

THE EFFECTS OF AN ENRICHMENT PROGRAM OF SOCIAL
PROBLEM-SOLVING ON PRESCHOOL AND
KINDERGARTEN CHILDREN'S
INTERPERSONAL SKILLS

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CHAPTER I

INTRODUCTION

With technical advancements of society producing closer personal contact and reliance on others, it is becoming imperative for our present and future generations to develop the ability to maintain good human relations. The lifetime task of becoming acquainted and evaluating oneself in relations to others is essential and cannot begin too early (Gillham, 1959). Social scientists view our contemporary society as characterized by lack of concern for others. Our Western Society, with the striving individualism of its culture, is seen as fostering an egoistic rather than an altruistic way of life (Hoffman, 1973).

Bessell (1973), in his contact with patients in psychotherapy, pointed out that many patients were middle-aged, middle-class, married and educated, functioning tolerably well in daily living but disappointed with their lives. In his consultations with these people, Bessell identified three basic related deficiencies found within their lives: (a) They were not really aware of the motives that influence their behavior. (b) They lacked a real and steady confidence in themselves as whole persons.

(c) And finally, they only dimly understood why and how human beings react to each other.

A review of the literature led to the supposition that individuals need to develop early the ability to better understand themselves and other people and the ability to think critically and apply humane values in their interaction with others. The emphasis of this study was interpersonal interaction and, specifically, one approach to increase effectiveness in this interaction.

Personality development is described as a continuous process; although healthy personalities by no means occur naturally (Margolin, 1974). Foote (1955) stated that, "There are no grounds for assuming that human nature will 'unfold' into competent personalities if merely given freedom" (p. 49). It would seem, then, that formal education could assist in developing healthy personalities as well as intellectual capabilities.

This research study was conducted under the basic assumption that the events of the early years of life are critical for long-term personal development. More specifically, early experiences can make a measurable difference in what occurs later in the individual's developmental sequence. Evans (1971) stated that sufficient evidence exists to document with confidence the academic and social significance of early childhood learning. Kohlberg (1968) placed similar emphasis on

personal characteristics developed by the background of preschool and early experiences. Hohn and Swartz (1971) affirmed that, "Many theorists have taken the position that the first five years of life are most important for intellectual and social development. As researchers become more knowledgeable about the development of children's attitudes and concepts, they become more convinced of the necessity for educational intervention and facilitation in the preschool and early elementary school years" (p. 1).

There is a vast amount of literature today dealing with the cognitive development of young children. General focus has been on children's thinking on such concepts as number, space and other impersonal topics. In questioning this emphasis, Emmerich (1973) alleged that another index of the young child's total educational experience should be the nature of his personal-social behavior within the classroom.

To increase a child's personal-social experiences in the learning environment, "We need to provide a way to open a discussion of life that leads to the appreciation of what others could do for us, what we could do for them and how to interact constructively rather than harmfully with other people" (Bessell, 1973, p. 1). Bessell felt that if society could help children become aware of themselves and empathetic and constructive in their social

relationships, many children may not have the emotional problems or neuroses that are becoming common today.

"Social learning consists of all the learnings which children have both in and out of school that help them to look at themselves and others with increasing respect, help them to gain ability to solve life's problems, and help them to build better understandings of living together" (Gillham, 1959, p. 3). An interpersonal relationship is one in which any two people are involved with each other in any way. Competence in this relationship is the satisfactory degree of ability for performing certain types of tasks implied in this type of relationship.

The nursery school is usually designed to enrich the child's social experiences; often times, it provides the child with his first peer contacts (Lickona, 1969). Researchers suggest that interpersonal competence can be cultivated through planned educational experiences (Flapan, 1968; Margolin, 1974). Foote (1955) acknowledged that, "Interpersonal competence is found to some degree in any normal person, regardless of his previous experiences. Nevertheless, as with virtually all human abilities, by practice and purposeful training, wide differences result. Interpersonal competence is neither a trait nor a state. It denotes capabilities to meet and deal with a changing world, to formulate ends and implement them" (p. 36). Bessell (1973) found when children are exposed deliberately

to the ways in which people are alike and different, and when these differences were discussed in an accepting atmosphere, four and five-year-old children can develop competent interpersonal skills through gamelike experiences.

This study was directed toward developing both the competence and the confidence of the young child in social interactions. The program emphasizes an accepting atmosphere of gamelike experiences to enrich the social environment and interaction of the preschool child. Its intention is to give the young child a good foundation of skills for handling interpersonal problems that may arise during normal social interaction. Experiences in this area were designed to encourage active involvement of the children. Their social and emotional experiences within the classroom reinforce and increase the internalization of the program's subject matter. The relevant information is expressed and this information gets shaped and refined by continuous feedback, not only from the teacher but also from the other children (Bessell, 1973).

Statement of the Problem

The purpose of this study was to determine the effect of an eight-week enrichment program stressing interpersonal cognitive skills and empathy on preschool and kindergarten children's ability to handle social interactions within the nursery school and kindergarten environment. Two

questions to be answered were: (a) Can a cognitive problem-solving style be taught to four through six-year-old children within an eight-week enrichment program in school? (b) Will program related behavioral changes occur within the social climate of the classroom?

Hypotheses

The basic hypotheses of this study were:

(a) The children receiving the eight-week enrichment program will achieve significantly greater problem-solving scores on the Preschool Interpersonal Problem-Solving Test than those children not receiving the enrichment program.

(b) The children receiving the eight-week program will significantly increase positive social behavior, as measured by the Hannemann Pre-school Behavior Rating Scale.

The independent variable in this study was the eight-week enrichment program. The dependent variables were the verbal scores as recorded on the problem-solving test and the behavioral changes in the classroom as recorded on the behavior rating scale. The control variables were the age of the children, their socio-economic background, and the length of school day. Possible intervening variables may have been the maturation of the children during the eight-week program and the personality differences and teaching capabilities of the teachers.

Limitations of the Study

The findings and conclusions reached in this study are limited in their application to the following:

(a) The results can be generalized only to four through six-year-old children of a similar socio-economic background.

(b) The results can only be generalized to children who participate in a child care program of comparable exposure.

(c) The success of any educational program in part relies on the dynamics of individual teachers. Since three different teachers conducted the enrichment program, the diversity of personalities and capabilities may effect program success. Teacher training sessions, structured dialogue and activities, and classroom visitations were used in an attempt to control teacher variability.

(d) This study utilized a quasi-experimental design with intact groups. Since implementation of more efficient designs were unattainable at this time, and it was felt that the area of social problem-solving with young children was worth considering, the design employed was believed to be sufficiently probing to be worth employing (Campbell and Stanley, 1963).

(e) The fact was also recognized that many events effect behavioral changes in the classroom. This study

was not concerned with other events outside of cognitive social skills developed in the enrichment program as a means of changing behavior in social situations within the classroom.

Basic Assumptions

It was assumed in this study that: (a) Events in the early years of life are crucial to later development. (b) Nursery and day care experiences can be an enriching experience for young children. (c) Nursery and day care curriculums usually do not include cognitive skills related specifically to interpersonal problem-solving. (d) Learning and behavior in intellectual areas are discrete from learning and behavior in interpersonal areas. (e) Classroom behavior is a result of a combination of cognitive and affective development of a child.

Summary

In an attempt to assist young children in developing healthy social personalities, enrichment programs in social development were reviewed. Programs incorporating empathy, and adaptable to the nursery school and kindergarten settings were of particular interest to the researcher.

CHAPTER II

REVIEW OF LITERATURE

This literature review relates to the following areas: (a) role-taking and empathy, (b) interpersonal relations and problem solving, and (c) training programs to increase social problem-solving skills.

Role-taking and Empathy

One essential ingredient of any social learning skill appears to be the process in which the individual somehow cognizes, apprehends and grasps a certain number of attributes of another individual (Flavell et al., 1968). Selman (1971) viewed role-taking as the first typical social cognitive skill. Flavell et al. (1968) saw social interaction and communication dependent upon the ability to take the role of another person, to be able to reproduce their attitudes in one's own response, thereby learning how to react to one's own behavior as others are reacting to it.

Research on role-taking with children has dealt most frequently with age differences. The earliest developmental studies by Gates in 1923 and Walton in 1936 (Flavell et al., 1968) both found that the ability to identify correctly

the intended emotional expressions in a series of posed pictures increases with age. Not a great deal has been done in studying the developmental changes prior to middle childhood. One of the first studies with young children was Murphy's classic study in 1937. She examined sympathy in relation to the preschool child, and found that children who seemed most concerned about others in distress were among the more popular and emotionally secure in the group. In Piaget's (1932) observations of young children, he concluded that social sensitivity, like cognition, proceeds in a series of hierarchical stages. His work, as well as others (Flapan, 1968; Gilbert, 1969; Rothenberg, 1970) support the hypotheses that conceptual role-taking skills do develop with age. Piaget (1932) asserted that many children of the early preschool period are simply unaware of perspective variations as one of life's possibilities. According to Piaget, the child between eighteen months and seven years of age is primarily egocentric, and unable to take another's point of view. It is not until around seven to twelve years of age that the child is able to see the viewpoints of others.

An aspect of social competence closely related to role-taking is empathy. Empathy is the involuntary experiencing of another person's emotional state rather than a more pertinent and appropriate response to one's own actual situation (Hoffman, 1973). Empathy is

increasingly becoming recognized as the primary process underlying human interaction. It is seen as a central component of interpersonal development (Borke, 1971); and according to role theorists, the absence of empathic ability hinders the development of interpersonal relationships (Greif & Hogan, 1973).

Borke (1971) acknowledged that general research supports the idea that as the child grows older he gains more experience in empathy and social relations. But she, as well as others, challenged Piaget's view that the child between two and seven is primarily egocentric and unable to take another's point of view. Borke (1971) found that children as young as three years of age were aware of other people's feelings. Furthermore, she found the testing method a crucial factor in determining whether young children were measured as empathic.

Results similar to Borke's 1971 study were found earlier by Flavell et al. (1968) and Feshbach and Roe (1968). Flavell et al. (1968) supposed the rudiments of role-taking and empathy may be present before the child is two years old; not long after he has attained person permanence.

In a cross-cultural study of empathy, Borke (1973) found that the capacity for social sensitivity and empathic awareness develops at a very early age. In this study of American and Chinese children, three to six years old, results suggested that empathy may be a basic human

characteristic related to social adaptation and essential for effective interpersonal communication. Lois Murphy's classic study of preschool children (1937) also concluded that experiencing distress when another is in distress seems reasonably universal.

There have been various approaches to the study of empathy in children. The main area of disagreement in these approaches has been the degree to which cognitive versus emotional criteria are used to define the properties of empathy.

Feshbach and Kuchlenbecker (1974) proposed a three component model of empathy: (a) The first was the ability to discriminate and label affective states in others. (b) The second was the ability to assume the perspective and role of another person. (c) The third was emotional capacity and responsiveness. The first two components are cognitive and crucial to this study. Their implication for social development is the recognition that cognitive understanding is a very necessary part of the empathy response. Earlier work by Kuchlenbecker and others (1974) had found a similar link between cognition and empathy, although emphasizing that comprehension was a necessary but not sufficient condition for empathy.

The affective area of learning is not to be overlooked as important in social development. But, Gilbert (1969) proposed that affect concepts may perform the same functions

of thought and problem-solving in relation to subjective experience as do geometric concepts in relation to the world of things. He alleged that "Affects are in part cognitive. They are in part the result of interpretation of 'sensations' from within our bodies influenced by our perceptions of the environmental context of the moment" (p. 629). Affects as interpretations, he stated, are learned. His research tests support the conclusion that a child's knowledge and acknowledgment of affect concepts are part of a general orientation which he utilizes in his awareness of self and his interpretation of other people.

The literature reviewed recognized empathy and role-taking as essential components of interpersonal relations. Of special interest is the cognitive aspect of empathy and its role in these relations.

Interpersonal Relations and Problem-Solving

According to Foote and Cottrell (1955), the concept of interpersonal relations was first explicitly stated by Dr. Harry Sullivan in 1947. Foote and Cottrell (1955) wrote that since 1947, the attention to "mastery" and "coping behavior" has become current among neo-Freudians.

The following research work in interpersonal relations has been reviewed by Reif and Stollak (1972): Dymond, 1952; Ojemann, 1961; Dupont, 1962; Stotland and Dunn, 1963;

Hoffman, 1963; Baldwin, 1965; Dubin and Dubin, 1965; Stotland, Shaver, and Crawford, 1966; Whiteman, 1967; Feshbach and Roe, 1968; and Gilbert, 1969.

In Reif and Stollak's (1972, p. 54) summarization of the work in interpersonal behavior, they listed the following concepts:

1. Children are aware of feelings, thoughts and behaviors of others to varying degrees.
2. Age seems to be the most consistent determinant of awareness, although there exists wide differences within different ages.
3. Differences appear to a large extent to be variants of the child's identification with others.
4. Degree of identification may affect awareness of others. Social learning increases with the child relating with siblings and peers.
5. Awareness of others is distinct from empathy with others; the former requires merely a cognitive understanding, whereas the latter also includes an affective, communicative response. Measurement of the latter is difficult with young children.
6. Children's awareness of others can be measured from either test materials, or from naturalistic observation; in either case an inference is always made.

From past research in interpersonal relations, one can assume that children of all ages are aware of the feelings of others. This awareness seems to vary with age, and is heavily influenced by environmental experiences. Furthermore, testing of empathy and interpersonal relations with young children is difficult, requiring cautious interpretation of results.

Programs to Increase Social Problem-Solving Skills

A new direction to the study of interpersonal relations, that incorporated empathy and other components of social sensitivity, and yet added a different dimension, was the work done by Spivack and Shure and summarized in their book, Social Adjustment of Young Children (1974). Their main component of healthy social functioning centered on the concept of interpersonal problem-solving based on a cognitive approach to social learning.

The cognitive approach to social learning has attempted to break down the traditional conceptual dichotomy between social and intellectual development. Social development is regarded as a special area for learning. A cognitive viewpoint sees social development as the process by which the child's social experience gives rise to certain ways of thinking about other people. These formed concepts in turn govern the child's subsequent social behavior (Lickona, 1969).

Spivack and Shure (1974) proposed that "The significance of cultural, interpersonal, familial, and psychological intrapsychic events in human adjustment depends on their impact on the problem-solving capacity of the individual in his attempts to become the kind of person he wants to be" (p. xi). They have supported in their work the idea that individuals can be helped to develop a problem-solving style through a cognitive approach to social learning.

Human problem-solving and thinking are rather complex and may take many specific forms. Davis (1973) stated that research has shown the skills involved in problem-solving can be increased through deliberate teaching of appropriate attitudes and techniques for producing ideas and by exercising various abilities. He sees two main barriers to problem-solving: habit and conformity. As an attempt to avoid these barriers he suggested starting training programs at an early age.

Hoffman (1973) questioned the possibilities that a child develops social competency naturally and that a child emerges from peer interaction with a greater understanding of others and the ability to work differences out mutually. He saw the outcome dependent in part upon how social conflicts are handled by parents and other socializing agents.

Most research in problem-solving ability has been

concerned with the impersonal world. Inquiries into these topics do not reveal much insight into aspects of cognition that play a role in interpersonal relationships. One main criticism by researchers (Feffer, 1970; Flapan, 1968; Lickona, 1969) of Piaget's work was that he centers largely on the nature of children's thinking in dealing with problems that are objective and impersonal in character. He has been criticized (Lickona, 1969) for not making any systematic efforts to structure the child's social environment so as to promote progress in this area.

In their work in the problem-solving area, Spivack and Shure (1974) have suggested that it is necessary to distinguish between problem-solving with impersonal intellectual tasks and impersonal problems, and problem-solving with interpersonal problems. They stated (1974) that "Solving impersonal problems does not allow one to become personally involved except to the extent that he is ego-involved in the task" (p. 3). The task is relatively unrelated to the individual as a person. Interpersonal problem situations have a greater emotional and intimate relationship to him.

Many of the concepts and ideas used in this research study have been adapted from the works of Spivack and Shure (1974). The thrust of their efforts are congruent with Bessell's (1973) commitment to emphasize the child's developing belief in himself as the kind of person who

can cope with challenges. This ability may require an understanding of the problem and careful step-by-step planning of different ways to reach a goal. Spivack and Shure's approach to teaching problem-solving skills centers upon the capabilities of arriving at alternative possibilities or solutions and possible consequences to actions.

In an earlier study, McDonald and Paulson (1971) found that children need to see differing perspectives and to expect differing reactions from various individuals in similar situations. McDonald and Paulson found that a child can provide adequate resolution to conflict when he is provided with a familiar conflict situation in a training program.

Lickona (1969) reported a study by Anderson of two different patterns of reaction to conflict observed in children. The dominative pattern was identified by goal seeking without the regard for the desires or interests of another child. Evident behaviors in this pattern were: commands, criticism, threats, physical seizure of toys, rigid responses, and no consideration of alternatives. The integrative pattern was identified as being more flexible, considerate of alternatives and interests and opinions of other children. The evident behaviors in this pattern were: pointing out common purposes, making

requests or suggestions, and complying with another's suggestions. In his review of studies, Lickona found that by the intervention of an adult, children can be helped to see social situations from several perspectives other than their own, and they can be taught how to anticipate consequences of different behaviors.

Muuss (1960) and Ojemann (1967) stated that solving human problems can make a significant contribution to behavior adjustment, and that teachers may enhance causal thinking by direct intervention in the classroom. Their research also suggested that causal thinking about social events is not the same as about impersonal events.

The ability to conceive of alternate solutions has been related to behavioral difficulties in the classroom by Shure, Spivack, and Gorden (1972). They demonstrated in their study an intimate relationship between behavioral adaptation and the capacity to arrive at relevant and meaningful ways to solve hypothetical but real-life problems. They found this relationship as early as four years old through the use of the Preschool Interpersonal Problem-Solving (PIPS) Test.

Prior to the creation of the PIPS Test, Spivack and Levine tested the relationship between real-life problem-solving skills and behavioral adjustment by comparing two different groups of adolescents; one group

was found in a normal public school and the other lived in a residential treatment home. Using a story-plot procedure, they found that the disturbed adolescents were more concerned with immediate gratification and exhibited less rational thought with regard to steps taken toward goal completion than the normal adolescents (Spivack & Shure, 1974).

Using the same storytelling technique, Shure and Spivack found similar deficiencies among younger disturbed youngsters, ten to twelve years old, when compared to normals the same age (Spivack & Shure, 1974). In further studies of the normal population, Spivack and Shure found that youngsters rated as able to adapt in the classroom were able to imagine a variety of interpersonal problem solutions. In an attempt to examine problem-solving ability and behavioral adjustment among nursery school children, testing techniques were modified, and a unique measure was developed to assess the number and variety of alternative solutions given by young children. It was through the use of this test, PIPS, that further research into this area of problem-solving has been studied by Spivack and Shure (1974).

In his study of "The Role of Comprehension in Children's Problem Solving", Bem (1970) identified three stages of problem-solving which seem to complement the work of Spivack and Shure. These three stages were:

(a) Comprehension--the understanding of the problem situation, (b) Production--arriving at possible solutions, and (c) Mediation--using solutions in terms of verbal and action responses. Bem saw failures in problem-solving with young children particularly in the Production and Mediation Stages. Kagan, Rosman, Day, Albert, and Phillips (1964) had categorized the processes of problem-solving somewhat differently. Yet both studies agreed that the ability of the child to reflect on alternate solutions to problems was essential to successful problem-solving.

The studies done by Spivack and Levine in 1963, by Shure and Spivack in 1970, and by Shure, Spivack and Jaeger in 1971 (Spivack & Shure, 1974) found similar results regarding impulsivity versus reflectivity and problem-solving ability. Their studies confirmed that those children judged as either impulsive or inhibited showed comparable deficiencies in solving typical social problems successfully; thus indicating that children who were maladaptive at either behavioral extreme have difficulties in successful problem-solving.

In order to achieve problem-solving skills, Spivack and Shure (1974) found that children must first have certain language and cognitive skills and then must be taught how to use these skills successfully.

Language skills have been recognized by others as important in social and cognitive development. Researchers in linguistics (Yudoviches, 1971) have clarified the importance of language. It is not only a means by which we cooperate and communicate with each other but more importantly, it also enables us to represent the world to ourselves as we encounter it. Language has direct relationship to behavior. It acquires a regulative function, a power to coordinate, stabilize, and facilitate other forms of behavior. "As a child acquires the ability to use language to refer to things not present, it becomes possible for him to represent in words 'what might be' rather than simply 'what is' "(Yudoviches, 1971, Intro.).

In agreement, Bessell (1973) viewed language as a crucial vehicle for feelings and thoughts and for placing behavior in a frame of reference and perspective. Goodman (1970) extended Bessel's judgement by stating that the "language base for thinking hardly can be overestimated...self-control and self-direction vary directly with cognitive maturity and especially with the ability to manipulate situations symbolically, to anticipate consequences, to weigh, to judge, and to decide between alternatives" (p. 20). She sees children learning at a very early age not only how to speak a language, but also how to select the correct language to fit the

specific occasion or relationship. Reif and Stollak's study (1972) in sensitivity explained language behavior beginning at about eighteen months, at which time most of the language was directed exclusively towards the self. Gradually developing to the age of three, responsive as well as spontaneous remarks were becoming an important part of the child's interpersonal interaction.

Spivack and Shure (1974) found that many young children do not have mastery of the language concepts necessary to solve interpersonal problems. And, even if a child uses a word, it may not have a functional meaning for him in the interpersonal area of problem-solving. In the enrichment program that Spivack and Shure developed to teach young children to solve interpersonal problems, language abilities are taught as prerequisite skills. The concept of negation was included, based on the work of Bereiter and Englemann (1966). In addition, to aid alternative and consequential thinking, Spivack and Shure included such polarities as "same-different," "all-some," and "happy-sad/mad". Also included were cause and effect words as "why," "because," "maybe," "might," and "fair".

Enrichment programs such as Spivack and Shure's were based on the belief that intelligence does not necessarily correlate to social skills. Muuss (1960) found with sixth-grade children that although scores on

a causality test describing impersonal events do relate to measured intelligence, social causality test scores do not. In their study with disadvantaged preschool children, Shure, Spivack, and Jaeger (1971) found that the ability to use the English language, as measured on the Peabody Picture Vocabulary Test, did not significantly affect the results of the PIPS Test Scores. In another study by Shure, Newman, and Silver in 1973 (Spivack & Shure, 1974) 257 Get Set children were studied, and the findings replicated earlier studies. The differential ability to conceptualize alternative solutions was found not to be a function of IQ (as measured by the Stanford-Binet) or of mere verbalization while being tested. Knowledge of IQ scores did not assist in the prediction of behavioral adjustment. But knowledge of alternative thinking ability, in collaboration with IQ score, significantly increased predictive ability of behavior. This study seemed to indicate that the extent to which intelligence affects level of adjustment was determined by the degree to which the type of IQ test measured interpersonal problem-solving thinking.

In light of these studies it would seem that certain linguistic skills are basic to both problem-solving and thinking, and yet the cognitive processes that seem to be involved in interpersonal problem-solving cannot be

merely measured by IQ tests or other measures of an impersonal nature.

Spivack and Shure (1974) base their enrichment program on seven principles:

1. Teaching of prerequisite language and thinking skills before teaching problem-solving strategies.
2. Teaching of new concepts in the context of familiar content.
3. Program content focused on people and interpersonal relations rather than objects and impersonal situations.
4. Teaching of applicable concepts rather than correct grammar.
5. Teaching patterns of seeking solutions and evaluating them on the basis of their potential consequences rather than the absolute merits of a particular solution to a problem.
6. Encouraging the child to create his own ideas and offer them in the context of the problem.
7. Teaching problem-solving skills not as ends in themselves but in relation to the adaptiveness of overt behavioral adjustment.

In summary of the literature review, it would seem that an enrichment program stressing empathy and problem-solving skills, with the incorporation of language prerequisite

skills, would be beneficial for setting the groundwork for social competence. Since current research that studied the value of alternative thinking and positive behavior (Bessell, 1973; Lickona, 1969; McDonald & Paulson, 1971; Muuss, 1960; Ojemann, 1967; Spivack & Shure, 1974) seemed to have produced encouraging findings, emphasis in this area will be extended to the present study. Permission was obtained from Spivack and Shure to use parts of their program in this thesis study (see Appendix A).

The present study used an eight-week problem-solving enrichment program supplemented by increased activities in empathy comprehension. Because most of the work done by Shure and Spivack had been done with black inner city youngsters, this research attempted to study the value of a similar approach for middle class youngsters.

CHAPTER III

METHODOLOGY

Subjects

The subjects of this study were enlisted by the experimenter by contacting nursery and day care centers in the city of Denton, Texas. The program was explained to the center directors and teachers, and participation was requested. Three different, independent day care centers volunteered to participate in the study.

Centers located to serve middle class families were selected because of the lack of study done with this group by Spivack and Shure (1974) and because of the possibility that children from more deprived backgrounds might lack necessary verbal communication skills required for a short-term program (Borke, 1971). A study reported by Boger and Cunningham (1972) found that lower class children in comparison to middle class peers showed greater impulsivity, lower self-esteem, lower curiosity and lower task completion drive. Since this program was short term, an attempt to avoid special learning problems found in some lower class backgrounds was regulated by choosing children from middle class families.

In an attempt to control the amount of school exposure experienced, only those children who participated in an all-day care experience were studied. A quasi-experimental design of intact groups consisting of three control groups and three experimental groups was used in this study. The children composing the groups were the following:

The experimental groups consisted of nine 4-year-olds from Kiddie Korral Day Care Center and seventeen 5 and 6-year-olds (eight in one group and nine in the other) from the First Baptist Day Nursery.

The control groups consisted of eight 4-year-olds and eight 5 and 6-year-olds from Little People Playschool, and seven 5 and 6-year-olds from Kiddie Korral.

In total, there were 23 children in the control groups and 26 children in the experimental groups. The three teachers in the experimental groups participated in the training program and conducted the enrichment program in their classroom. The teachers in the control groups conducted their classes in their traditional manner.

InstrumentsThe Preschool Interpersonal Problem-Solving Test

This test measures the child's ability to name alternative solutions to two life-related types of problems: ways a child might obtain a toy from another child and ways a child might avert his mother's anger caused by his damaging property. In their book, Social Adjustment of Young Children, (1974) Spivack and Shure described this test:

For all peer problems the child had to conceptualize ways one child might obtain a toy from another. The experimenter showed the subject three pictures, two of children and one of a toy, and then (for instance) said: Here's Johnny (pointing to a picture) and here's Jim (pointing to another picture). Johnny is playing with this shovel (pointing to picture of shovel), and he has been playing with it for a long time. Now Jim wants a chance to play with this shovel. What can Jim do or say so he can have a chance to play with this shovel?

The procedure was designed to elicit as many different solutions as possible from each child as he went through variations of the problem situation. New characters and a new toy were presented to elicit

a new response and to maintain interest. The instructions were worded to encourage the child to give a different solution to each new toy and set of characters. The child was presented with a minimum of seven similar peer-toy situations, but if seven different solutions were given the experimenter continued until the child ran out of options.

For authority problems the child had to conceptualize specific ways to avert his mother's anger for acts of property damage. The same procedure was followed; after one solution, new characters and a new act of property damage were presented and a different solution was sought. (p. 12)

The subjects' responses were recorded on a PIPS Test Sheet. A child's score consisted of the total number of different solutions given to the stories (see Appendix B).

Validity of PIPS Test. Over a four-year period, the PIPS Test was used in several different research studies. The major findings were consistently replicated over the entire research period.

Based on a behavior scale on which children were rated by their teachers, two aberrant behavioral groups emerged--impulsive and inhibited. Validity is claimed for the PIPS Test because the measure discriminates between

children who differ in the degree of behavioral adjustment exhibited in the classroom and background, and in the fact that these findings are not accounted for by general verbal output during testing or by level of intellectual functioning (as was measured by the Peabody Picture Vocabulary Test, Slosson, and Stanford-Binet).

Furthermore, following a controlled research training program (Spivack & Shure, 1974) there was found a direct relationship between improvement in skills measured by the PIPS Test and improvement in the behavioral adjustment of both impulsive and inhibited children, as was predicted. "In sum, validity of the PIPS Test is evidenced by the research differentiation of behavior groups, its relationship to socio-economic group, its consistent change with change in overt adjustment, and its relationship to specifically interpersonal behavior"(Shure & Spivack, Test Manual).

Reliability. Test-retest reliability was obtained in a test of 57 randomly selected four-year-olds on two separate occasions, the second occurring one week after the first. The reliability coefficient was .72. The mean for the pretest was 5.39 (SD = 2.24) and 5.72 (SD = 2.56) for the posttest. This difference was not statistically significant (t = -1.37, df = 56). In addition, a standard error of measurement (SEM) was obtained,

indicating the amount to which a score may change from one week to the next with this specific group. The obtained SEM was 1.27, an indication that a change in score of two or more on the PIPS may be viewed as a significant change in ability to think of alternatives rather than an error in the measure itself (Test Manual).

Scorer reliability. With training and clarity of response classification, as listed in the Test Manual, scorer reliability has shown to be quite high. Between 10 pairs of judges, responses yielded a reliability of 97% (Test Manual).

The experimenter was the only scorer in this study.

Hahnemann Pre-School Behavior Rating Scale

This scale has been derived from extensive early work in scale development and refined during later research (Spivack & Shure, 1974). It has been used by Spivack and Shure to assess behavioral change brought about by their problem-solving program.

The rating sheet consists of seven items which require the rater to think in terms of the overt behavior of the child. These seven items define three behavioral factors: (a) difficulty in delaying gratification, (b) proneness to emotional upset, and (c) social aggressiveness. Minor problems of impulsiveness are

indicated when scores fall into the range of 38 to 42. As scores increase into the 50s, severe impulsiveness is indicated. Children scoring neither overly inhibited nor impulsive may be considered behaviorally adjusted.

Four other behaviors that have been shown to relate significantly to problem-solving skills and that Spivack and Shure (1974) had found to improve through their training program are: (a) if a child functions autonomously, (b) if he shows initiative, (c) if he shows concern for another child, and (d) if he is liked by his peers. These behaviors are also listed on this scale, but were not used in this study (see Appendix C).

Procedure

One week before the start of the enrichment program, the teachers of both the experimental and control groups rated the behavior of each child in their class using the Hahnemann Rating Scale. Prior to the first rating, they were instructed on the use of this rating scale. The control and experimental teachers again rated their children after 8 weeks. Unfortunately, the experimental preschool teacher left her teaching position after 6 weeks, requiring that she complete her final rating at that time. Her successor continued the program with her children. The experimental teachers did an additional rating after 4 weeks of enrichment.

The PIPS Test was administered to each child in

both control and experimental groups, as a pretest a week prior to the start of the enrichment program and as a posttest the week immediately following the completion of the program. Two other testers assisted the experimenter in administering the PIPS. A training program on test administration was conducted with these testers prior to testing. Each tester gave the pretest and posttest to the same children. Tests were administered individually outside of the classroom.

Teacher Training

Weekly teacher training sessions were conducted for the three teachers of the experimental group to provide them with the necessary materials and script to conduct the eight-week program.

The first meeting with the teachers was orientation to explain the basic content and problem-solving goals of the program. Teachers were introduced to the main ideas of the script to be used and how the program was sequenced. They were also introduced to the Behavioral Rating Scale and instructed on its use.

The second meeting was devoted to demonstrating the initial lessons to be used the following week. Lessons were acted out to ensure familiarity with the games and dialogues before conducting them with the children. In addition, the informal use of the script

throughout the school day was explained. In the meetings that were to follow, previous lessons were discussed, with special emphasis on any problems teachers may have encountered. Problems with "difficult" children were evaluated. Discussion and role-playing of next week's scripts was conducted.

The responsibilities of the teachers within the experimental groups were: (a) to participate in 8 weekly training sessions, (b) to conduct the daily enrichment programs with the children using the materials made available in the training sessions, (c) to encourage the use of the new skills taught in the children's group sessions throughout the day in informal interaction, and (d) to complete the 3 behavioral ratings of each child during the duration of the program.

Enrichment Program

The formal enrichment program was conducted by each teacher within the classroom setting. Children were grouped around the teacher in an arrangement to facilitate entire participation. Grouped sessions were held in the morning every day for eight weeks, and ran from 5 to 10 minutes at the program start and built up to an average of 10 to 15 minutes by the fourth week of the program. The remainder of the day's activities were continued as usual. Informal use of the program content was stressed

during social problems within the classroom as teachers guided the children to use concepts developed in group sessions. The general topic areas included in the program were:

- Language, listening and paying attention skills
- Establishment of basic word concepts
- Encouragement to listen and learn from others
- Increasing awareness of others
- Identifying emotions (word-concepts)
- Learning how to recognize emotions in others
- Self-awareness
- My feelings, thoughts, and behavior--good and bad
- Individual preferences
- People are the same and different
- Respect for the rights of others
- What happens next--or what might happen?
- Causality--why and because
- Consequences
- Understanding how we effect others and they effect us
- Fairness, sharing, kind behavior

Program dialogue was printed on sheets of paper that were folded into 5 X 8 cards and held comfortably on the lap. Program pictures were obtained and duplicated

from magazines and coloring books, and given as needed during weekly training sessions. Program puppets were constructed by the experimenter. Complete program content and dialogue can be found in Spivack and Shure's book, Social Adjustment of Young Children. Additional program ideas were obtained from Bessell's work in human development (1973).

During the "formal" program instruction, behavior modification techniques were utilized with the preschool experimental group of children to encourage listening skills. Small cartoon hand stamps were given to the preschool children who were "good listeners" during the sessions. All experimental group teachers were encouraged to use frequent praise and recognition for those children participating during the formal sessions, and those children utilizing program concepts in informal problems throughout the school day.

In summary, an eight-week enrichment program was conducted with two kindergartens and one preschool class in Denton. Two other Denton kindergartens and one preschool class were contacted for controls. Pretests and posttests were conducted along with teacher ratings to assess program impact.

CHAPTER IV

ANALYSIS OF DATA

The basic purpose of this study was to ascertain whether a cognitive problem-solving style could be taught to nursery and kindergarten children through an eight-week school enrichment program and whether changes would occur in the classroom from the program. The first objective of this analysis was to determine the change in verbal problem-solving style as measured by the PIPS Test. The second objective was to report classroom behavioral changes. This chapter has been divided into two major sections, each one corresponding to the two objectives.

PIPS Analysis

Pretest Analysis of PIPS

Using the PIPS pretest scores, experimental and control group scores were compared for equivalency at the .05 level of significance using the t statistic (see Appendix D for raw scores).

Kindergarten children. The equivalency of variances of pretest scores for the two experimental kindergarten classes was found to be equivalent, $F(8,7) = 1.89$.

These two groups indicated equivalency of class scores through comparison of pretest means, $t(15) = -1.65$.

Variances for the two control kindergarten groups were also found not significantly different, $F(6,7) = .453$. Class score equivalency was indicated through comparison of pretest means, $t(13) = 1.54$.

Since statistical analysis supported equivalency of class scores between the two experimental kindergarten classes and the two control classes, further PIPS Test analysis was with the combined classes--one group each of experimental and control kindergarten children.

These two kindergarten groups, experimental and control, were analyzed for homogeneity of variance and found equivalent, $F(16, 14) = .495$. Pretest means also indicated similar mean scores, $t(30) = .19$ (See Table 1 for means).

Analysis of pretest scores supported equivalency of scores between experimental and control kindergarten children.

Preschool children. Only one class of preschool children composed the experimental group and one class the control group. Equivalency of variances of pretest scores was established, $F(8, 7) = 1.731$. Comparison of pretest means indicated equivalency of class scores, $t(15) = 1.03$.

Table 1
Mean Score and Standard Deviation of Score
on PIPS Pre- and Post-Test with
Five- and Six-Year-Olds

	Experimental		Control	
	Pretest	Posttest	Pretest	Posttest
Mean	7.65	10.41	7.53	8.27
<u>SD</u>	1.80	2.06	2.56	1.58
Gain	2.76 *		0.74	

* Significant at 0.05 level of significance ($t = 5.19$)

Table 2
Mean Score and Standard Deviation of Score
on PIPS Pre- and Post-Test
with Four-Year-Olds

	Experimental		Control	
	Pretest	Posttest	Pretest	Posttest
Mean	3.89	6.00	5.50	6.75
<u>SD</u>	3.59	2.55	2.73	1.58
Gain	2.11 *		1.25	

* Significant at 0.05 level of significance ($t = 2.74$)

Analysis of pretest scores supported equivalency of scores between experimental and control preschool children.

Posttest Analysis of PIPS

Administration of the PIPS Test was repeated as a posttest for both the experimental and control groups. Analysis of variance and the F statistic was employed and posttest means compared using the t statistic at the .05 level of significance.

Kindergarten children. Variances of kindergarten posttest scores were equivalent for experimental and control groups, $F(16, 14) = 1.706$. In reference to Table 1, analysis of posttest means found the control group's mean significantly less than the experimental's mean, $t(30) = -3.268$. This finding supports the hypothesis of this study, that the group of children receiving the enrichment program will significantly increase their ability to verbalize alternate solutions to social problems, as measured by this test. This PIPS Test analysis also supported Spivack and Shure's findings (1974) that a program teaching problem-solving skills can increase the child's ability to verbalize alternate solutions to social problems.

Preschool children. Similarly, variances of posttest

scores of the two preschool groups were equivalent, $F(8, 7) = 2.6$. In reference to Table 2, the assumption that the experimental 4-year-olds increased their scores significantly when compared to the controls was rejected, with analysis of posttest means finding the control group scores equal to or greater than the experimental group, $t(15) = .717$. This finding is in conflict with the first hypothesis of this study and Spivack and Shure's findings (1974), that an enrichment program of problem-solving skills increases posttest scores on the PIPS Test.

Differences between Pre- and Post-test Scores

In an attempt to clarify the program's ability to increase verbal problem-solving skills for 4-year-olds, as well as kindergarten children, pre- and post-test scores on the PIPS Test were compared at the .05 level of significance within each of the experimental and control groups to determine significant gains in score.

In reference to Table 1, in comparing the mean gain between pre- and post-test scores for both experimental and control kindergarten groups, as was expected, the experimental score gain was found to be significant, $t(16) = 5.19$. The control score gain was not significant, $t(14) = 1.058$.

In reference to Table 2, in comparing the mean gain between pre- and post-test scores for the two preschool groups, the experimental group gain was found significant, $t(8) = 2.735$, whereas the control group gain was not significant, $t(7) = 1.49$. This finding indicates that though the experimental group of preschoolers' scores failed to be significant over the control group, they did gain significantly in their pre- and post-test scores. This finding may suggest that though pretest score equivalency of the preschool children was supported statistically at the .05 level of significance, the small sample sizes reduced the power of tests to discern differences. Reserved judgement regarding the worth of a short-term enrichment program for this group is warranted, based on this analysis.

Behavioral Ratings

Three behavioral adjustment factors of each child, assessed through a rating scale of one to nine on the Hahnemann Pre-School Behavior Rating Scale (Appendix C), were: (a) impatient behavior, (b) emotional behavior, and (c) aggressive behavior. The control group teachers did a pre- and post-program rating on each child; and the experimental group teachers did a pre- and post-rating, as well as an additional rating half-way through the enrichment program. Means and standard deviations were computed for

each rating period. Since teacher rater reliability was not checked, behavior ratings were not compared among groups. (For raw score ratings see Appendix E)

The rating means and standard deviations (SD) for each group are presented in Figures 1 and 2. Groups A through C are the experimental groups, and D through F the control groups. These Figures give an overall picture of the degree of aggressiveness found in each classroom at the start of the program period and at the completion. According to Spivack and Shure (1974), who developed this rating scale, scores in the range of 38 to 42 reveal minor problems of impulsiveness and aggression. As scores increase into the 50's, severe impulsiveness and aggressiveness are indicated. The broken horizontal line on each figure in the score range of 32 indicates "normal" behavior adjustment as measured by this scale. Scores falling below this normal range show varying levels of inhibition.

Experimental Groups---Groups A, B, and C

All first ratings by the teachers resulted in a mean score above the normal range of behavior, with Group C recording the most impulsive-aggressive and Group B close to normal (see Figure 1). SD within each group remained fairly constant from the first rating to the third.

The greatest variation from the mean occurred in Group A,

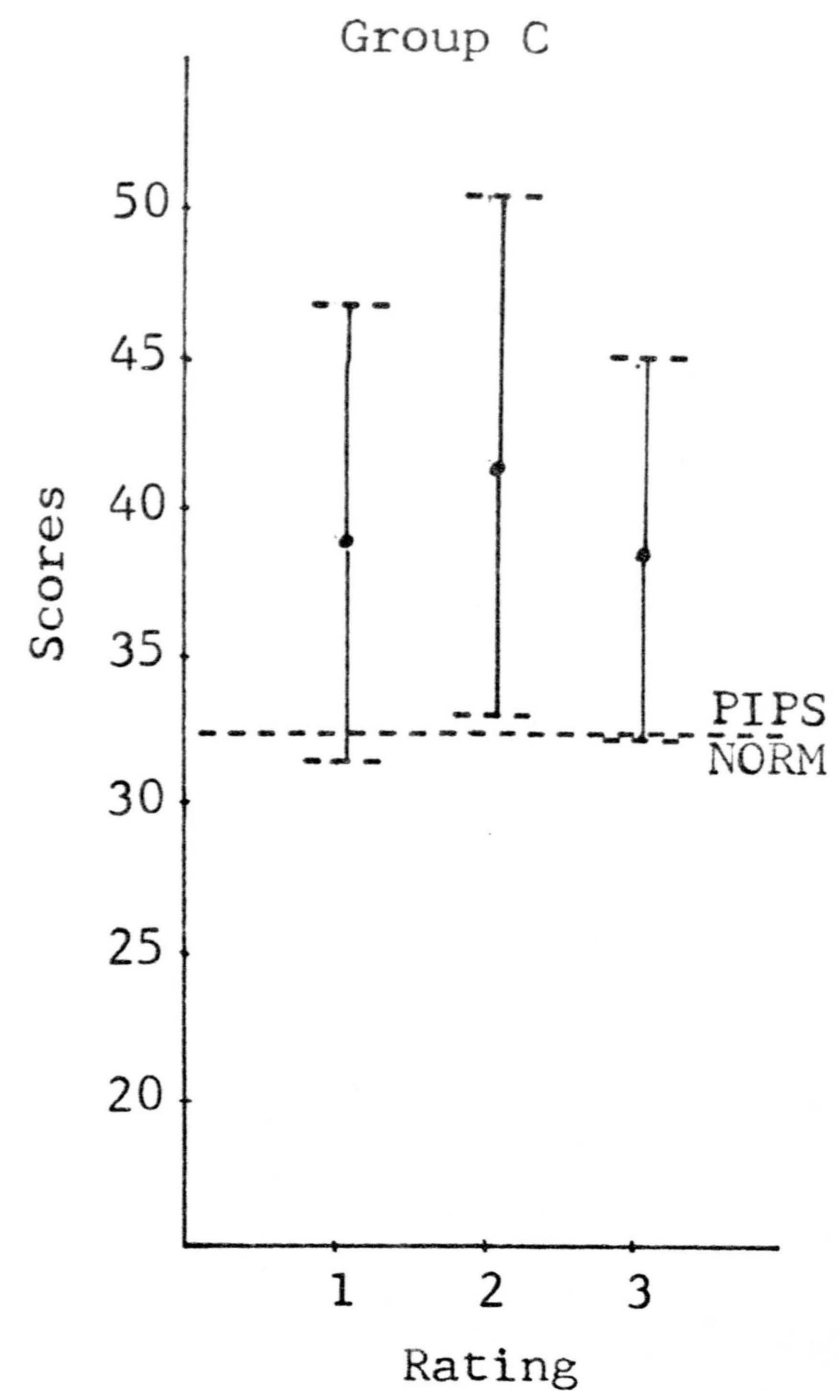
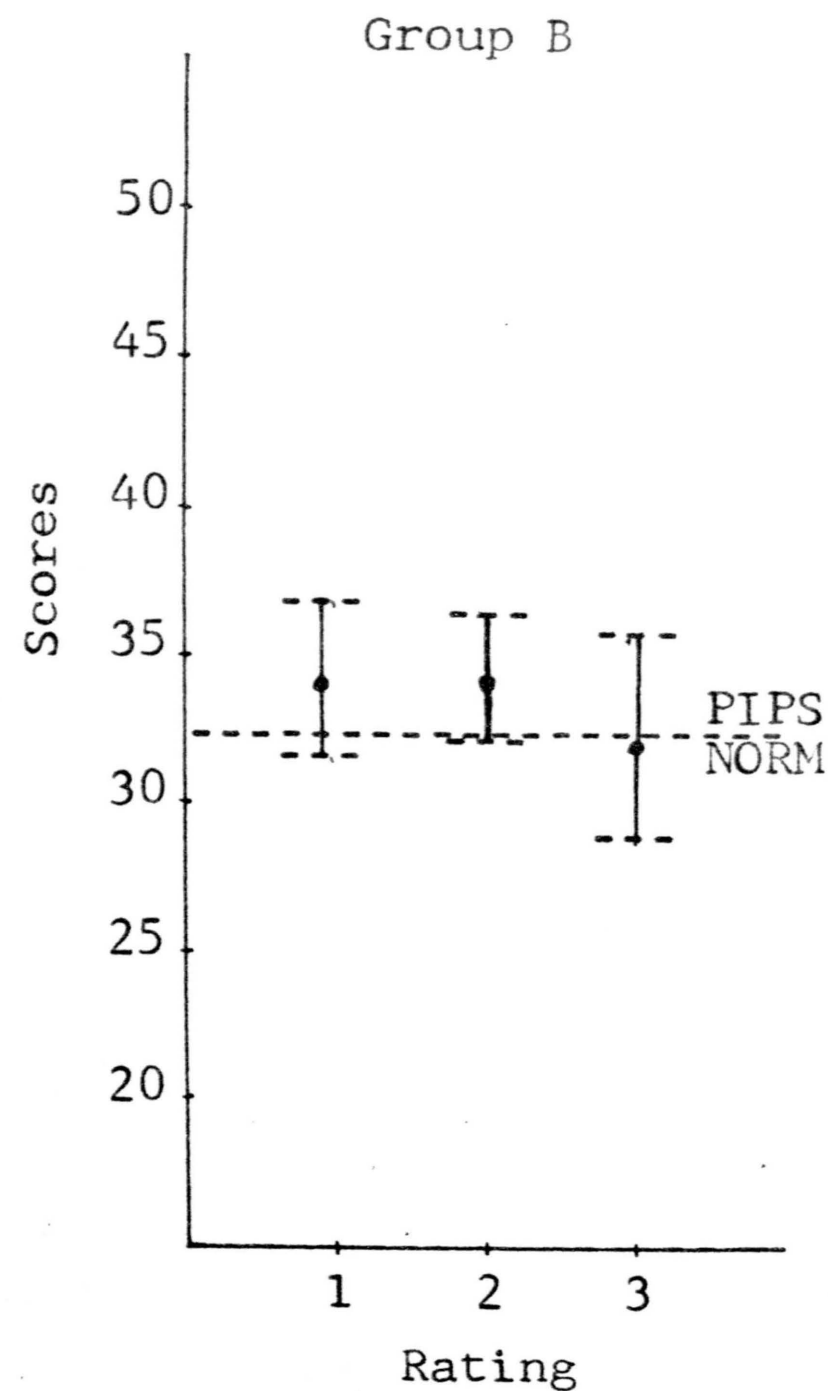
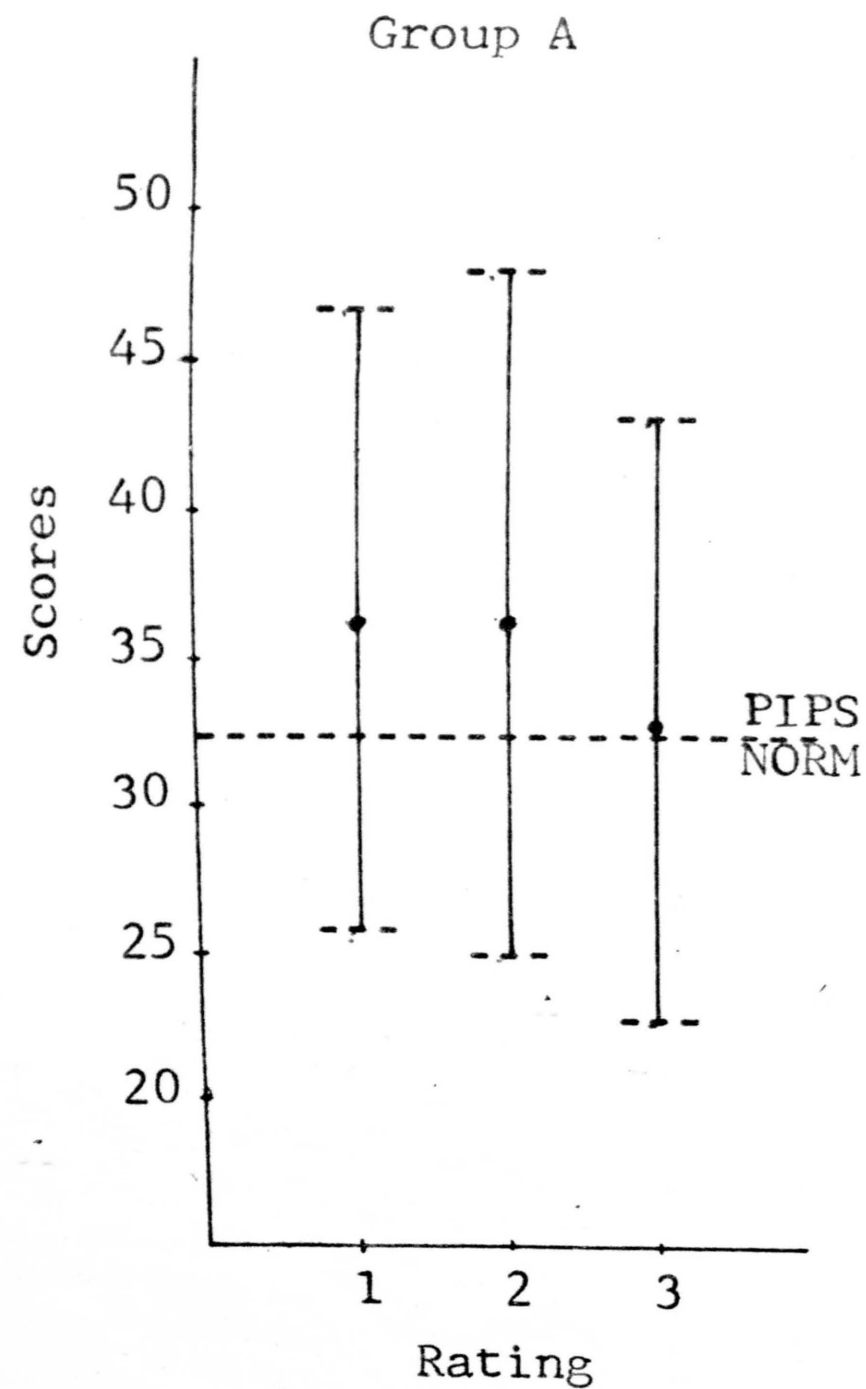


Figure 1. Means and standard deviations for the behavioral ratings of the experimental groups.

indicating both exceedingly aggressive and inhibited behavior. Even though the mean score of Group A decreased at the third rating, SD remained fairly constant, with little change in extreme behaviors.

Group C's SD also indicated extreme behaviors, with primarily aggressive rather than inhibited behavior. Slight change occurred in mean score and SD from the first to third rating.

Group B's behaviors clustered closer to average than any other group in the study. The SD remained small and constant throughout the rating, with a slight decrease in mean score from first to third rating.

Control Groups---Groups D, E, and F

The first ratings by the teachers of this group vary from highly aggressive-impulsive (Group E) to slightly below average (Group F). (See Figure 2)

The mean score of Group D would indicate slight aggressiveness. The SD of this group remained fairly constant from the first to last rating; with large deviation from the mean, indicating extremes in both aggressiveness-impulsivity and inhibition. This group's final rating indicated a slight decrease in mean score, with no noticeable change in SD.

Group E's mean score on both ratings identified this group as fairly impulsive-aggressive. The first rating

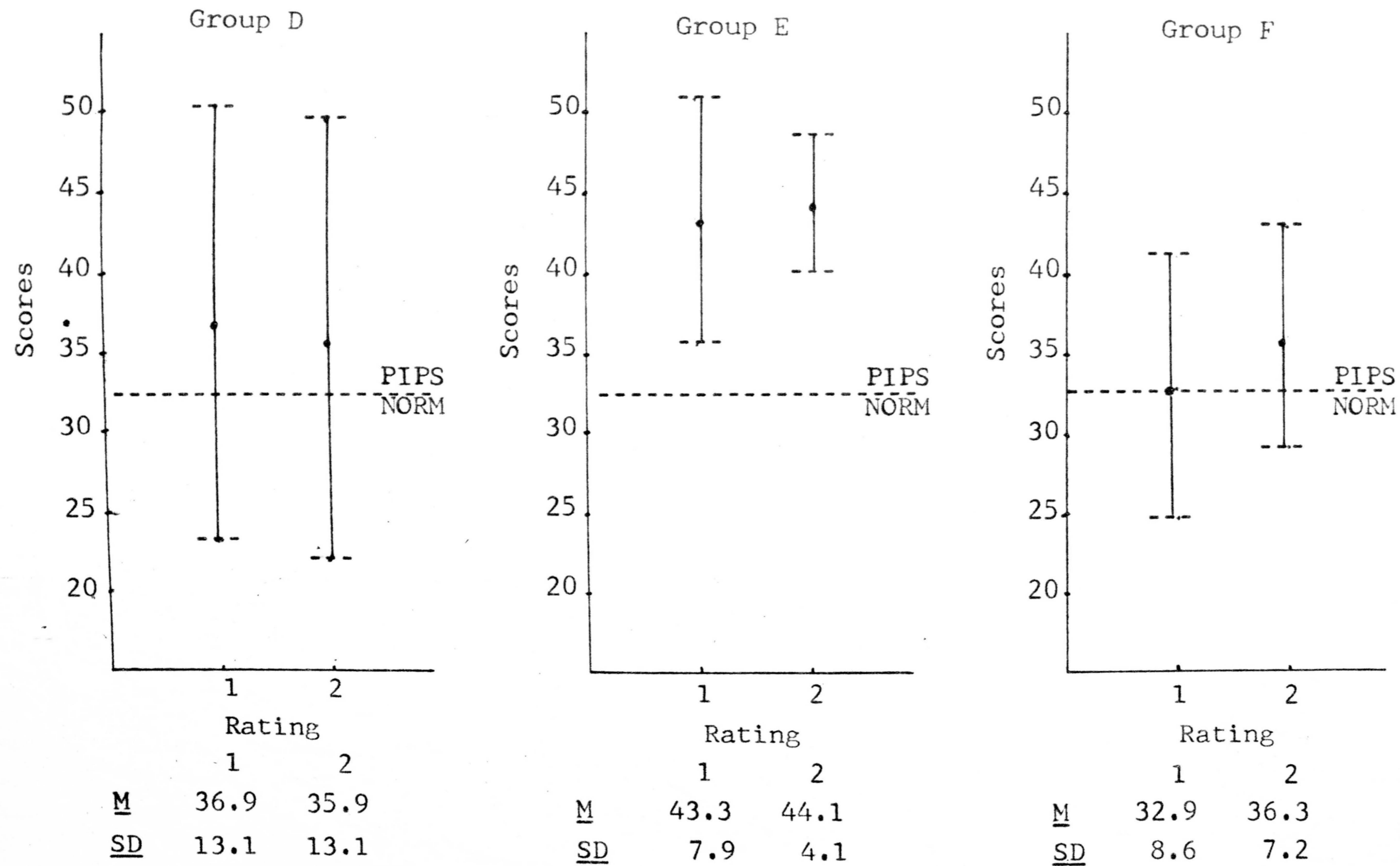


Figure 2. Means and standard deviations for the behavioral ratings of the control groups.

indicated appreciable amount of deviation from the mean, with some children rating impulsive-aggressive, and others closer to normal. The second rating indicated a slight increase in mean aggressiveness and less deviation.

Group F's mean score also increased from the first to second rating; from slightly below average to slightly above (aggressive-impulsive) with the SD decreasing slightly.

Summary and Conclusions

Both Group A (experimental 4's) and Group D (control 4's) exhibited behavior patterns with similar mean scores and standard deviations. Because similar behavioral changes occurred in both preschool control and experimental groups, the researcher concedes that the changes may have occurred in the experimental group as a result of variables other than the enrichment program.

The kindergarten groups showed more noticeable differences. Experimental groups B and C decreased aggressive-impulsive behavior from the first to third rating. Though this decrease was not great, it was a decline, whereas both of the control groups E and F increased aggressive behavior within the same time period. This finding may support the second hypothesis of this study: that children participating in the enrichment program will increase in positive social behavior.

The increase in aggressive behavior by control Group E, with a decrease in SD, poses an interesting question for further research study: Do highly aggressive-impulsive behaviors within a class influence the less aggressive child to use aggressive-impulsive behavior as a means of coping adequately with his peers?

Because of the complexity of human behavior, no direct cause-effect relationship can be stated about the behavioral changes in this study. As a result of this behavioral rating, it could be surmised that the results support the research done by Kagan et al. in 1964, Bem in 1970, and Spivack and Shure in 1974, suggesting that the increased ability to verbalize alternative solutions has a positive effect on social behavior. This researcher feels that the uncontrolled variables present in this study, such as teacher perception, do not allow for the justification of the second hypothesis: an increase in positive social behavior.

In summary, the findings of this analysis support the first hypothesis of this study, that children receiving an enrichment program, when compared to those who did not receive the program, significantly increased their ability to verbalize alternate solutions to social problems as measured by the PIPS Test. This analysis was unable to contribute conclusive support for the second hypothesis of this study of program-related behavioral changes.

CHAPTER V

SUMMARY AND RECOMMENDATION

Summary

The problem of this study was to determine the effect of an eight-week enrichment program of interpersonal cognitive skills on preschool and kindergarten children's ability to handle social problems within the school environment.

Children for the study were selected from two preschools and three kindergartens located in Denton, Texas. Twenty-six four through six-year-old children composed the experimental groups, and twenty-three children composed the control groups. The experimental and control groups consisted of two classes of five and six-year-olds, and one class of four-year-olds. The three teachers in the experimental groups participated in an eight-week training program and conducted the enrichment program in their classrooms. Teachers of the control groups received no special training and conducted their classes in their traditional manner. Children of all experimental and control groups were administered the PIPS Test as a pretest and posttest, and scores were analyzed

to discover significant program gains. Teachers of all groups did a pre- and post-program behavioral rating of each child in their class involved in this study. Teachers of the experimental group did an additional mid-program behavioral rating. These ratings were assessed to give insight into behavioral changes during the eight-week program duration.

Analysis of PIPS Test scores indicated a significant increase in scores for the kindergarten children receiving the enrichment program over the kindergarten children not receiving the program. Analysis of pre- and post-test score differences of the kindergarten experimental group indicated significant gain, whereas the control kindergarten group failed to make a significant gain from pre- to post-testing. Comparison of preschool control and experimental groups failed to show significant increase in problem-solving scores for the experimental group; but further analysis of pre- and post-test differences of the experimental group, noted significant gain in score. The control fours made no significant gain from pre- to post-test.

Pre- and post-program behavioral rating assessment indicated a slight decrease in aggressive-impulsive behavior (suggesting a slight increase in positive social behavior) for the two classes of experimental kindergarten

children. Aggressive behavior increased slightly for the control kindergarten children. The behavior rating for both control and experimental preschool children, showed similar behavior change, with a slight decrease in aggressive behavior.

Through teacher program evaluation, the teachers who participated in the enrichment program stated their general satisfaction with program concepts. They noted an increase in their children's awareness of feelings and consequences of actions. All three teachers stated that they would continue using this approach in future teaching years, and they would recommend the program to other teachers.

Conclusions

The findings of this study suggest that the eight-week enrichment program of cognitive problem-solving skills is likely to increase the four through six-year-old child's ability to verbalize alternative solutions to social problems. This study was unable to provide conclusive evidence regarding changes in positive social behavior resulting from the enrichment program. Behavioral ratings suggest a slight increase in positive behavior for the kindergarten experimental group but, because of uncontrolled and intervening variables, no cause-effect conclusion can be drawn.

Recommendations

Based upon the findings, observations, and subsequent conclusions of this study, the researcher submits the following recommendations:

(a) A longer study is necessary for recording any behavioral changes. A similar study should be conducted starting at the beginning of the school year and lasting over a greater length of time. More adequate and numerous behavior rating tools should be utilized and, if possible, rater (teacher) reliability checked.

(b) Teacher program evaluation suggested that more emphasis should be placed on the "informal" part of this program, with increased training on the types of dialogue for teachers to use during social conflicts within their classrooms.

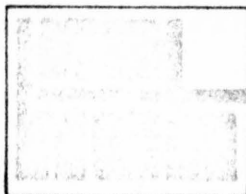
(c) Teachers found that it was often difficult to adequately conduct a "formal" program lesson with the total class participating at the same time. For maximum benefit from the group lesson, the ideal situation as utilized by Spivack and Shure (1974) would be smaller group participation per teacher. But, without additional finances or teacher aides available, this ideal situation is not attainable for the average kindergarten or preschool. Behavior modification techniques may need to be part of this program to insure optimal child participation during the formal instruction.

(d) Assessment of the impact of the initial preschool experience in changing aggressive-impulsive social behavior is needed.

(e) A similar study should be done incorporating teacher ratings, which could then be analyzed in relation to student aggressive-impulsive behavior and program impact.

(f) The implementation of this program may be most beneficial with teacher training at a college level, where this approach could be taught in conjunction with other methods of dealing with classroom social problems.

APPENDICES



THE HAHNEMANN MEDICAL COLLEGE & HOSPITAL OF PHILADELPHIA

DEPARTMENT OF MENTAL HEALTH SCIENCES

COMMUNITY MENTAL HEALTH SERVICES

November 8, 1974

HOTEL PHILADELPHIA
14 NORTH BROAD STREET
PHILADELPHIA, PA. 19102 (215) LO 8-0860

Ms. Judy Christianson
2503 W. Prairie, #1
Denton, Texas 76201

Dear Ms. Christianson:

We are pleased that you have found our book, "Social adjustment of young children", of interest, and plan to use our ideas in your thesis.

Certainly feel free to use our script. That is why we put it into our book. If you want copies of the test, please write to Dr. Shure telling her how many you would wish.

I know of programs teaching empathy skills to young children, specifically some work done by Norma Feshbach at the University of California in Los Angeles. You might write to her.

If I can be of any other help, please do not hesitate writing.

Sincerely,

George Spivack, Ph.D.
Director, Research & Evaluation
Community Mental Health Center

GS:bw

APPENDIX B

PRESCHOOL INTERPERSONAL PROBLEM SOLVING
PIPS TEST

Child's Name _____
School _____
Teacher _____
Date _____
Experimenter _____

Myrna B. Shure, Ph.D. and George Spivack, Ph.D.
Hahnemann Community Mental Health/Mental Retardation Center
Department of Mental Health Sciences
Hahnemann Medical College and Hospital
Philadelphia, Pa. 19102

INSTRUCTIONS TO CHILD

We want to know how children think about things. I've got some pictures and I'm going to tell you some stories about children. I'm going to tell you the first part of the story, and I want you to make up the rest of the story. I want you to tell me what you think the child could do in the story. Pretend all the children are (age of S). O.K.?

PIPS TEST

Peer Problem

1) Truck (Doll)

Here's A (e.g., Johnny).

Read name written on picture and place picture upright against carrying case.

This is B (e.g., Jimmy.)

Place picture next to the "A" character.

Can you tell me what this toy is?

Let child respond, and correctly identify toy if need be.

Yes, a truck (doll).

Place the toy picture so it overlaps that of the "A" character.

Now, A has been playing with this truck (doll) for a long time and B wants a chance to play with it. But A keeps on playing with it.

Memory Cue: Who's been playing with the truck (doll) for a long time? You can point. Let child respond. That's right, A [point to A]. Who wants to play with it? Let child respond. That's right, B [point to B].

Question:

What can B [point to B] do so he (she) can have a chance to play with the truck (doll)? Point to toy. (See Manual for probing techniques [do, say, etc.])

.....
Note. After first relevant solution is given, say: That's ONE way. Now the idea of this game is to think of lots of ways to get A to play with toys. O.K.?

2) Shovel

Here's C.

Read name written on picture and place picture upright against carrying case.

And here's D.

Place picture next to the "C" character.

And what is this toy?

Let child respond, and correctly identify toy if need be.

Good, a shovel.

Place the shovel so it overlaps the picture of the "C" character.

Now, C has been playing with this shovel all morning and D wants to have a chance to play with this shovel. But C keeps on playing with it.

Memory Cue: Who's been playing with the shovel all morning? You can point. Let child respond. That's right, C. [point to C.] Who wants to play with it? Let child respond. That's right, D [point to D].

The memory cue might be shortened to Who has it? (Child points.) Who wants it? (Child points.)

Question

What can D [point to D] do so he (she) can have a chance to play with the shovel? Point to shovel.

Probe according to child's response as illustrated in Manual.

5) Drum

Present the pictures in the same manner as in previous stories.

Here is J and this is K. And what is this toy? Let child respond. Good, a drum. J keeps on playing with this drum and K would like to have a chance to play with this drum.

Memory Cue - Judge need for use

Question:

What can K [point to K] think of to do so he (she) can have a chance to play with the drum? Point to drum.

6) Boat

Present the pictures in the same manner as in previous stories.

This is L and this is M. And this toy is a .
Let child respond. Yes, a boat. L keeps on playing with this boat and M wants a chance to play with it.

Memory Cue - Judge need for use

Question:

What can M [point to M] do so he (she) can have a chance to play with the boat? Point to boat.

7) Top

Present the pictures in the same manner as in previous stories.

Here is N and this is O. And what is this toy?
Let child respond. This is a spinning top. Now N keeps on playing with this top and O would like a chance to play with it. But N keeps on playing with it.

Memory Cue - Judge need for use

Question:

What can O [point to O] do so he (she) can get to play with the top? Point to top.

Extra Stories

Use only if 7 different solutions are given.
Allow the usual 3 probes but stop at the first toy for which no new solution is given.

8) Piano -

9) Teddy Bear -

10) Telephone -

Mother Problem (minimum of five)

Now we're going to change the story. We're going to make up some stories about children and their mommies. These are just pretend (make-believe) stories, O.K.? Here's the first one.

1) Broken Flower Pot

Here's P.

Place picture upright against carrying case.

This is P's mommy.

Place picture upright next to the "P" character.

(Very dramatically) Let's pretend that P just broke his (her) mommy's favorite flower pot and he (she) is afraid his (her) mommy might be mad at him (her).

Memory Cue: What did P do? Let child respond.
Yes, he broke her favorite flower pot.

Question:

What can P do so his (her) mommy will not be mad?

2) Scratch on Table

Present pictures in the same manner as in story 1.

Now let's pretend that Q scratched his (her) mother's wooden table and (very dramatically, simulating motion) it made a big scratch or mark on the table. His (her) mommy might be mad about that.

Memory Cue - Judge need for use

Question:

What can Q do so his (her) mommy will not be mad at him (her) because he scratched her table?

3) Burned Hole in Dress

Present pictures in the same manner as in previous stories.

Now let's say it's this way. R burned a hole in his (her) mother's best dress and he (she) is afraid his (her) mother might be mad at him (her).

Memory Cue - Judge need for use

Question:

What can R do so his (her) mommy will not be mad at him (her)?

4) Torn Page in Book

Present pictures in the same manner as in previous stories.

One day S tore some pages in his (her) mother's favorite book and he (she) was afraid his (her) mother might be mad.

Memory Cue - Judge need for use

Question:

What can S do so his (her) mommy won't be mad?

5) Broken Window

Present pictures in the same manner as in previous stories.

T was playing ball. The ball hit a window, and the window _____. Let child say broke. Yes, the window broke. He (she) was afraid his (her) mommy might be mad.

Question:

What can T do so his (her) mommy will not be mad at him (her)?

Extra Stories

Only if 5 different solutions are given.
Allow the usual 3 probes but stop as soon as the child misses.

It is all right to start over with child character "A". The child may say "I saw him already." Just say "I know, you're giving so many ideas we have to start all over with these pictures of children." The child will accept this explanation.

6) Broken Dish -

7) Knocked over and broke an ashtray -

8) Broke a Drinking Glass -

APPENDIX C

HAHNEMANN PRE-SCHOOL BEHAVIOR RATING SCALE (HPBS)*
Myrna Shure, Ph.D. and George Spivack, Ph.D.
Hahnemann Medical College and Hospital

CHILD'S NAME _____

CHILD'S BIRTHDATE _____

DATE OF RATING _____

GET SET CENTER _____

YOUR NAME _____

check correct box:

- ☐ Teacher
- ☐ Assistant Teacher
- ☐ Classroom Aide

Impatient, emotional, and aggressive behaviors

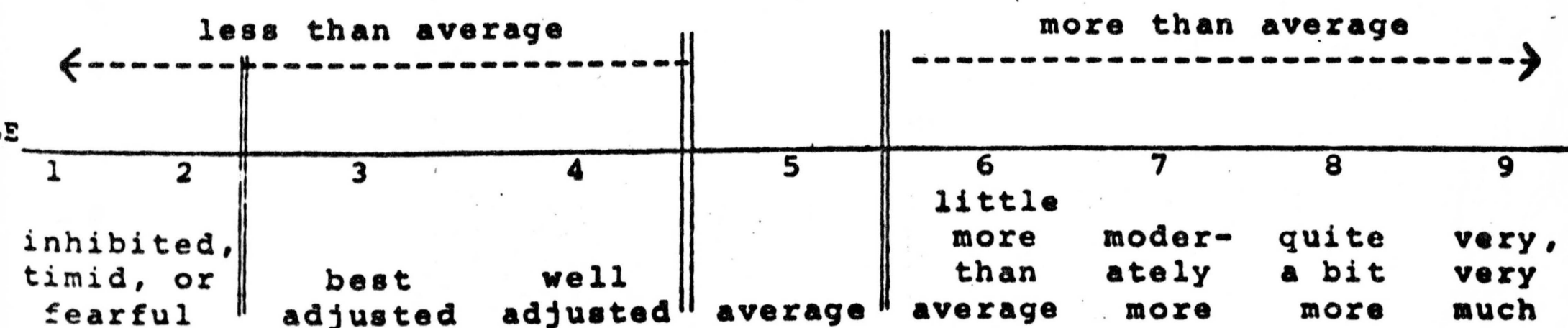
Think of the average 3, 4, 5 year old. Indicate how this child compares with the average child his age and sex. For each item (considered separately) rate the child:

"1" or "2": if the child displays the behavior less than he should because he is too inhibited, timid or fearful. A rating of "1" reflects more inhibition, etc., than does a rating of "2."

"3" or "4": if the child displays the behavior less often than the average child, because his adjustment or maturity is better than average. A rating of "4" describes well adjusted behavior; a rating of "3" shows best adjusted behavior.

"5": if the child displays the behavior being rated about as often as the average child of the same age and sex.

"6," "7," "8," or "9": if the child displays the behavior being rated more frequently than the average child, ranging from "6" (somewhat more) to "9" (very, very much more). Higher scores reflect greater amounts of negative behaviors, e.g., aggression, emotionality, and/or impulsiveness.



ITEMS

- | | | | |
|---|-------|---|-------|
| • <u>Persistent and nagging</u> : persists when told he cannot have something. Nags, demands, repeatedly asks for something | _____ | 5. <u>Physically aggressive</u> : hits, bites, scratches, pushes, or in other ways hurts or attacks other children in a free play situation with peers | _____ |
| • <u>Easily upset by peers</u> : Examples-when teased, pushed, etc. | _____ | 6. <u>Prone to emotional upset</u> : reacts with immediate anger or upset if <u>some other child</u> interferes with his play or takes something that is his | _____ |
| • <u>Easily upset by adults</u> : gets very upset or over-emotional if things don't go his way | _____ | 7. <u>Impatience</u> : unable to wait proper time or share; grabs toys; unable to take turns. (Please note: a high score shows <u>more</u> grabbing, and <u>less</u> ability to share and take turns) | _____ |
| • <u>Dominant</u> : bosses, threatens, dominates other children | _____ | | |

OTHER BEHAVIORS

For each of these items, use the following scale:

ry little or none	Less than average	Same as most his age	More than average	Much more than average
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1	2	3	4	5	6	7	8	9
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To what degree is the child (or does the child):

1. Able to talk in complete sentences (more than short phrases or single words) —
2. Complete activities by himself —
3. Seek out adult attention and support —
4. Get the point of what he hears in class —
5. Able to make himself understood with words —
6. Overcome obstacles by himself —
7. Oblivious to what is going on in class (not "with it," seems to be in own private "closed world") —
8. Able to apply what he has learned to a new situation —
9. Ask for special privileges or special help from teacher —
10. Gives an answer that has nothing to do with the question being asked —
11. Willing to talk with peers (ask questions; give answers; makes verbal contact with others) —
12. Makes you doubt whether he is paying attention when teacher explains something to him (looks elsewhere, has blank stare, faraway look) —
13. Show initiative in what he does —
14. Makes irrelevant remarks during a classroom discussion —
15. Want to be physically close to teacher —
16. Initiates classroom discussion —

Very little or none	Less than average	Same as most his age	More than average	Much more than average
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1	2	3	4	5	6	7	8	9
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- | | |
|--|---|
| 17. Acts defiant (will not do what he is asked to do) | — |
| 18. Shows concern and/or offers help to a child in distress | — |
| 19. Liked by peers (they seek him out, enjoy being with him) | — |

APPENDIX D

PIPS Test Raw Scores for Kindergarten Children

Child	<u>Experimental Group</u>		<u>Control Group</u>	
	Pretest	Posttest	Pretest	Posttest
1	8	12	9	9
2	10	9	10	8
3	4	8	10	7
4	8	9	10	10
5	8	10	7	8
6	7	9	5	7
7	4	10	9	10
8	7	11	11	9
9	7	10	3	10
10	7	12	5	10
11	8	12	8	7
12	10	12	6	9
13	6	7	6	6
14	8	13	10	9
15	10	12	4	5
16	9	7	-	-
17	9	14	-	-

PIPS Test Raw Scores for Preschool Children

Child	<u>Experimental Group</u>		<u>Control Group</u>	
	Pretest	Posttest	Pretest	Posttest
1	8	10	7	7
2	1	6	3	4
3	5	4	5	7
4	0	3	4	9
5	0	3	11	8
6	7	6	7	7
7	8	8	4	7
8	6	9	3	5
9	0	5	-	-

APPENDIX E

Raw Behavioral Scores for All Groups

<u>GROUP A</u>			
RATINGS NO.			
<u>Child</u>	<u>1</u>	<u>2</u>	<u>3</u>
1	22	20	20
2	37	33	29
3	41	50	50
4	53	53	38
5	30	28	26
6	27	35	38
7	28	25	25
8	49	47	43
9	41	37	32

<u>GROUP B</u>			
RATINGS NO.			
<u>Child</u>	<u>1</u>	<u>2</u>	<u>3</u>
1	31	34	32
2	32	32	27
3	31	32	30
4	34	35	34
5	34	32	30
6	38	38	36
7	35	33	32
8	38	37	38

Behavioral Ratings

Child	<u>GROUP C</u>		
	RATINGS NO.		
	1	2	3
1	34	38	40
2	34	37	36
3	35	49	39
4	50	51	43
5	31	34	33
6	38	43	40
7	44	50	43
8	34	28	27
9	53	51	48

Child	<u>GROUP D</u>	
	RATINGS NO.	
	1	2
1	22	35
2	60	60
3	32	26
4	43	15
5	28	36
6	24	35
7	49	45
8	37	35

Behavioral Ratings

GROUP E RATINGS NO.

<u>Child</u>	<u>1</u>	<u>2</u>
1	52	44
2	50	42
3	42	46
4	50	50
5	40	38
6	28	43
7	38	49
8	46	41

GROUP F RATINGS NO.

<u>Child</u>	<u>1</u>	<u>2</u>
1	42	44
2	19	24
3	26	41
4	36	36
5	43	43
6	30	31
7	34	35

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