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The Effects of Empathy Teaching on Sociometric Status in Kindergarten Children from Urban and Rural Populations

Marilyn Egan Skinner

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THE EFFECTS OF EMPATHY TEACHING ON SOCIOMETRIC STATUS IN KINDERGARTEN CHILDREN FROM URBAN AND RURAL POPULATIONS

by

Marilyn Egan Skinner

A thesis submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in

Family and Human Development

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UTAH STATE UNIVERSITY
Logan, Utah

1980
This work is dedicated to Julie Puzey who planted the seed of a Master's study and watered and cared for the seed until the flower bloomed.
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ABSTRACT

THE EFFECTS OF EMPATHY TEACHING ON SOCIOMETRIC STATUS IN KINDERGARTEN CHILDREN FROM URBAN AND RURAL POPULATIONS

by

Marilyn Egan Skinner, Master of Science
Utah State University, 1980

Major Professor: Dr. Craig Peery
Department: Family and Human Development

Children's popularity is of concern in this study and the effect on the child's sociometric status after a series on empathy teaching has been presented. An objective of the study was to see if children in the isolated or rejected sociometric status would change to popular and amiable status after being taught empathy skills. Another objective was to find an intervention program which would teach children empathy skills.

In order to measure children's abilities in sociometric choice, a sociometric technique devised by Dr. Craig Peery at Utah State University was used. The empathy tool used to measure children's empathy skills was the Interpersonal Awareness Test from Carnegie-Mellon University by Helen Borke. A modified version of the Feshback and Roe slides was the empathy teaching tool. The children were given pretest and post-test on both the sociometric measurement
and the empathy skill measurement.

Kindergarten children from three schools in the Weber County School District were tested. They were all 5 to 6 years of age and were divided into control and experimental groups, 66 in the control and 81 in the experimental.

The results of the study indicated little evidence that an intervention program of two months made a significant difference. It was found, however, that children of both control and experimental groups do increase scoring in an empathy test which measures pre and post testing. It was also found that children do change sociometric status to a greater extent in the experimental group than in the control and that popular children do score higher on the empathy test with isolate children scoring lowest. All children did increase in empathy scoring but not at a significant difference of .05.

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INTRODUCTION

A main interest reflected in the field of child development is a child's popularity and acceptance from his peers. The need to examine popularity as it relates to the social status of the child is an important factor in achieving the objectives of education. Authors Jencks and Bane (1975) suggest that Americans have pursued the notion that schools and schooling can solve our social ills and if schools don't make a difference in one's chances for success in life, then nothing short of reordering our entire social structure will have any effect on future generations. Popularity, modeling behavior, imitation, and empathy are the topics to be discussed in this study in relation to developing in children a sense of worth, significance, and competency to succeed in the social structure of today. Empathy and how it affects popularity is the main thrust of this research effort.

Certain interpersonal skills may influence how well a child is liked by other children (Gottman, Gonso, & Rasmussen, 1975). Popularity has been researched and restudied many times and in many different ways. Many predecessors in child development have teamed popularity with other factors. The effect of modeling and reinforcement on a child's social status has been discussed and studied (Hartup, 1965; O'Conner, 1969; Parton & Priefert, 1975; Thelen, Frye, Dallinger, & Paul, 1976). Thelen,
Frye, Dallinger & Paul, (1976) found that reinforcing modeling behavior has an effect upon behavior and that reinforcing certain behavior has significantly improved home adjustment. Researchers (Bandura & Huston, 1961; Bandura, Ross & Ross, 1961; Hicks, 1965; O'Conner, 1969) have found through their studies that children can produce a behavioral change through simple observation. O'Conner (1969) showed films teaching social competencies to isolate children and his study showed significant changes in the children's social status. Instead of isolates, the children became more socially accepted.

Being imitated by another person serves as a reinforcing stimulus for an individual. Considering that much of a person's daily behavioral interactions involve others imitating the same behavior just exhibited by another person, the similarity resulting from being imitated serves the important function of maintaining attraction for others (Parton & Priefert, 1975).

In reaching an appropriate social standing, Lovaas et al., (1966) showed that children can develop complex repertoires of good responses to replace poor responses through a combination of modeling and reinforcement procedures. Also, the effect of reinforcement and its role in children's sociometric status, shows different effects at different age levels and on children's task performance. However, positive reinforcement is influenced in peer interaction at all age levels (Walters,
Interpersonal Behavior in Personality Development

Social interaction is the result of acts of others mixed with those of self and brought about by each person to interact as they see fit (Dymond, 1949a).

The child who does not possess social skills will not be able socially to handle "repertoires" that are necessary to function socially. These children find themselves rejected, harassed and in general being mistreated by their peers. This kind of treatment to the isolated child tends to reinforce interpersonal avoidance and slows the child's ability to develop competencies that are socially accepted (O'Connor, 1969). Children who are socially isolated do not learn socially from their peers because their opportunities in this area are limited (Oden, Ashner, 1977).

Children are at a risk in performance of social interaction skills when they are rejected or not accepted by their peers. Researchers feel that sociometric measures are definitely predictive of social functioning (Cowen, Pederson, Babigan, Izzo & Trost, 1973; Gottman, 1977).

When a child avoids social interaction during his childhood, his avoidance of social interaction carries over into adulthood (Bandura, 1969; Evers & Schwartz, 1973; MacFarland, Allen, & Honzik, 1954; Van Alsyne & Hattick, 1939). Many adults require psychiatric help. Most of the isolates that are on record fit into manic
depressives and schizophrenics. There is also a higher suicidal and delinquent tendency related to low peer acceptance (Gottman, Gonso, & Rasmussen, 1975).

Social Competence

The Researchers whose main thrust has been social competence have different concepts of the topic. Zigler and Trickett (1978) state that not only should social competence reflect the success of the human being in his interactions with others, but that social competency skills should project personal development of the human being.

Studies by Jennings (1975) suggest that children are more socially competent if they are more socially knowledgeable.

Measures of social competence should reflect the knowledge of oneself or the personal development of the human being. Social competence rather than I.Q. should be the principle measure of success of intervention programs such as head start (Zigler & Trickett, 1978).

Friendships and Acceptance

To gain a better insight in how to help friendless children, a study of the mechanisms of friendship is necessary.

There have been many researchers working with the making of friends. One of these studies explains that personality and sociological factors help determine the kind of friendship two children will have when they
interact frequently with each other (Challman, 1932).

Propinquity also has a big part in the influence of friendships. Friendships often form between two people who are correspondent with similar tastes and interests and where the same likes and dislikes. Other conditions that might correlate with friendship are a likeness in sex, chronological age, mental age, intelligence, a degree of extroversion, physical activity, laughter and social participation (Challman, 1932). Blau and Rafferty (1970) worked on a study where negative factors such as bribery had an influence on friendships. Challman (1932) cites that cooperative activities between friends give them more opportunity to play together and become friends. Helpfulness was found to be highly related to measures of peer acceptance and friendship (Ladd & Oden, 1979).

Having reviewed the basic needs for friendship, a study of how friends treat each other will give more information into a better insight for helping children with this social task.

Bigelow (1977) finds in his research that friends are expected to share. They share not only their toys, but their rights and privileges and they are also expected to give each other a needed and generous supply of gratification. Interaction between friends is reciprocal. Newcomb, Brady and Hartup (1979) further researched and found that friends make more cooperative decisions and
suggestions to each other and guide each other more than non-friends, and that there were also more mutual commands given.

Reese (1961) did an interesting study on children and acceptance with their peers. He discovered that acceptance by others and by best friends were related to self-concept scores. A child whose acceptance was high showed moderate self-concept scores. Those whose acceptance was low showed low-self concept scores. If the children were approved of by others and not just best friends, the date was more strongly related to self-concept. Girls showed a more significant mean in self-concept than boys. The same results were gathered in 4th, 6th, and 8th grades, and it was found that data did not vary according to age levels.

An interesting study of Ladd and Oden (1979), on peer acceptance and children's ideas of helpfulness, indicated that children who were popular and well liked had more knowledge on how to make friends. Their "pro-social" behavior was related to being highly accepted, and the results of the study suggest that social knowledge and peer acceptance of children are positively related. Evidence shows that children of 3rd through 5th grade are very aware of social situational matters. They are willing to offer solutions for social problems no matter who is helping who. Those children who gave few but unique responses to social problems tend to have a higher sociometric rating. Those children who show lower
sociometric ratings have little knowledge of values that would be helpful in social behavior.

Challman (1932) made the statement that children have some degree of friendship for every other child. It may be that the degree of friendship is measured by the other child's ability to interact. As reported by Marshall and McCandless (1957) positive social participation is significantly and positively correlated with social acceptance.

**Sociometric Identification**

There are many different ways of testing a child on sociometric status. Studies show children being asked to pick out favorite peers.

An earlier method of testing children's social status was used by Lippett (1941) when she used pairs of children in measuring popularity. Her method of testing was to have a child choose out of two children which one was most favorable to him. This measurement proved valid to measuring the popular and unpopular child but showed no valid measure for the child who fell between these two extremes. Understanding the necessity to build social skills for those children who are categorized as isolated or rejected, this study is aimed at developing a useful teaching tool for this purpose.

When Gottman (1977) worked on sociometric categories, he grouped the children into five different areas. The popular children were called the sociometric stars. The second group was the sociometric rejects. Children who
had a high negative interaction with teachers were classified as the third group. The fourth category of children studied were those children who were "turned out" or off task when they were alone.

In a technique developed by Peery (1979), a measurement was devised to study four areas of social status which are as follows: 1) popular, 2) amiable, 3) rejected and 4) isolate. The popular children are those who have the approval and acceptance of their peers. The amiable children have low social impact with their peers but have a high social preference. The rejected children accomplish attention from their peers but of the negative type. If children receive negative attention and have a low social impact, the classification is that of isolate.

Peery also divided the dimensions of scoring which include Social Impact, noting how many times a child is chosen on the sociometric picture board. Social Preference the second dimension, measuring the times a child is mentioned in a negative way and the number of times he is mentioned positively by his peers.

Studies have indicated the different kinds of categories needed for solid interpersonal relationships, with empathy being noteworthy of the basis for social interaction. Cottrell (1942) supports this idea by finding that empathy is the basic tool for all social interaction.

In this study, the author is particularly concerned with the social status of young children, especially the
children who fit into the rejected and isolated categories. The purpose of this study is to find a teaching tool that will be of some value in improving a child's social status.

**Empathy**

The definition for empathy that Dymond (1949b) used is "The imaginative transposing of oneself into the thinking, feeling and acting of another and so structuring the world as he does" (p. 343).

Several researchers state that empathy may be one of the underlying processes on which our understanding of others is built (Conttell, 1942; Hoskins, 1946; Murphy, 1937; Watson, 1938).

Stotland (1963) notes that empathy is positively related in self-esteem and birth order. A similarity between the emphazier and the stimulus person also is apparent.

Empathy is related to insight and from various studies there is evidence that insight may be necessary for any long term personality changes. In order to have insight, we must have the ability to bring repressed unconscious material to the surface. Dymond (1950) calls this interaction—a self-other pattern. He states that a person's personality is made up then of a combination of self-other patterns which the individual has internalized from separate interactions of others. He also states that the ability to take the role of another (empathy) is certainly related to the skill of understanding ourselves (insight).
In summary, insight is the understanding of these self-other patterns which have been incorporated by an individual and form the foundation of his expectations of others. This also influences his life situations and the position he feels he belongs to in them. The relationship between insight and empathy are closely correlated. Since insight is a closer understanding of relationships between oneself and others, the ability to feel and describe thoughts and feelings of others are closely related. Without empathy, conclusions could be drawn from the research that show a lack of insight into one's own self-other patterns. Empathy appears to be a necessary tool for building upon self-other patterns.

Dymond (1949b) questions whether empathy can be developed if a person is low in empathy or completely lacks empathy. He suggests that to build empathy in one's self, one must consciously try taking the other person's role in the relationship. In other words, one must stand in the other person's shoes and look at the situation from where he does.

In a similar study by Dymond (1949b), terms are presented that are very close in meaning to empathy. Sympathy is described as a feeling that compels one to put forth assistance or consideration of others, often only after putting one's self in the other person's place. Insight differs from sympathy in that you must have the ability to take the role of others.

Empathy appears to be one aspect of imitative behavior or identification. Feshback and Roe (1968) theorize that
empathy influences social insight and understanding but state that insight and understanding are not related. These researchers also think that empathy response may be influenced depending on the comprehension of a social happening. Therefore, social understanding is independent of effective response.

Dymond's (1949b) research indicated several factors which are closely related to empathy. The research shows that those with high empathy characteristics have a positive attitude towards families and their relationships with others show family oriented ties. In the area of orientation, the high empathy group is very compassionate with fellow beings and are interested and tolerant of other's feelings and supportive and willing to help others. Low empathy groups appear to have more sibling conflicts, constant arguing with parents and others in authority of the family. They are also skeptical of others and afraid of being mistreated and of getting hurt. Also, low empathetic individuals are often interested in a relationship only if they can see some benefit to themselves.

In the area of goal setting, the high empathetic group set goals for themselves that are centered around the family and home life; a secure and happy relation that will be everlasting is at the top of their list. Occupational aims are the center of the low empathetic group's goals. These individuals want others to appreciate their worth and want others to look up to them as successful individuals.
High and low empathy groups were asked to describe their feelings and awareness toward others. The high group considered themselves as sensitive romantics, who have sympathy for the underdogs and have an awareness for the world's social problems. The low group admire those with stronger ideals and are capable, confident, and uncaring about others—taking care of themselves is foremost. People who are low in empathy feelings want to know what others are thinking of feeling, and number one is what they want to be.

Those who seem to have good empathetic ability are better judges of the empathy in others than those lacking in this skill. Dymond also states that it is easier to empathize with a person who has a high empathy level than one whose empathy level is low.

Many studies have been made on popularity and what affects the social status of the child. This study will be particularly concerned with the effects of empathy upon a child's popularity social status. In teaching children how to be empathetic toward others, there is hope of changing the low social status to a status that is more acceptable in society.

Empathy role taking is closely related to classification, spacial egocentrism, and popularity. Popularity, therefore, is related to the figuration and literal ability to take the viewpoints of others. This seems to support Piaget's thinking (Rubin & Maioni, 1975). In a study by Borke (1971), findings indicate that the failure of empathic role-taking
was significantly related to the incidence of dramatic play. Popular children know how to make friends more easily. They show more skillful learning in their knowledge of friendship building. Communication is more clearly presented and, therefore, they have their peers' attention (Gottman, Gonso, & Rasmussen, 1975).

There appears in the literature many different studies which question whether girls have more empathy skills than boys. Helen Borke (1973) worked with American and Chinese children, three to six years of age. Children's ability to identify happy, afraid, sad and angry was concentrated on. There were trends in both cultures for "happy" to be recognized first. The ability to identify the emotion "afraid" increased with age. Both groups, boys and girls, perceived angry last and least accurately with angry and sad being the two emotions which were confused most often. The girls appeared more accurate than the boys in both cultures.

In Hoffman and Levine (1976), it is suggested that girls respond more emotionally than boys which agrees with a study made by Adams, Schvaneveldt and Jenson (1979), dealing with empathic ability in adolescence. It was still questionable in their study of what age this becomes apparent. In a study by Hogan (1969), women scored higher on a scale devised by him than did males. Hoffman's (1977) most recent investigations on empathy find that regardless of age of the subjects or the measures used, women do score higher in empathy than men. Both sexes are equally able to assess
how a person feels, but the females will respond more affectively. Dymond (1950) reports that females did not show indications of having any kind of advantage in their ability to empathize with others but they did learn to understand their peers better than the boys did.

There are all kinds of specific behaviors in high acceptance children (popular) and low acceptance children (unpopular). Piaget (1926) writes that the more popular children are able to take a listener's viewpoint into account better than their egocentric peers. Deutsch (1974) also found that this ability plays a part in the female preschooler's attainment of popularity. Of interest is the fact that the preschooler's preference on whom they wish to play with differs from those with whom they do play.

Evidence from other studies indicate that low sociometric children refuse more "overtures" from both adults and children than the more popular child. Children who have many friends are off task less and give or receive more positive reinforcement than low friend children. Highly aggressive children seem to have a low peer status (Dunnington, 1957; Hartup, Glazer & Charlesworth, 1967; Koch, 1933; Moore, 1967). However, the high empathetic boys are rated more aggressive than those boys with less empathy skills. There is also a slight trend reflecting greater aggression in high empathy girls (Feshback & Feshback, 1969).
Data have been collected and studied which show that a major antecedent of social acceptance and reflection is the rate that a child gives out reinforcement to the peer group. A child's friendliness to other children may be instrumental in him being liked by others and this positive reinforcement encourages him to use the approach again (Moore, 1967). When observed at the University of Minnesota, children whose behavior was socially unpleasant were likely to be the ones who received similar negative treatment from their peers.

Scores representing positive reinforcement and social acceptance are consistent and represent characteristics in children that are socially desirable. Teachers do not try to change these characteristics as readily as they would in children who give negative reinforcement or rejection (Hartup, Glazer & Charlesworth, 1967).

Reinforcement coming from peers also has a definite effect on children's task performance. During a reinforcement exercise using marbles as the instrument and phrases, "That's good" or "That's fine," as the reinforcement phrase, it was discovered that the children who were reinforced or praised by the unpopular peers increased in the rate of response whereas those reinforced by popular peers decreased in response but not at a significant level (Hartup, 1965).

Different age levels have an effect on children when reinforcement is used. Fourth graders showed more progress in preferences when reinforced by nonfriends and second and
third graders showed greater changes when reinforced by non-friends (Hartup, 1965).

In another study by Charlesworth and Hartup (1967), more positive reinforcement was found to happen by four year-olds than three year-olds. Older children tend to give more reinforcements to more children than younger children. They found that during the preschool years, more definite increases were found in the child's use of social reinforcement with his peers. Younger children may have learned inferential skills but may not know how to use them appropriately, thus, the child who has empathic abilities may not often apply them in a cooperative situation (Flavell, 1974).

Boys and girls show a definite difference in social reinforcers. Young girls give less total reinforcement than younger boys. Boys, however, give more submissive reinforcements in both general and dramatic play. Younger girls give less affection and personal acceptance than boys and both sexes tend to reinforce the same sex more than the opposite gender (Charlesworth & Hartup, 1967).

In further testing, acceptance has been found to be predictable by the number of times positive reinforcement is given (Hartup, Glazer & Charlesworth, 1967).

Giving negative reinforcement has been suggested as being associated with social reflection. Therefore, a child's social status prediction can be guessed at by the number of times he gives negative reinforcement to the peers.
Social skill training is effective in creating long term effects. We can increase an isolated child's peer acceptance by coaching him in social skills (Oden & Asher, 1977). Gottman, Gonso, and Rasmussen (1975), question that a systematic study of the effects of coaching children in social skill training has been developed.

Moore (1967) states that, "The more teachers and researchers can identify the pertinent variables affecting the child's peer status, the more specific help can be given to children in early trouble with their peers" (p. 297).

Data has been collected that suggest that the behavioral approaches may be one of the answers to the treatment of diverse psychological conditions (Bandura, 1969; Eysenck, 1964; Wolpe & Lazarus, 1966).

Social acceptance appears to be when a child receives positive choices from his peers and social rejection apparently is when a child receives negative choices from his peers (Hartup, Glazer & Charlesworth, 1967).

In Roff's 1961 study, a positive relation between the quality of early social behavior in a peer group and social adjustment is apparent. Studies have shown that peer interaction is reinforced socially. If isolate play is either punished or ignored, children will eventually lean toward the higher level of social behavior (Allen, Hart, Buell, Harris & Wolf, 1964; Hartup, 1965; Patterson & Anderson, 1964).
Empathy, being directly related to popularity and the ability to take the viewpoint of others, needs to be taught to those children of low acceptance. Children need to be able to listen more carefully to others and to be able to respond more appropriately when social opportunities come their way.

Since social acceptance is dependent on whether a child receives positive or negative choices from his peers, children must be taught correct "repertoires" for the correct occasion. This would also raise self-concept scores (Reese, 1961). Social knowledge and how to integrate that knowledge in order to gain in popularity and acceptance, and become more accepted as adults, must be accepted.

Cottrell (1942) stated that there exists a strong feeling of empathy as being a basic process in all social interaction. From the research reviewed, this study has emphasized the effects of empathy teaching. The teaching tool was teaching "feelings" to the Kindergarten child. If indeed, empathy is a basic process of social interaction, the child's social status in some instances improved from being rejected or isolated to being popular or amiable.

Summary

The present study examined Kindergarten age (5 and 6 year-olds) children in the area of social status. The studies of the children were done in such a way that they related to the role of sociometric concepts of
social impact and social preference. Categories for the study were the following: popular, amiable, rejected, isolated, with the measurement of the social status being taken before and after a series of empathy teaching techniques had occurred.
METHOD

Subjects

Kindergarten children in three different schools and areas of the Weber County School District were the subjects of the study. The first school was Uintah School in Ogden, Utah. The school is in an urban area and included children from upper class families. Lakeview School in Roy, Utah, was the second school and included children from middle class families and is a center school for special education children. The third school was Kanesville School, in Kanesville, Utah. The school is in a rural area and included children from farm areas. Ages of the children ranged from 5 to 6 years old. Each school had two sessions of Kindergarten. One session from each school was the experimental group in the study, while the other group was the control group. Therefore, the study had three control groups and three experimental groups. Total number of children in the study was 147. Peery's (1979) sociometric picture technique, designed through Utah State University, recorded each child's preference of classmates according to friendships. The sociometric testing was completed in three weeks.

Identifying Measures

Children, in all sociometric categories, were identified through the sociometric picture technique. A picture
board displaying a 3 x 3 inch photo of each child in each participating school and session was assembled. The sociometric board was on display for a week prior to the sociometric testing. Once the sociometric testing had been started, each child was taken individually in a separate room with the picture board and examiner. The child was asked to point to the picture and/or name of a child who best fit the answer to the following questions:

1. Whom do you play with when you play outside?
2. Whom do you sit next to for stories on the rug?
3. When you can do whatever you want to, whom do you do it with?

The following negative questions were then asked:

4. Whom don't you play with outside?
5. Whom don't you sit next to for stories on the rug?
6. When you can do whatever you want, whom don't you play with?

If the child volunteered two names, no further proding was necessary. If they did not volunteer two names, the examiner would ask "who else?" until two names were received. The number of times a child was chosen by his friends on the sociometric questionnaire, either positively or negatively, determined social impact. The number of times he/she was mentioned negatively, subtracted from the number of times he was mentioned positively was the child's social preference as shown in Figure 1.
Figure 1. Intersecting axes for plotting sociometric status.
After the scores were tallied, they were placed accordingly on a bi-variate axes developed by Peery (1979). The farther the child rated on the axes, the clearer the identification would be in a specific area. Thus, each child was rated as popular (high social impact, high positive social preference), rejected (high social impact, high negative social preference), amiable (low social impact but positive social preference), or isolated (low social impact, and negative social preference).

After sociometric testing was completed in the schools, each child was given the Interpersonal Awareness Test from Carnegie-Mellen University by Helen Borke. The examiner took the child in a separate room for the testing. The child was shown pictures of a child of their own sex. The child in the test was pictured as happy in one picture, sad in another, afraid in the third and angry in the fourth. He/she was asked to show which picture indicated happy, then sad, afraid and then the angry emotions. Stories were then told to the child and the child was asked to pick the picture that showed the emotion the story called for. Examiner circled the child's response and continued with the testing. If the child refused to pick a face, the examiner chose the right one and explained why the child felt that way. If the child chose the correct response, praise was given and the question of why the child would feel that way was asked. There were eight situational stories given including
each of the emotions—happy, sad, afraid, angry.

After the Borke testing was completed, the teachers proceeded with the modified teaching tool using the Feshback and Roe Empathy slides (see Appendix).

Each teacher was given a set of instructions and were coached on the correct procedure of using the teaching tool. The sheet of instructions for the teachers included teaching times, which was the first half hour of the session. Since the starting times were staggered (given in detail in the procedure section of this paper), the teachers were given their starting and ending times.

Equipment that was needed for the individual schools included a camera with film for taking pictures of the children, sociometric picture boards, a screen, tape and slide machine.

Procedure

The treatment was initiated the week following each individual classroom screening. The screening methods used were the Borke test and the sociometric measure devised by Peery (1979). A modified version of Feshback and Roe Affective Situation Test for Empathy was the teaching tool.

The photos of the children were taken by the teachers. The photos were then developed and placed on a board. Each participating school had their own sociometric board as well
as each session. These boards, with the pictures mounted on them, were delivered to the schools. The teachers placed the boards in their rooms at the children's eye level for a week prior to the sociometric testing.

The flow sheet (Figure 2) indicates scheduling of individual schools. The Lakeview experimental and control groups were first to be administered the sociometric testing. One day later, the Borke test was begun with each child being taken to an outside room with the examiner. The treatment with slides and tapes was begun with the afternoon group being the experimental group. The first presentation was the stories and discussions teaching the emotion--happy. The presentation teaching the "sad" emotion was taught next. The slides and tapes for "afraid" feelings were used next. The stories teaching "angry" were taught last. Two days later, there was a review day with the teacher randomly picking two of the slide stories, showing them and asking which of the emotions were represented. She chose two stories with the same empathy teaching in order to keep concepts the same. Three days later, the afraid empathy lessons were repeated. Two days later, the happiness emotion was retaught with the slides still being the teaching tool. The second teaching for the empathy emotion angry was given two days later. Slides on the sadness stories were retaught three days after the stories on angry, with the review of a random picked emotion being taught three days later. The final section
<table>
<thead>
<tr>
<th></th>
<th>February</th>
<th>March</th>
<th>April</th>
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<tbody>
<tr>
<td></td>
<td>Weeks</td>
<td>Weeks</td>
<td>Weeks</td>
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<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
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<tr>
<td>Administer</td>
<td></td>
<td>(L(4))</td>
<td>(B(18))</td>
</tr>
<tr>
<td>Borke</td>
<td>(U(11))</td>
<td>(S)</td>
<td>(F)</td>
</tr>
<tr>
<td>Sociometric</td>
<td>(K(19))</td>
<td>(S)</td>
<td>(B)</td>
</tr>
</tbody>
</table>

Start of testing and ending date. L=Lakeview
U=Uintah
K=Kanesville

Figure 2. Flow sheet indicating start of testing and ending date for schools.
of slides were presented in two-day intervals, commencing three days after the review was presented. The series at that time were not taught in sequence form. The slides with the emotions were switched around so the teachers could reinforce the learning of the emotions. A review of randomly selected emotions were given three days after the presentation of the final section of slides. The next day, the sociometric testing was repeated, followed the next day by the Borke testing.

The Uintah School started the sociometric testing one week later than Lakeview. The Borke test was given the following day. The first empathy teaching was given two days later with that school beginning with the emotion—afraid. Three days later, the presentation teaching angry was given. The slides and tapes for happy feelings were taught on the following third day. Two days later, the stories teaching sad were given. The review day was given three days later, with the teacher randomly picking two of the slide stories, showing them and asking which of the emotions were represented. She chose two stories with the same empathy teaching in order to keep concepts the same. The afraid empathy lesson was repeated two days later and two days after that, the happiness emotion was retaught with the slides still being the teaching tool. Three days later was the second teaching for the empathy emotion angry. Slides on the sadness stories were retaught two days later, followed by the review of randomly picked emotion two days
after the sadness slides. The final section of slides was presented in the following week and a half at two and three day intervals. The series at that time were not taught in sequence form. The slides were switched around so the teachers could reinforce the learning of the emotions. A review was given with random selected emotions two days after the final series were taught. The next day, the sociometric testing was repeated and the Borke testing was repeated during the following week.

Kanesville started the sociometric testing one week after the Uintah School. The Borke was given the following day. The morning session was the experimental group and started their presentation one week after the Borke testing with the emotion—happy. The presentation teaching the sad emotion was taught two days later, followed by the slides and tapes for the afraid feelings three days later. The stories teaching angry were given two days later, while four days later was a review day with the teacher randomly picking two of the slide stories, showing them and asking which of the emotions were represented. She chose two stories with the same empathy teaching in order to keep the concepts the same. Three days later, the afraid empathy lesson was repeated, with the happiness emotion lesson retaught two days following. The second teaching for the empathy emotion angry was taught two days later. Slides on the sadness stories were retaught three days later. The review of a random picked emotion was taught
two days after the sadness emotion. The final section of slides was presented in a four-day span of time, ending with a review. The series was not taught in sequence form during this teaching time. The slides with the emotions were switched around so the teachers could reinforce the learning of the emotions. The next day, after the review, the sociometric testing was repeated followed by the Borke testing the next two days.
RESULTS

Data analysis will be presented in the following order:

Effect of Training on Borke Affective Perspective Taking Scores (A.P.T.), relationships between affective perspective taking and sociometrics, shifts in sociometric status across time, relation between sociometric shifts and affective perspective taking.

Effect of Training (Treatment) on Affective Perspective Taking (Borke Scores)

A 2 x 3 ANOVA was run on all data (experimental group and control group, by school, 1, 2, 3) for the Borke scores on the pretest data. No significant difference between schools, or between experimental and control groups, was found (see Table 1). The mean scores for the pretest experimental were 11.84 (SD = 2.2). The mean score for the control group was 11.81 (SD = 2.2). Since there is not a significant difference between schools, there is not a difference between rural and urban areas in this study.

As shown in Table 2, a similar ANOVA was run on Borke scores post-test to determine if there were post-test differences between the experimental or control groups. The experimental groups did show a gain from pretest with means of 12.58 (SD = 2.34). Control groups also showed a gain in means, 12.31 (SD = 2.24). However, with an F of
Table 1

3 x 2 ANOVA Comparisons of Borke Scores by School (Uintah, Lakeview and Kanesville) and Group (Experimental and Control) Pretest

<table>
<thead>
<tr>
<th></th>
<th>Uintah</th>
<th>Lakeview</th>
<th>Kanesville</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>11.55</td>
<td>12.54</td>
<td>11.46</td>
<td>11.84</td>
<td>2.23</td>
<td>.009</td>
<td>.926</td>
</tr>
<tr>
<td>Control</td>
<td>11.90</td>
<td>11.82</td>
<td>11.73</td>
<td>11.82</td>
<td>2.17</td>
<td>.89</td>
<td>.414</td>
</tr>
</tbody>
</table>

.501 (p = .480), the difference between groups was still not statistically significant. Again, there were also no significant differences between schools. Since there were no significant differences between groups, the expected treatment effect did not emerge.

Further Analysis of Improvement in A.P.T. from Pretest to Post-Test

Noting the overall increase in Borke scores from pre to post-test, the next analysis examined differences in the total population from pretest to post-test on Borke scores to determine if this gain was significant. A significant difference of F = 5.21 (p = .023) was found indicating the children did score better on the post-test.
Table 2

3 x 2 ANOVA Comparisons of Borke Scores by School (Uintah, Lakeview and Kanesville) and Group (Experimental and Control) Post-Test

<table>
<thead>
<tr>
<th></th>
<th>Post-Test Comparisons</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uintah</td>
<td>Lakeview</td>
</tr>
<tr>
<td>Experimental</td>
<td>12.22</td>
<td>13.12</td>
</tr>
<tr>
<td></td>
<td>( \bar{X}=12.58 )</td>
<td>( \bar{X}=12.94 )</td>
</tr>
<tr>
<td></td>
<td>SD=2.72</td>
<td>SD=1.92</td>
</tr>
<tr>
<td>Control</td>
<td>12.09</td>
<td>12.72</td>
</tr>
<tr>
<td></td>
<td>( \bar{X}=12.16 )</td>
<td>( \bar{X}=12.30 )</td>
</tr>
<tr>
<td></td>
<td>SD=2.52</td>
<td>SD=1.92</td>
</tr>
<tr>
<td>( F )</td>
<td>1.52</td>
<td>0.501</td>
</tr>
<tr>
<td>( P )</td>
<td>0.222</td>
<td>0.480</td>
</tr>
</tbody>
</table>

than on the pretest (see Table 3). The mean Borke score for pretest was 11.83 (SD = 2.24) and the mean on post test was 12.46 (SD = 2.29).

Table 3

Mean Percent of Pre and Post Borke Scores on Total Population

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \bar{X}=11.83 )</td>
<td>( \bar{X}=12.46 )</td>
</tr>
<tr>
<td>( F )</td>
<td></td>
<td>5.22</td>
</tr>
<tr>
<td>( P )</td>
<td></td>
<td>0.023</td>
</tr>
</tbody>
</table>

Since there was this indication the Borke scores had improved, a further analysis was made comparing experimental and control groups. We wanted to determine if the treatment
was responsible for better scores in the Borke for the experimental group. For the control group, the mean pretest was 11.81 (SD = 2.17), post-test mean was 12.31 (SD = 2.24). A one-way ANOVA comparing these pre and post scores for the control group was nonsignificant (see Figure 3). The experimental group's pretest mean 11.84 (SD = 2.29) and post score mean 12.58 (SD = 2.3). The one-way ANOVA for this pre-post comparison was \( F = 4.12 \) (\( p = .04 \)), showing a significant difference between pretest and post-test Borke scores indicating the treatment had an effect. Because using both pretest and post-test scores from the same subjects violates the independence assumption of ANOVA, a further comparison using differences scores (post-test - pretest) was conducted on experimental and control groups. The control group mean difference was .5000 (SD = 2.46) and the experimental group's mean was .7407 (SD = 2.35), \( F = .366 \) (\( p = .56 \)). Again, the direction of differences showed the experimental group had the greatest improvement, but because of the considerable variance, the mean difference scores were not statistically different.

**Relationship Between A.P.T. Scores and Sociometric Status**

To determine if there was a relationship between A.P.T. scores (Borke) and sociometric status, mean scores for each sociometric category were compared (all subjects, pre and post-test combined). A significant difference of \( F = 3.914 \) (\( p = .004 \)) indicated that children's sociometric status made a difference in scoring on the Borke.
Further analysis for experimental and control groups were also run to determine which group (if any) had the strongest relationships between sociometric status and Borke scores (A.P.T.).

For the experimental group (Table 4) pretest Borke scores were: popular mean = 12.57 (SD = 1.98), amiable mean = 11.94 (SD = 2.08), isolated mean 11.07 (SD = 2.69), and rejected children mean = 11.42 (SD = 2.42) with $F = 1.70$ ($p = .172$). The control group's pretest Borke scores were popular mean = 12.14 (SD = 2.05), amiable mean = 11.25 (SD = 2.46), isolated mean = 11.17 (SD = 1.85), and rejected mean = 12.41 with $F = 1.32$ ($p = .2764$).

Table 4
Relationship Between Pretest Borke Scores and Sociometric Status

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Popular</th>
<th>Amiable</th>
<th>Isolated</th>
<th>Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>12.57 (1.98)*</td>
<td>11.94 (2.08)*</td>
<td>11.08 (2.69)*</td>
<td>11.42 (2.42)*</td>
</tr>
<tr>
<td>Control</td>
<td>12.14 (2.05)*</td>
<td>11.25 (2.46)*</td>
<td>11.17 (1.85)*</td>
<td>12.41 (2.18)*</td>
</tr>
</tbody>
</table>

*Numbers in brackets are Standard Deviations.

A similar ANOVA was run on the post-test scores (Table 5) to see if there was a significant difference in scoring after the treatment had been given. The experimental group scored as the following: popular mean = 13.37 (SD = 1.71), amiable mean = 11.94 (SD = 1.84), isolated mean = 12.29 (SD = 3.42)* and rejected mean = 12.11 (SD = 2.25) with $F = 1.91$ ($p = .1343$).
Figure 3. Pre and post-test comparisons on Borke scores with experimental and control groups.
The control group showed popular mean = 12.42 (SD = 2.24), amiable mean = 11.40 (SD = 2.55), isolated mean = 12.36 (SD = 2.02), and rejected mean = 12.67 (SD = 2.27) with 

\[ F = 0.712 \ (p = 0.5484) \]

### Table 5

**Relationship Between Post-Test Borke Scores and Sociometric Status**

<table>
<thead>
<tr>
<th>Post-Test</th>
<th>Popular</th>
<th>Amiable</th>
<th>Isolated</th>
<th>Rejected</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>13.37</td>
<td>11.94</td>
<td>12.29</td>
<td>12.11</td>
<td>1.91 ns.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.71)*</td>
<td>(1.84)*</td>
<td>(3.42)*</td>
<td>(2.25)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>12.42</td>
<td>11.40</td>
<td>12.36</td>
<td>12.67</td>
<td>0.71 ns.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.24)*</td>
<td>(2.55)*</td>
<td>(2.02)*</td>
<td>(2.27)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Numbers in brackets are Standard Deviations.

**Shifts in Sociometric Status Across Time**

To determine sociometric stability and/or transitions from one sociometric status to another, three 4 x 4 transition matrices were generated (Table 6). The rows in each matrix depict the pretest sociometric status, the columns depict the post-test status.

In Matrix Ia, the raw data of the total group is presented. The resulting normalized stochastic matrix is presented in Matrix Ib. The data will be presented in percentages as is presented in Matrix Ib.

Perhaps one of the most interesting findings is the stability of the popular group which finds 75% of the children remaining stable throughout the testing. The
The control group showed popular mean = 12.42 (SD = 2.24), amiable mean = 11.40 (SD = 2.55), isolated mean = 12.36 (SD = 2.02), and rejected mean = 12.67 (SD = 2.27) with $F = .712 (p = .5484)$.

**Table 5**

<table>
<thead>
<tr>
<th>Post-Test</th>
<th>Popular</th>
<th>Amiable</th>
<th>Isolated</th>
<th>Rejected</th>
<th>$F$</th>
<th>$P$</th>
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</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>13.37</td>
<td>11.94</td>
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<td>12.11</td>
<td>1.91</td>
<td>ns.13</td>
</tr>
<tr>
<td></td>
<td>(1.71)*</td>
<td>(1.84)*</td>
<td>(3.42)*</td>
<td>(2.25)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>12.42</td>
<td>11.40</td>
<td>12.36</td>
<td>12.67</td>
<td>.71</td>
<td>ns.55</td>
</tr>
<tr>
<td></td>
<td>(2.24)*</td>
<td>(2.55)*</td>
<td>(2.02)*</td>
<td>(2.27)*</td>
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</tr>
</tbody>
</table>

*Numbers in brackets are Standard Deviations.

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To determine sociometric stability and/or transitions from one sociometric status to another, three 4 x 4 transition matrices were generated (Table 6). The rows in each matrix depict the pretest sociometric status, the columns depict the post-test status.

In Matrix Ia, the raw data of the total group is presented. The resulting normalized stochastic matrix is presented in Matrix Ib. The data will be presented in percentages as is presented in Matrix Ib.

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Table 6
Raw Data Matrices and Normalized Stochastic Matrices

<table>
<thead>
<tr>
<th>Raw Data Matrices</th>
<th>Normalized Stochastic Matrices</th>
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</thead>
<tbody>
<tr>
<td>Post-Test Status</td>
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</table>

Matrix I
Total Group

<table>
<thead>
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<th>I</th>
<th>R</th>
<th></th>
<th>P</th>
<th>A</th>
<th>I</th>
<th>R</th>
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</thead>
<tbody>
<tr>
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<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>3</td>
<td>14</td>
<td>9</td>
<td>5</td>
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<td>45%</td>
<td>29%</td>
</tr>
<tr>
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<td>1</td>
<td>13</td>
<td>4</td>
<td>24</td>
<td>I</td>
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<td>4%</td>
<td>54%</td>
</tr>
<tr>
<td>R</td>
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<td>4</td>
<td>9</td>
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</table>

Matrix II
Experimental Group

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<th>I</th>
<th>R</th>
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<td>19%</td>
<td>0%</td>
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<td>23%</td>
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<td>23%</td>
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<tr>
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<td>18</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Matrix III
Control Group

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>A</th>
<th>I</th>
<th>R</th>
<th></th>
<th>P</th>
<th>A</th>
<th>I</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>18</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>22</td>
<td>P</td>
<td>32%</td>
<td>9%</td>
<td>0%</td>
</tr>
<tr>
<td>A</td>
<td>0</td>
<td>7</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>A</td>
<td>0%</td>
<td>47%</td>
<td>33%</td>
</tr>
<tr>
<td>I</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td>I</td>
<td>27%</td>
<td>9%</td>
<td>55%</td>
</tr>
<tr>
<td>R</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>12</td>
<td>18</td>
<td>R</td>
<td>17%</td>
<td>0%</td>
<td>17%</td>
</tr>
<tr>
<td>PTS2</td>
<td>24</td>
<td>11</td>
<td>15</td>
<td>16</td>
<td>147</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P = Popular  R = Rejected
A = Amiable  PTS1 = Pretest Status Totals
I = Isolated  PTS2 = Test Status Totals
largest category is the stability of status across time for those children in the isolated group 54%, and the rejected group 50%. Each of the categories - popular, amiable, isolated and rejected were represented indicating that all children had a group and fit in some category. In looking at which categories children shift to, popular children do not shift to isolated and only one-fourth of the children move to another category. In the amiable category, very few children, 10% move up to popular, the largest amount of children stay amiable, but there is 29% that move to isolated and 16% who become rejected. With 54% remaining constant, 25% move to the popular status, only 4% move to amiable while 17% become rejected. One of the most interesting interchanges in the Matrix is that of the rejected group. These children seem to make almost equal changes, 21% to popular and 20% to isolated while 50% remain rejected and only a small percentage 9% move to amiable.

Comparing Differences Between Experimental and Control Matrices

Matrix IIa and Matrix IIIa were compared against the null hypothesis that they reflected identical samples using the Lambda statistic (Anderson & Goddman, 1957).

There is no statistically significant difference, but the differences in the matrices are interesting.

Matrices II and III separate the transition of the experimental and control groups. There was a shift in
every status from first testing to second testing with the exception of the amiable category (Table 7). The overall percentages in each category shows popular increased from 32% of the children in that category to 35%. Amiable stayed the same with 20% of the children remaining stable. The isolated children increased from 16% to 22% while the rejected children decreased from 32% to 22%.

Table 7
Experimental Group Sociometric Status Change From Pretest to Post-Test

<table>
<thead>
<tr>
<th>Category</th>
<th>Pretest</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popular</td>
<td>32%</td>
<td>35%</td>
</tr>
<tr>
<td>Amiable</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Isolated</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>Rejected</td>
<td>32%</td>
<td>22%</td>
</tr>
</tbody>
</table>

The transitions within each category made by the experimental group are as reported: 69% of the popular children remained in the popular category, 19% moved to amiable, none of the group changed to isolated and 11% changed to rejected. The children in the isolated category show 54% stayed the same, 23% transferred to popular, 23% moved to rejected while there were no shifts to amiable. The group which showed more change in all categories was the rejected group who shifted in the following ways: 23% to popular, 15% to amiable, 23% to isolated and 38% stayed the same (Table 8).
Table 8
Control Group Sociometric Status
Change From Pretest to Post-Test

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popular</td>
<td>33%</td>
<td>37%</td>
</tr>
<tr>
<td>Amiable</td>
<td>23%</td>
<td>15%</td>
</tr>
<tr>
<td>Isolated</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>Rejected</td>
<td>27%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Matrices IIIa and b display the analogous data for the transitions with groups are as follows: 82% of the popular group remained constant, 9% moved to amiable, no changes to isolated and 9% change to rejected. There were 47% of amiable children that stayed in that group with no children changing to popular, 33% changed to isolated and 20% to rejected. The isolated group made the following changes: 27% to popular, 9% to amiable, 54% remained the same and 9% to the rejected group. There were 47% of amiable children that stayed within that group with none of them changing to popular, 33% did move to isolated and 20% to rejected. Quite unlike the experimental group, the control group showed the following changes: 16% transferred to popular, no change to amiable, 17% change to isolated and 67% stayed the same.

Summary

In summary, Kindergarten children improve their scores
on the Interpersonal Awareness Test during the period of our testing. Although these findings show improvement, there is no evidence (at the .05 level of significance) that an experimental group, having been treated with a modified slide presentation by Feshback and Roe, does better than a control group who received no treatment. There is evidence of a relationship between the Borke scoring and sociometric status. In all sociometric categories, an increase in scores was shown at the post-test evaluation. During this study, notation has been made that isolated and rejected children in an experimental group are affected by some part of the treatment and show gains and category differences after the treatment time.
DISCUSSION

One of the main interests of this research effort was to find an intervention program that would help children enhance their social skills and improve their social status.

The first ANOVA (Table 1) that was used investigated the pretest scores between groups, experimental and control and between schools, Uintah, Lakeview and Kanesville, and found no statistical evidence that the scores were significantly different. The information that children are equal in pretest abilities such as recognizing empathy skills within the same scoring range, even though they come from various social areas, urban and rural, was found. Researchers in this study were pleased that they failed to find teacher effects or school and area effects that might have altered the findings.

The next area studied was the post-test scores (Table 2), showing the experimental group scored slightly higher than the control group but not enough to make a significant difference at the .05 level.

Different reasons such as effectiveness of the instrument, internalization, teacher and area effects, religion, discipline and age level, can be speculated upon as to why the program failed to increase the experimental group's score significantly. These will be discussed later in the chapter.
Further Analysis of Improvement in A.P.T. (Borke) Scoring From Pretest to Post-Test

The total population was analyzed according to group differences on pre-post Borke scores. This gain was pertinent indicating the children in both groups, experimental and control, did statistically show improved in scores across time in post-test scoring as revealed in Table 3. The next step was to check differences between experimental group and control group to see if one group did better than the other in increasing their scores. The experimental group did show more improvement although the findings were not significant. An assumption by the author is that since all the children scored higher on the post-test, factors such as maturational growth, subject matter, awareness, or teacher's effect could be instrumental in both groups developing more empathy skills. These factors will also be discussed later in the chapter.

Relationship Between A.P.T. Scoring and Sociometric Status

When considering the relationship between A.P.T. scores and sociometric status, a look at individual group differences is in order. During the pretest scoring between groups (refer to Table 4), the experimental popular mean 12.57 (SD = 1.98) and the control popular mean 12.14 (SD = 2.05) scored higher than the other categories. Dymond (1950) studied and reported that popularity and empathy have a close correlation. Empathic people show more willingness to help and support others, they
are more secure in the environment and more sensitive to others. Having internalized these sensitivities, the popular children are able to respond more appropriately to the Borke examination and thus show a higher overall score.

The amiable groups' scores did not vary greatly between pre and post-tests. These children did not appear to have internalized the skills of empathy. The amiable child may be pleased with his status and have no reason for wanting to change his ways to gain new friends. According to Peery (1979) amiable children have low impact but high preference and they may be considered to have few friends but consistent friends.

The isolated child does not have many opportunities to try out his social skills (Oden & Ashner, 1977), therefore, it is difficult for him to internalize the empathy teaching and become reinforced in a positive way. Since the popular children score higher than the other groups, an assumption can be made that popular children are more aware of the isolate's poor social skills and leave the isolated children alone because of the isolate's poor ability to respond back appropriately.

Shifts in Sociometric Status Across Time

The changes in sociometric status within the experimental group inform researchers that the popular children in both experimental and control groups remain more constant
than any other category. Ladd and Oden (1979) wrote that popular children have more knowledge on how to make friends. The possibility exists that with this knowledge, these children are able to make and keep the friends they have. This may be one of the reasons that none of the experimental or control popular children changed to the isolated category. The "pro-social" skills that have been developed by these highly accepted children seem to remain constant and percentage wise, as shown in Matrix IIb and Matrix IIIb, keep these children from becoming rejected or isolated. According to Peery's (1979) sociometric scoring technique, the popular children have high impact and high preference from the other children, therefore, these children seem to be able to maintain this high impact-preference rating with their peers.

The amiable group, who have low impact but high preference, made different changes in sociometric status during the period they were observed. In this study, the largest percentage of the amiable children in both experimental and control groups, stayed in the amiable category. Only a small percentage of the experimental group, 9% (Matrix IIb) changed to the popular category. Not one child in the control group changed. There was a larger percentage in both groups that changed to the isolated category, 25% in the experimental group and 33% in the control group. In the experimental group, 13% of amiable children moved to rejected and 20% in the control group
moved to rejected (Matrix IIb and Matrix IIIb). It appears to the author that the amiable children are not the aggressive, demanding children as seen within the rejected group and that possibly, their mellow ways keep them in harmony with their peers. However, since these children show a low score on empathy testing, whatever is helping them maintain their high preference is not due to a knowledge increase in empathy skill building. The amiable children are the most likely ones in the sociometric status group to go to the isolated category because their impact remains low and they lack empathy skills.

As focused on in this study, the isolated and rejected children between experimental and control groups show thought provoking changes. While 55% of the children remained constant, 27% moved to popular and 9% changed to the other groups in the isolated, control group. In contrast, the experimental group showed equal changes of 23% to popular and rejected, with none of the children going to amiable (Matrix IIb and Matrix IIIb). The isolated children appear to increase their social impact with the experimental group, as well as increase their social preference. There is a possibility that with isolated children, their peers recognize them as having few prosocial abilities, and therefore, leave them alone. Another possibility is that since the isolated group are aware of the differences between empathy categories (happy, sad, afraid, angry), they may choose to isolate
themselves. These children may be content to play alone and be content without having to interact with peers.

The rejected experimental group made more changes in their status than any other group. With the lowest percentage of children not changing status, 39%, changes to every other category are noted, including 23% of the children to popular, 15% to amiable and 23% to the isolated category. Within this group, then, changes are seen in impact and in preference depending on the child's placement.

The control group also show changes, but not in every category and not as high of a percentage change. There are 66% who remain constant while only 17% moved to popular and 17% to isolated with no amiable candidates. This group also made moves in social impact and social preference.

After looking at the changes children have made in the sociometric status, possible reasons that will change a child's popularity in the eyes of his peers is of interest. The treatment has to have had an effect on the experimental children, noting the changes that have been discussed. Interesting also to this writer is the impact a program or a teacher can make on a child's popularity. If this is indeed true, and it looks as if it might be, a closer look at the teachers who may project their feelings toward a child and the child's popularity status, is needed. If a teacher has that
"power" to change a child's popularity status through a program or his/her personal feelings, the author's feelings are that as educators we need to be assured that a knowledgeable, loving person fills that position.

Reactions as to Why the Study Did Not Show a .05 Significance in Experimental Groups Tested on Empathy Skills

Mentioned in the first part of the discussion, page 42, was a list of possible reasons why the intervention program was not more significant with the experimental group. The following reasons are given and explained in the following paragraphs: effectiveness of instrument, internalization, teacher and area effects, religion, discipline and age level.

The first reason noted was the effectiveness of the instrument. The testing instrument, the Borke Empathy Test, was questionable to this author in the sense that questions on the test could have been answered logically in two different ways and both of the answers could of been correct responses; for example, "Show me how Nancy would feel if you said something bad about her father or mother. Would she feel happy, sad, afraid or angry?" This author can see reasons for children to choose sad or angry depending on the child's mood or temperament. Either answer could be an appropriate response, but in the Borke answer guide, if the child does not answer "angry," the response is considered incorrect.
As stated in an early paper of Borke (1971), children of five or six do have a difficult time differentiating between sad and angry. Happy appears to be the first emotion they internalize, then they know fear - perhaps because of media effects in their environment. Sad and angry appear to be the last emotions they internalize. Therefore, if the questions are not very specific with only a one answer possibility, and the children are still having a difficult time differentiating between sad and angry, the instrument needs to be evaluated to provide a more accurate tool in testing for empathy. While the Borke test may be appropriate for pre-school age children, it may be an inappropriate tool for Kindergarten age children since scoring was relatively high in the pretest.

The second reason to be discussed is internalization. In Piaget's (1926) studies, he finds that children are very concrete in their thinking ability up until the age of 7 years old. The present study asked the children to internalize the Feshback and Roe slide stories and implement the concepts of emotions into their environment and even more specifically into scoring higher on the Borke Empathy Test. Although Borke (1971) states that children are able to recognize the different emotions as early as 3 years old, being able to apply those skills is a different task and the time element might be wrong with these children. The program could be introduced too late or too early in their lives.
Teacher and area effects are the third reasons mentioned. All three teachers graduated from the same University, Utah State, and their philosophy in teaching is very closely related; they are very "feeling" oriented. Also possible, in the opinion of this author, the social sensitivity of the teachers being transmitted to the children is noted. Since the control group showed a close proximity to the experimental groups in the Barke post scoring, the teachers may have continued teaching empathy skills although they were not using the Feshback and Roe slides in the control group as a teaching tool.

The school areas, although in rural and urban areas, are in the same school district, Weber County. The philosophy of that district is school wide and of the belief that "Every child is a winner." Although the children come from different areas, the unity of the district may be instrumental in giving the child some social skills.

Religion is the fourth possible reason that the scores were not significant. In the Ogden, Utah area, the majority of the families are of the Mormon faith. Early programs are started with young children within the structure of the Church. Interactions with many children provide social opportunities to build empathy skills at an early age (2 years old). If children of non-member families in another area were tested as to empathy skills, a more significant difference might materialize.
Discipline may affect the child's empathy understanding. If he/she is constantly in trouble at home and school and only given negative feedback, it is this writer's opinion that he will in turn give the negative feelings back. Looking at the positive feedback, from a mother or teacher, helps build the child's self-concept and feelings about others. His insight is developed and he is able to put himself in others' shoes. Therefore, if the teachers are teaching about self-concept and feeling good about yourself, the reinforcement is positive and the child is developing good empathy skills through modeling.

The age level for teaching empathy is a factor in differing scores. As an educator, this author notes that the Kindergarten age child has some empathy skills when he comes to school. He has sympathy with those children around him and is sensitive towards his peers. He/she is not afraid to express his feelings, although he may not be able to put the right words with the right emotion.

More factors are considered on page 39 as to the reasons why the scores for experimental group were not significantly higher than the control group, maturational growth, subject matter, awareness and teacher effect.

The first factor to be discussed is the maturational growth. The treatment was administered over a four-week period in the spring of the school year. As observed by this author, the child's readiness skills, social growth and independent skills show a rapid increase during this
time period. The control group as well as the experimental group could of been more aware of their environment during a maturational growth span, therefore, allowing both groups to do well on the Borke test.

All three schools were using a highly empathic tool in addition to the treatment provided in the study for the experimental group. The tool, Alphatime, although used as a reading readiness program, is very conscious of children's feelings and responses to the world around them. The majority of lessons center around situations in which the children respond in an empathetic manner to the "letter people." Children have been involved in the program from the first month of school and may have already in various ways, internalized some empathy skills. It may be that the continuation of the program, without the treatment, provided the control group with an equal amount of practice in empathy as the experimental group. The fact that the children in both groups improved even more than the pretest indicates that empathy skills were internalized in ways by the children. The teaching tool, for the experimental group, was an enrichment program for the teaching of empathy, when used with the already "rich" empathy teaching tool of Alphatime. Of interest would be a study of the same topic using one school teaching with Alphatime the entire year, and one school absent of Alphatime.

The teachers in the study were aware of the testing
and purpose of the study. The knowledge of the study could have an effect on the transferring of empathy information to the control group. A naive teacher possibly would make a difference in the scoring of both groups.

Of interest to this author was a set of identical twins in the experimental group. During the first sociometric testing, both boys scored in the popular range on the sociometric scale. During the second sociometric testing, the boys scored closer to the rejected side of the scale. It must be noted that the difference in popularity and rejection, as well as amiable and isolated, is a result of how many times a child is chosen, positively or negatively. The line is thin, and children could be in one category one time and shift to the opposite category the next time. The popularity of the twins was of interest, scores were checked again. It was found that the only time the boys were chosen negatively (they were always chosen together) was on the question, "Whom don't you sit by on the rug?" The rug time for these boys was the only time they chose to sit by each other, but they always sat by each other at that time. Perhaps the other children sensed the twins togetherness at that time and did not want to interrupt, therefore, choosing them negatively because they sat by each other during that particular time.
SUMMARY AND CONCLUSIONS

Summary

It must be emphasized that although the results of the study were not that which had been desired, growth and learning did take place. Although the results are not statistically significant, the data trends are in the expected direction. Children were made more aware of empathy skills and were made more aware of social skills needed for sociometric growth. A critical look at the teaching tools gave the researchers better insight into what changes need to be made before another study such as this one takes place. An awareness of teachers' ability and the tools' ability to change a child's sociometric status has to be one of the major concerns. The fact, itself, that children do change sociometric status with an increased knowledge of social skills (empathy) is important. It must be emphasized that the children already had developed empathy skills, knowledge gained from pretest scores, and the gain increase was not as high as the gain would have been if the children had scored lower during pretest.
Conclusions

From the results of this study, it may be concluded that children do produce an accelerated score after a period of six weeks has passed on an empathy test. It is not reasonable at this time to conclude that the increased scores are the product of an empathy treatment. Furthermore, a conclusion can be made that children do make changes within their sociometric status and this may be due to an awareness of empathy skills presented.

Implications for Further Study

Several possibilities for future studies are apparent. They are:

1. Since the treatment time in this study was over a five-week period, of interest would be a study of this nature over the period of one year, beginning in the fall and terminating in the spring. A further suggestion for the study would be teachers who were picked randomly and kept innocent of the proceedings.

2. Having questioned the validity of the Borke Empathy Test, this author would suggest further investigation in developing an empathy test that would be more accurate in gaining knowledge from Kindergarten age children.

3. It was observed during the correcting of data, that many of the subjects confused the emotion sad and angry. Further study into age differences, identifying the proper term could be helpful in assessing a more
SUMMARY AND CONCLUSIONS

Summary
It must be emphasized that although the results of the study were not that which had been desired, growth and learning did take place. Although the results are not statistically significant, the data trends are in the expected direction. Children were made more aware of empathy skills and were made more aware of social skills needed for sociometric growth. A critical look at the teaching tools gave the researchers better insight into what changes need to be made before another study such as this one takes place. An awareness of teachers' ability and the tools' ability to change a child's sociometric status has to be one of the major concerns. The fact, itself, that children do change sociometric status with an increased knowledge of social skills (empathy) is important. It must be emphasized that the children already had developed empathy skills, knowledge gained from pretest scores, and the gain increase was not as high as the gain would have been if the children had scored lower during pretest.
accurate empathy response. Along this same line, investigation into what sex (if any) is able to discriminate the two choices (sad and angry), and at what age.

4. An interesting study in the field of sociometrics would be the status a child holds and maintains if his absentee record is high. Because children are not in attendance, even though they have good empathy skills, does that make a difference in popularity?

Limitations

Three limitations that concern the effect of this study are: time, sealing effects and the inadequacy of the Borke Empathy Test.

The short time period of two months is questioned. The increased effectiveness of constant teaching of Kindergarten children must be taken into consideration. Suggestions of a longer time period of actual teaching, perhaps a nine month period, is made.

The children showed considerable knowledge of empathy as recorded on the pretest. Since the testing scores were high to begin with, there was not as much opportunity to record a large difference in pretest and post-test.

The inadequacy of the Borke Empathy Test may have been instrumental in scores being different than hoped for because of the possibilities of answers being correct between sad and angry.
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Fouts, G. T. Perceptual and motor skills, effects of being imitated on the behavior of preschool girls and boys. Perceptual and Motor Skills, 1975, 41, 75-78.


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APPENDIXES
A. TEACHING TOOL FOR EMPATHY LEARNING

**Equipment needed:** Slides from Feshbach and Roe Affective Situation Test For Empathy, Tape and Recorder with the tape teaching empathy.

**Instructions:** Teacher will put slides and tape on, changing slides when beeper sounds. Two stories will be presented each day, for a total of 4 days. A review will then be given and the stories repeated in the same order. Another review will be presented and the sequence taught again ending with the third review.

**GH-I**

1. This girl decided to enter a contest that she hears about on TV. The prize is two tickets for everything at Disneyland even including food. She feels excited when she thinks about entering the contest. Her face tells you she is excited.

2. Here she is mailing her entry hoping that she will win. She is feeling glad that she is entering the contest. It feels good to participate in contests and be one of the kids.

3. She has won. Here she is receiving the good news in the mail and the tickets as well. Wait till her friends and family hear about this. She is so happy that she won the contest. It is a good feeling to be happy. Look at that big smile on her face. If she was not happy, you would see a frowny face. Her face looks nice.
GH-11

1. This boy has just awakened and he remembers that today is his birthday. He feels excited because he is having a party and there will be presents. He is glad that his friends are coming to the party.

2. Here he is greeting his friends who are coming to his party. He is so glad that they came. It feels good to have friends. Look at his face and his friend's face. It is fun to have a party and to be invited to parties. That makes us feel good when someone invites us to a party.

3. Now he is ready to blow out the candles on his delicious cake before he opens his many presents. He has had such a good time at his birthday. Look at the big smile on his face. The other kids are having a good time too. Look at the smiles on their faces.

Discussion:
What kinds of things made the first girl happy?
Would she have been happy if she had not won?
Would you be happy if you won a contest?
Have you ever won a contest?
How did you feel?
What kinds of things in our classroom make you happy?
What kinds of things at home make you happy?
What kinds of things made the second girl happy?
Would that make you happy?
GA-1

1. Two girls are playing ball. One girl is asking the other girl not to play so close to the window because it might break. She is afraid the window will get broken and the people inside will get angry. That is not a happy feeling. It kind of hurts inside.

2. The girl didn't listen. The ball did hit the window and the glass shattered all over. The girls feel upset that the window broke. Now they are afraid of what might happen to them. They might feel like hiding. Look at their faces. Those are not smiley faces.

3. And when the owner rushed out to see what happened, the girl who really broke the window blamed it on the other girl. The girl that did not break the window is so mad because she is being blamed for the window breaking. Look how angry her face looks. People who get angry are not happy.

GA-11

1. The boy in the grey sweatshirt is getting ready to test his new rocket. The boy standing up is watching him. It's fun to get a new toy and have a friend try it out with you.

2. The boy who was watching is trying to grab this other boy's rocket away. That makes the boy upset and afraid he will lose his rocket. The look on his face is not happy. He does not want to lose his new toy.
3. The boy has managed to grab and take away this boy's new rocket. Now the first boy is really angry and wants his rocket back. His face looks mad. It is not pleasant to look at.

Discussion:
What made the girls feel afraid?
What makes you feel afraid? Show me what your face looks like when you are afraid.
What kinds of things make you angry?
Show me an angry face?
What kinds of things make you angry at story time?
What kinds of things make you angry at play time?
How did the first boy feel when his rocket was taken away?
How would you feel? Would it feel good?
(Teacher will accept all answers)

GS-I

1. Here is a girl and her day. This girl goes everywhere with her dog but sometimes the dog tries to run away. When he tries to run away, the girl worries. Look at her face and see if she is happy when she worries.

2. Here he is running away again. The girl is afraid she won't be able to catch him. She is afraid he might get hurt. Look how worried her face looks.

3. This time the dog cannot be found and the girl realizes that the dog may be gone and lost forever. She
feels very sad and she even feels like crying. She has lost a good friend. She is lonesome without him and that makes her sad.

BS-11

1. This boy has just moved into the neighborhood. He sees some boys playing a fun game. He would love to be able to join them. It is scary sometimes to meet new friends. You might get a funny feeling in your tummy and want to go home to mom.

2. He asks to join in. They say "no." They have enough children and besides they really don't know him. The boy feels very bad that they won't play with him. He is lonesome and sad. Look how unhappy his face looks. He might feel like crying.

3. The other children continue to play. He has no one to play with. He does not feel good. He feels sad. He does feel like crying.

Discussion:
How did the girl feel when her dog ran away?
Has your dog ever run away? How did you feel?
Is a sad look on somebody's face pleasant to look at?
How would you feel if you lost a friend?
Do you ever feel sad at school? What made you sad?
How did the boy feel when the other kids wouldn't play with him?
Have you ever been left out? How does that feel?
Have you ever left someone out? How did that feel?
How would you feel if no one would play with you?
Show me a face that would feel bad.

GF-I

1. This girl is picnicking with her family in a wooded forest. Her parents asked her to bring some water from the well near the road. She likes to help her family. She is happy to get the water.

2. She seems to have taken the wrong turn because there is no road, only trees and more forest. She is afraid she is lost. She is very scared. Look how frightened her face looks. It is not pleasant to look at.

3. She is getting deeper and deeper in the forest. It is getting darker. Night is coming and she cannot even see where to go. She doesn't know how to find her way back. She is very frightened. She feels afraid and alone. She feels like crying.

BF-II

1. This boy sees a big dog. He does not know whether the dog is friendly or mean. He is beginning to worry about the dog. Look how concerned his face looks.

2. The dog begins to run after the boy. The boy tries to get away. The boy is afraid the dog will hurt him. It does not feel good to be afraid. Sometimes your body shakes inside if you are afraid.
3. The boy is not able to get away and the mean dog is going to attack him. The boy is very frightened and scared. He wishes his dad or mom were there to protect him. He doesn't want to get hurt. His face looks so scared.

Discussion:

How did the girl feel when she found she was lost?
How would you feel if you were lost?
Have you ever been frightened? What frightened you?
What frightens you here at school?
How did the boy feel when he saw the dog?
Have you ever been scared by a dog? What does it feel like?
How did the boy feel when the dog started chasing him?

(Teacher will accept all answers)
CARNEGIE-MELLON UNIVERSITY

B. Interpersonal Awareness Test

Part I

Name: ________________________ Date of Birth: ______________
Age: ________________________ Date: ________________________
Examiner: ____________________

Instructions:

1. Examiner places pictures showing child of same sex
   as subject in following order: Happy, Sad, Afraid and Angry.
   These are pictures of Nancy (Johnny). Can you tell me how
   Nancy (Johnny) feels in each picture? How does Nancy
   (Johnny) feel in each picture? How does Nancy (Johnny)
   feel in this picture? Examiner points to first picture.
   Examiner tells subject the names of any feelings child is
   unable to identify. Examiner circles faces child names
   correctly.

   Happy    Sad    Afraid    Mad    None

2. Illustration A: Examiner picks up faces and
   shuffles them making sure the "Happy" face is not on top.
   Examiner lays out the faces in the new order and then places
   the picture for the first illustration story in front of the
   subject. Show me how Nancy (Johnny) would feel if she were
   eating the food she liked best. Would she feel (examiner
   names the emotions according to the new sequence of faces).
   Pick up the face you think and put it on the picture.
   Examiner circles the face selected by the subject:
Happy  Sad  Afraid  Mad  None

If the subject does not select a face, the examiner places the "Happy" face on the picture, saying: Nancy (Johnny) would probably feel "happy" if she were eating the food she liked best.

If the subject does select a face, regardless of which one, the examiner says: Very good. Why do you think Nancy (Johnny) would feel _______ if she were eating the food she liked best?

Now I am going to tell you some more stories about Nancy (Johnny) and I want you to show me how Nancy (Johnny) feels in each story. There are no right or wrong answers. All I want to know is how you think Nancy (Johnny) feels in each story.

NOTE: Examiner reshuffles pictures before each story and circles child's response.

1. Show me how Nancy (Johnny) would feel if her mother was going to take her some place she liked to go. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _______? (H) 

2. Show me how Nancy (Johnny) would feel if her mother forced her to eat something she didn't like. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on
the picture. Why do you think Nancy (Johnny) would feel ________? (AN) H S A M

3. Show me how Nancy (Johnny) would feel if she dreamed that a tiger was chasing her. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel ________? (AF) H S A M

4. Show me how Nancy (Johnny) would feel if she fell and hurt herself. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel ________? (S) H S A M

5. Show me how Nancy (Johnny) would feel if her sister or her brother took her toys away from her. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel ________? (AN) H S A M

6. Show me how Nancy (Johnny) would feel if she were alone in the dark. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel ________? (AF) H S A M

7. Show me how Nancy (Johnny) would feel if someone she liked very much had to go away. Would she feel (examiner names emotions according to sequence). Why do you think Nancy (Johnny) would feel ________? (S) H S A M
8. Show me how Nancy (Johnny) would feel if she got a new toy as a gift. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel_______? (H)
CARNEGIE-MELLON UNIVERSITY
Interpersonal Awareness Test
Part II

Name: ______________________  Date of Birth: ____________
Age: ______________________  Date: ______________________
Examiner: _____________________

Instructions: Now I am going to tell you some more stories only this time there will be just this one picture of Nancy (Johnny) to put the face on. Examiner shuffles faces making sure the "happy" face is not on top. Show me how Nancy (Johnny) would feel if you let her play with your toys. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Examiner circles the face selected by the subject.

Happy  Sad  Afraid  Mad  None

Why do you think Nancy (Johnny) would feel ________ if you let her play with your toys?

NOTE: Examiner reshuffles pictures before each story and circles child's response.

1. Show me how Nancy (Johnny) would feel if you gave her some ice cream. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _________? (H)  H S A M
2. Show me how Nancy (Johnny) would feel if you pushed her down and she got hurt. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel________? (S)  H S A M  

3. Show me how Nancy (Johnny) would feel if you pretended to be a ghost and ran after her in the dark. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel________? (AF)  H S A M  

4. Show me how Nancy (Johnny) would feel if you left her and went to play with someone else. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel________? (S)  H S A M  

5. Show me how Nancy (Johnny) would feel if she just finished building a tower of blocks and you knocked it down. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel________? (AN)  H S A M  

6. Show me how Nancy (Johnny) would feel if you told her a ghost story. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel________? (AF)  H S A M
7. Show me how Nancy (Johnny) would feel if you said something bad about her father or mother. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel? (AN) H S A M

8. Show me how Nancy (Johnny) would feel if you invited her to come and play with you. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel? (H) H S A M
VITA

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Master of Science

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Biographical Information:


Education: Attended elementary school in Ogden; graduated from Ben Lomond High School in 1961; received the Bachelor of Science degree from Utah State University, with a double major in elementary education and child development, in 1965; did graduate work in the department of child development, 1979-1980; completed requirements for the Master of Science degree, in family and human development, at Utah State University in 1980.

Professional Experience: Kindergarten teacher at Hamilton Air Force Base, two years, San Anselmo School District, one year; Weber County School District, Lakeview School, 10 years.

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