9, Girls 7)

No Neck (Boys 10, Girls 9)

Source: Koppitz 1968, pp. 333-334.

APPENDIX I

STEPS FOR EVALUATION SESSION

STEPS FOR EVALUATION SESSION

The evaluation will consist of the following steps:

1. The parents and siblings of the participants will be allowed to remain in the room if they desire but will be asked to remain quiet so as not to cause bias in the drawings by offering suggestions, criticism, etc.

2. The investigator will give each child participant a plain white sheet of paper, eight-and-one-half by eleven inches, and a number two pencil with an eraser. The paper will be placed in front of the child with the eleven inch side perpendicular to the edge of the table. The pencil will be placed on top of the paper pointing away from the child. Rotation of the paper will not be encouraged or discouraged.

3. The child will be asked to "Draw a whole picture of yourself. Make sure it is a whole picture and not a stick figure or a cartoon figure."

4. No bias may be interjected by the investigator as to whether the picture is "right" or "wrong." Praise may be used as an incentive such as "You're doing a good job."

5. The investigator will not encourage or discourage erasures.

6. When the child appears to be finished, the investigator will ask him if he is finished drawing At this time the investigator may ask the child to explain certain parts of the picture that may not be clear to her. Notes of this discussion will be recorded on a separate sheet of paper.

7. Following the procedure described, each participant will then be asked to "Draw a whole picture of 'Johnny' (the younger retarded or nonretarded sibling). Make sure it is a whole picture and not a stick figure or a cartoon figure."

8. The investigator will label each picture with a number that indicates who drew the picture and if it is a picture of the self or the younger sibling. No names of participants and/or family will be visible on the drawings.

9. After the participant has finished the two Draw-A-Person tests, the investigator will collect the demographic data sheets and the signed consent agreements from the parents in Group A and Group B.

10. Each drawing will be evaluated at a later time by judges familiar with the Goodenough-Harris scoring system (Harris 1963) and Koppitz's Emotional Indicators (Koppitz 1968) as was explained under the subsection Tool.

APPENDIX J

HOLLINGSHEAD INDEX OF SOCIAL POSITION

HOLLINGSHEAD·TWO FACTOR INDEX OF SOCIAL POSITION

To determine the social position of a household two items are essential: (1) the precise occupational role the head of the household performs in the economy; and (2) the amount of formal schooling he has received. Each of these factors are then scaled according to the following system of scores.

The Occupational Scale

1. Higher Executives, Proprietors of Large Concerns, and Major Professionals
2. Business Managers, Proprietors of Medium Sized Businesses, and Lesser Professionals
3. Administrative Personnel, Small Independent Businesses, and Minor Professionals
4. Clerical and Sales Workers, Technicians, and Owners of Little Businesses
5. Skilled Manual Employees
6. Machine Operators and Semi-Skilled Employees
7. Unskilled Employees

The Educational Scale

1. Graduate Professional Training (Persons who completed a recognized professional course leading to a graduate degree are given scores of 1).
2. Standard College or University Graduation (All individuals who complete a four-year college or unviersity course leading to a recognized college degree are assigned the same scores. No differentiation is made between state universities, or private colleges.)

3. Partial College Training (Individuals who complete at least one year but not a full college course are assigned this position. Most individuals in this category complete from one to three years of college.)

4. High School Graduates (All secondary school graduates whether from a private preparatory school, a public high school, a trade school, or a parochial high school, are assigned the same scale value.)

5. Partial High School (Individuals who complete the tenth or the eleventh grades, but do not complete high school are given this score.)

6. Junior High School (Individuals who complete the seventh grade through the ninth grade are given this position.)

7. Less Than Seven Years of School (Individuals who do not complete the seventh grade are given the same scores irrespective of the amount of education they receive.)

The factors of Occupation and Education are combined by weighing the individual scores obtained from the scale positions. The weights for each factor were determined by multiple correlation techniques. The weight for each factor is:

Factor	Factor Weight
Occupation	7
Education	4

Determination of a Family's Index of Social Position Score

Factor	Scale Score	Factor Weight	Score X Weight
Occupation	3	7	21
Education	3	4	12
Index of Social Position Score			33

Social Class	Range of Computed Scores
I	11-17
II	18-27
III	28-43
IV	44-60
V	61-77

Source: Hollingshead 1965, pp. 2-11.

APPENDIX K

PERMISSION TO REPRODUCE GOODENOUGH-HARRIS SCALE

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May 8, 1978

Ms. Stephanie Wren Gage
2909 Mustang #143
Grapevine, TX 76051

Dear Ms. Gage:

Thank you for your March 28th letter advising us that you wish to reprint pp. 248-263, pp. 275-291, and p. 292 from CHILDREN'S DRAWINGS AS MEASURES OF INTELLECTUAL MATURITY by Dale B. Harris in your forthcoming dissertation.

We are willing to grant permission for this large amount of material from our volume without charge.

We should require that copyright credit be given as footnotes on the page or pages on which the selections begin or appear as follows:

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Should your dissertation be commercially published, we ask that you reapply,

Sincerely yours,

John Devlin

John Devlin
Permissions Department

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APPENDIX L

PERMISSION TO REPRODUCE KOPPITZ'S EMOTIONAL INDICATORS

PART 1--GRUNE & STRATTON, INC.

PART 2--PERMISSION OF AUTHOR

2909 Mustang #143
Grapevine, TX. 76051
February 20, 1978

Dear Sir:

I am a registered nurse and a graduate student at Texas Woman's University in Dallas, Texas. I am presently writing a thesis concerned with how children perceive their younger retarded and nonretarded siblings in terms of body image. I am planning to have my participants draw a person and score it using Elizabeth Koppitz's Emotional Indicators which are illustrated in the book, Psychological Evaluation of Children's Human Figure Drawings. I would like to receive your permission to reproduce this tool to use in my thesis. I would appreciate your answer as soon as possible. Thank-you.

Sincerely,

Stephanie Wren Gage

FEB 23 1978

Stephanie Wren Gage

P.S. This book was published in 1968.

Please pardon the informality but to speed our reply we have answered on your own letter.

Permission is granted per the attached conditions
GRUNE & STRATTON, INC.
by Robert L Brewer
date 3/7/78

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March 7, 1978

Stephaine Wren Gage
2909 Mustang #143
Grapevine, Texas 76051

Dear Ms. Gage:

We are happy to grant permission to quote or reprint the material noted in your attached request. It is not our policy to charge a fee for scientific use of scientific material. However, the following conditions must be met:

(1) Permission must also be obtained from the author. In the case of multiple authorship, permission from the senior author is sufficient.

(2) Full acknowledgement of the source must be made, including author, title and year (if the source is a book, Grune & Stratton's name as the publisher must also be included; if the source is a journal article, the journal name, volume number and inclusive page numbers of the article must also be included).

(3) The words "by permission" must be included in the acknowledgement, and the acknowledgement must be an actual note, not just a reference to the bibliography. No other special wording or position is required; the acknowledgement may appear as a footnote, part of figure or table legend, or as part of a special page or prefatory paragraph of acknowlegements, so long as full data as itemized above are included.

Sincerely,

Eileen Dinker

GRUNE & STRATTON, INC.

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

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April 21, 1978

Ms. Stephanie Wren Gage
2909 Mustang # 143
Grapevine, Texas 76051

Dear Ms. Gage:

I received your letter regarding your thesis on children's perception of retarded and nonretarded siblings. You have my permission to use and to reproduce in your thesis the Emotional Indicators from my book "Psychological Evaluation of Children's Human Figure Drawings". Since your topic is of great interest to me I would appreciate very much if you would share your findings with me, once your study has been completed.

Best wishes for your thesis.

Sincerely

Elizabeth M. Koppitz

Elizabeth M. Koppitz

APPENDIX M

APPROVAL BY HUMAN RIGHTS COMMITTEE

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Stephanie Wren Gage Center: Dallas

Address: 2909 Mustang #143

Grapevine, Texas 76051

Dear Ms. Gage:

Your study entitled A Comparison of Body Image of Mentally Retarded and Nonretarded Children as Perceived by Their Siblings has been reviewed by a committee of the Human Research Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

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

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

Sincerely,

Geraldine M Stamm

Chairman, Human Research Review Committee at Dallas.

APPENDIX N

PART I--RAW DATA COLLECTED NOT PRESENTED IN PAPER

PART II--FREQUENCY OF INDICATORS CLASSIFIED BY ITEM

RAW DATA COLLECTED NOT PRESENTED IN PAPER

Subject Number	Number Emotional Indicator (Self)	Number Emotional Indicator (Sibling)
Group A		
1	1	0
3	1	1
5	1	4
7	2	1
9	1	2
11	0	0
14	0	1
16	1	1
17	3	3
Group B		
19	3	2
22	2	3
23	0	0
26	1	1
27	0	0
29	0	0
31	0	2
33	1	1
35	1	0

FREQUENCY OF INDICATORS CLASSIFIED BY ITEM

Indicator	Self-Drawing	Sibling Drawing	Total
Group A			
Poor integration	2	3	5
Short arms	1	2	3
Hands cut off	1	2	3
Tiny figure	1	2	3
No feet	1	1	2
Arms clinging to body	1	1	2
Long arms	0	1	1
No nose	1	0	1
Teeth	1	0	1
Big hands	0	1	1
Big figure	1	0	1
			23
Group B			
Teeth	3	3	6
Tiny figure	1	2	3
Shading body/ limbs	1	1	2
Long arms	0	1	1
Arms clinging	1	0	1
Shading hands/ neck	0	1	1
Gross asymmetry of limbs	0	1	1
Big figure	1	0	1
Short arms	1	0	1
			17

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A COMPARISON OF BODY IMAGE OF MENTALLY-RETARDED AND NONRETARDED CHILDREN AS PERCEIVED BY THEIR SIBLINGS

ABSTRACT

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A nonexperimental, descriptive study was conducted to determine how older nonretarded children with a mentally-retarded sibling and older children with a nonretarded sibling perceived their own body image and the body image of their siblings. The purposes of the study were to determine how older children with mentally-retarded or nonretarded siblings perceived their own body image and the body image of their siblings. The groups were compared to determine if there was a difference in the way older children with a mentally-retarded sibling and older children with a non-retarded sibling perceived the sibling's body image.

The population studied consisted of nine children who had a younger sibling with Down's syndrome (Group A). These children were within the five- to twelve-year-age group, and the retarded siblings were within the two- to eight-year-age group. A control group of nine children with a younger nonretarded sibling (Group B) were matched as closely as possible for race/ethnic origin, size of family, ages of children, and socioeconomic status.

Each child was asked to draw a picture of himself and of the younger sibling. The self-drawings were scored using the Goodenough-Harris scoring system and all drawings were scored using Koppitz's Emotional Indicators. The differences between the chronological age and the mental age of the self-drawings were analyzed using the Wilcoxon Matched-Pairs Signed Ranks Test. There was no significant difference between these values of either Group A or Group B. The number of Emotional Indicators present on the self-drawings and the sibling drawings were compared to determine if there were more, the same, or fewer indicators present on the self-drawings as compared to the sibling drawings. There was no significant difference between Group A and Group B.

The results of this study suggested that children with younger mentally-retarded siblings, who have lived in the home since birth, were as well adjusted as children with nonretarded younger siblings. This conclusion was true only for this sample and may not be applicable to the general population.