AN ABSTRACT OF THE THESIS OF

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Title: PEER ACCEPTANCE AND INTERACTION OF PRESCHOOL

CHILDREN

Abstract approved: *Redacted for Privacy*

Mary Massey

The purpose of this study was to explore the relationship

between social acceptance and observed peer interaction in a select

group of preschool children. The subjects were 30 children enrolled

in two sessions of a child development laboratory sponsored by the

Department of Family Life at Oregon State University. The 15 children

in the morning session, eight boys and seven girls, ranged in age from

three years-eight months to four years-three months. The 15 children

in the afternoon session, seven boys and eight girls, ranged in age

from three years-six months to four years-five months.

The data consisted of a social acceptance score taken from a

picture sociometric interview and observed behavior frequencies

recorded on the Social Interaction Scale (SIS). Peer interactions

observed include aggresive-hostile peer interaction and cooperative-

friendly peer interaction. The statistical analysis employed was the

Spearman Rank Correlation Coefficient (r_s) method. The specific

null hypothesis explored was:

There will be no relationship between social acceptance and

    a)   aggressive-hostile peer interaction

    b)   cooperative-friendly peer interaction

    c)   total frequency of peer interaction

The correlation coefficients found between social acceptance

and aggressive-hostile peer interaction in the morning session were

positive and significant when analyzed for the sexes combined. A

negligible correlation coefficient (r_s .035) was indicated for boys and

data revealed a tendency toward an inverse relationship (r_s -.471) for

morning girls. Negative, nonsignificant correlation coefficients were

found for the afternoon session when the variables of social accep-

tance and aggressive-hostile peer interation were analyzed for sexes

combined and for boys and girls separately.

An r_s of .686 indicated a positive significant correlation coef-

ficient existing for the afternoon session when the variables of social

acceptance and cooperative-friendly peer interaction were analyzed

for sexes combined. No further significant correlation coefficients

were shown for the afternoon session when analyzed by sex groupings.

The correlation coefficients found for the morning session although

negligible were in a negative direction.

The Spearman Rank Correlation Coefficients calculated for the

variables of social acceptance and total frequency of peer interaction were found to be significant only for the afternoon session. A positive significant correlation coefficient, r_s .454, was found in the analysis for the sexes combined and a negative significant relationship, r_s -.789, was found for boys. The correlation coefficient for the girls was negligible. No significant correlation coefficients were indicated for the morning session although there was a tendency toward a negative relationship when the session was analyzed for sexes combined and for girls.

These findings indicate a need for further study of the relationship between social acceptance and observed peer interactions. The nature of the data collected in the present study provides avenues for further research.

Peer Acceptance and Interaction
of Preschool Children

by

Nancy Josephine Winston

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INTRODUCTION

According to Potashin (1946), for optimum mental health, it is essential that every individual have or be capable of having interpersonal relationships with peers. Since a high level of mental health is the desired state of being for individuals, personality theorists as well as social scientists have searched for the components of successful interpersonal relations. This research has been done in hopes of helping individuals to become well rounded, emotionally stable persons who are capable of sound intergroup relationships (Justman and Wrightstone, 1951). When studying interpersonal relationships, researchers have turned to the origin of social groupings to determine the variables involved in these relationships.

The investigation of peer relationships among young children provides one approach to the study of interpersonal relationships. At the age of three, the child is already developing likes and dislikes for members of his peer group. Such an early social group can be seen in the nursery school, where opportunities for both group and solitary activities exist. Why some children are accepted by their peer group and others are rejected or simply overlooked has plagued not only the teacher, but researchers and parents as well.

Attempts to study children's actual feelings toward each other have been done through sociometric research. Among these studies are the following: Koch (1933); Hagman (1933); Lippitt (1941); Moreno (1942); Frankel (1946); Marshall (1957); Marshall and McCandless (1957a, b); McCandless and Marshall (1957a, b); and Horowitz (1961). These studies attempted to determine not only what a child's position was within his peer group, but also why this was so.

School-aged children served as subjects of early sociometric research (Swift, 1964; Moore, 1967). The children responded to a paper-and-pencil test which called for the child to "nominate" members of their group for positions of prestige or favor. As the early preschool years were found to be more appropriate for observation of group formation, the techniques of sociometric research took on a new design. No longer would the paper-and-pencil technique suffice, for the preschool child neither reads nor writes. New techniques for testing social acceptance emerged. Direct observation of the child's social participation was one technique explored (Frankel, 1946). The number and the types of social interactions elicited and received by each child are tabulated. Another method developed was the use of a brief individual interview. Several varieties were designed: Koch (1933); Moreno (1942); Dunnington (1957a); McCandless and Marshall (1957a). Usually the child is asked to name the peer or peers with whom he would most like to play or participate in an

activity. The number of choices a child received from his peers is recorded and the scores of the children then ranked from most frequently chosen down to least chosen. This method did not, however, differentiate between the child who is actually rejected by the group and the child who is overlooked. To help in this differentiation, methodology was expanded so that the child is asked also to name the child or children with whom he does not want to play. These negative points are then subtracted from the positive to give a sociometric score which is then ranked.

To increase the effectiveness of sociometric interviews with the preschool-aged child, two techniques are often used as aids to the interview. The picture sociometric interview uses pictures of each of the children in the group studied to help the child recall all of the members of the group. The second technique often employed in an interview is the paired comparison technique. A pair of children's names are presented to the child and he is asked to choose his favorite of the two children. These aids help the young child in his recall and also make the activity of the interview itself fun for them (Koch, 1933; Lippitt, 1941; Dunnington, 1957a).

Later studies became involved in relating other variables with social acceptance. Variables studied have been: aggressive, imaginative, and verbal behavior (Dunnington, 1957b; Marshall, 1961), social participation and play preference (McCandless and Marshall, 1957b),

social behavior in the classroom situation (Booney and Powell, 1953),

dependence upon adults (Marshall and McCandless, 1957b), sex

differences (Marshall and McCandless, 1957b; Walters, Pearce and

Dahms, 1957).

Results from studies which investigated the relationship between

hostility and/or aggressive behavior and social acceptance have been

inconsistent. Lippitt (1941), Marshall and McCandless (1957a), and

Marshall (1961) concluded that hostile, aggressive interaction with

peers is not related to social acceptance. Koch (1933), Dunnington

(1957a), and Moore and Updegraff (1964), however, found indication

of low-status children displaying highly aggressive acts. Children of

high-status showed a greater proportion of positive, cooperative

affects than did the low-status children, and their aggressions tended

to be expressed within the context of dramatic play (Dunnington,

1957b). Positive, cooperative behavior has been found to be an

accompaniment and possible determinant of peer acceptance. The low

magnitude of correlations found in research, however, suggest that

other variables or factors must be important in predicting social

acceptance (Moore, 1967).

Although Dunnington's research (1967a, b) spurred the initial

emphasis on experimental, controlled investigation of specified

observed behaviors of preschool children as the dependent variable,

most of the studies since that time have been unpublished papers.

This indicates the need for further controlled investigation of social acceptance and the variables affecting it. Since no "one" variable has been found to be the only factor of peer acceptance, the question of what constitutes social acceptance still remains. The inconsistent results indicated by the research on aggressive behavior also is indicative of the need for further examination of this variable to substantiate past research. Furthermore as the frequency of cooperative-friendly behavior has tended to accompany social acceptance an interrelationship of cooperative-friendly peer interaction and aggressive-hostile peer interaction may be operating in determining social acceptance. This study focused upon the variables of aggressive-hostile and cooperative-friendly peer interaction and their relationship to peer acceptance.

Purpose of the Study

The purpose of this study was to explore the relationship between social acceptance and observed peer interactions in a select group of preschool children. Peer interactions observed include: aggressive-hostile interaction with peers, and cooperative-friendly peer interaction. These interactions were measured by the Social Interaction Scale (SIS) (Volenski, 1971). Social acceptance was derived from a picture sociometric interview developed originally by McCandless and Marshall (1957a).

Hypothesis

Specifically, the hypothesis investigated was:

There will be no relationship between social acceptance and

a) aggressive-hostile peer interactions

b) cooperative-friendly peer interactions

c) total frequency of peer interaction

Definition of Terms

Operational definitions of terms in this thesis include:

Sociometric interview - a means for determining the degree to which

individuals are accepted within a group (Moreno, 1942)

Social acceptance - the degree of acceptance of a child in a group

formed by children of about the same age

Total frequency of peer interaction - the total composite score of

frequencies, for each individual child, of the peer interactions

measured by the SIS

Aggressive-hostile peer interaction - refers to contact with peer in a

negative verbal or nonverbal interaction (Volenski, 1971)

Cooperative-friendly peer interaction - refers to contact with peer in

a positive verbal or nonverbal interaction (Volenski, 1971)

Assumptions

1. The picture sociometric interview can be used to measure social

acceptance of preschool children (Dunnington, 1957a, b; Marshall, 1957; McCandless and Marshall, 1957a, b).

2. The Social Interaction Scale (SIS) can be used as a valid measure of frequencies of certain observed peer interactions of preschool children (Volenski, 1971).

REVIEW OF LITERATURE

Although sociometric techniques have evolved to a state of

complexity and diversity researchers must search out each technique

individually. A conceptualization is then devised for the particular

research project on the basis of sample and variables under study.

The focus of this study was preschool-aged children. There-

fore this review of the literature is limited to relevant research

regarding sociometric techniques used with preschool children. The

review of the literature then explores the research findings regarding

the relationship between social acceptance and the variables of

aggressive-hostile peer interaction, cooperative-friendly peer inter-

action, and total frequency of peer interaction.

Sociometric Techniques Used
with Preschool Children

The analyses of social acceptance in groups have utilized a

variety of methods. Early studies focused primarily upon the school-

aged child. Investigators typically administered paper-and-pencil

tests, which called for the child to "nominate" members of his peer

group for positions of prestige or favor (Moore, 1967). Paper-and-

pencil techniques often called for the child to rate his peers on their

social ability or adequacy (Hollander, 1965). In studying the preschool

child, it became evident that they could not respond to this form of

sociometric test, for they did not have the ability to either read or write. Experimenters working with young children began exploring other techniques for eliciting sociometric choices.

The establishment of a method for studying preschool friendships in a reliable fashion was needed to contribute to the behavioral sciences. Many methods have been explored since the early studies of the 1930's. These studies sought a better method for inferring social acceptance in a preschool group. One method explored was to observe the child's social participation directly, tabulating the number and types of social movements the child both makes and receives from his peers (Challman, 1932; Frankel, 1946; Jennings, 1950; Lippitt and Gold, 1959). Observers using this technique first had to identify the relevant behaviors to be observed and define the categories of behavior well enough to assure agreement between independent observers. Observing for the most part used a time-sampling technique in which the child is observed for a specific interval of time, usually two to five minutes. A code is set up to record the relevant behaviors studied. The observations often included such aspects of peer interaction as teacher dependence, hitting, and whining (Frankel, 1946). The observations are repeated as a reliability test. This method although time consuming and expensive, has proven to be a valuable instrument for studying the young child (Moore, 1967).

Brief individual interviews have also been used as an

experimental approach to the study of social status. Sociometric

interviews usually ask the child to name a particular child or children

with whom they would most like to play in a specified activity: "Who

would you like to play with outside?". The situations are chosen to

be relevant to the peer group studied (Dunnington, 1957a, b;

McCandless and Marshall, 1957a; Moore, 1967). In Moore's (1967)

review of the literature, validity and reliability have been found to be

dependent upon the child's ability to focus his attention on the entire

group at one time, and his ability to recall his impression of each

member in the group.

The paired comparison technique is another of the methods

developed to aid researchers in interviewing young children. This

method asks the child to select his favorite child from a given pair of

children's names from the group. Each child's name is paired once

or twice with the name of every other child in the group. The pairs

of names are given in quick but not fast succession (Koch, 1933;

Lippitt, 1941; Dunnington, 1957a). The question to the child is usually

stated: "Which do you like better, Mary or Ann?". The wording is

often rearranged slightly to hold the young child's interest. This

method was found to work best with no more than 20 name pairs a

session and under 15 children per group.

Still another form of sociometric interview has been used with

the young child, the picture sociometric interview developed by

McCandless and Marshall (1957a). The examiner uses a board containing pictures, head and shoulders only, of each child within the peer group being studied as an aid. The child is taken individually into an isolated room and seated beside the interviewer in front of the picture board. First the child is asked to find his picture on the board, then to identify the other children in his group. This is done so the child becomes personally interested in the activity and also to help the child recall the members of his group (McCandless and Marshall, 1957a; Moore, 1967). Next the child is presented with a series of select criteria questions and asked to choose a child or children he would most like to participate in the activity presented: "Who would you like to play with outside?". The child chooses from the board by either naming the child or children or pointing to their photographs. This method seems to be of interest to the child and is felt to supply worthwhile information on sociometric status (McCandless and Marshall, 1957a, b; Marshall and McCandless, 1957a; Moore and Updegraff, 1964). Miller (1960) indicated in his review of the literature that preschool children could not be depended on to recall all of the members of their social group, thus pictures would help the young child in their ability to recall and to select peers.

In a study by Hagman (1933), the child made a decision about whom in his group he would give the prize of a toy fish. This technique is based on the notion that actions speak louder than words.

After playing the "fishing game" in an isolated experimental room, the child is allowed to keep one of the five fish won for himself and then is asked to choose four children to receive the other four fish. The four children chosen are considered to be his personal preferences. In Moore's (1967) review of the literature, she felt there was one drawback to this method, determining if the choices were made for reasons other than personal preference; for instance, to pacify an aggressor.

The variety of sociometric techniques available indicate the need for the person doing sociometric research to explore the methods more in depth so they might choose one appropriate to their individual project and group. Each researcher must decide for himself which of the methods available would suit his particular study and sample (Northway and Weld, 1957).

Social Acceptance and Aggressive Peer Interaction

Studies of aggressive behavior in children have been conducted by a number of investigators with inconsistent results. Researchers (Lippitt, 1941; Marshall and McCandless, 1957a) concluded there was no relationship between observed hostility, aggression in the nursery school and social acceptance. Three other investigators have shown negative correlations between aggression and social acceptance. This indicates for these particular studies that children with low social

acceptance displayed highly aggressive behavior (Koch, 1933;

Dunnington, 1957a; Moore and Updegraff, 1964). Two of the three

studies (Koch excluded) elicited both positive and negative choices to

the criteria questions. Moore (1967) suggested that the differences in

method of these studies and those of Lippitt (1941) and Marshall and

McCandless (1957a) might account for the difference in findings as

> . . . there is some evidence to suggest that aggression is
> more closely related to the number of times a child is
> selected as a disliked peer than to the number of times
> he is selected as a liked peer (Moore, 1967, p. 290).

In the study by Dunnington (1957a), the degree of social

acceptance was obtained in a verbal interview in which 15 preschool

children were asked to name peers with whom they did or did not like

to play at school. In order to secure responses of accumulative rather

than temporary nature, subjects were interviewed immediately upon

their arrival at nursery school before they had become active in the

group situation. Aggression was measured by each child's participa-

tion in two 20-minute doll play sessions. The child's projective

storytelling themes as well as his handling of the toys were scored on

a number of dimensions, one of which was aggression. Findings

indicated that highly accepted children when compared to those with

low acceptance showed a greater degree of positive nonaggressive

behavior relative to negative behavior in their doll play themes and

actions (Swift, 1964). Aggression shown by the highly accepted

children was in general "specific to its origin," indicating the aggressions displayed in doll play were more often directed at appropriate objects rather than displaced to innocent victims or other inappropriate objects (Dunnington, 1957a).

> Dunnington also found that the aggressions of high popular children, compared with low popular children, was more likely to be "thematic" in type; that is it was more likely to follow reasonable provocation or in some other way appear sensible within the context of the doll play (Moore, 1967, p. 291).

This research indicated a need for considering the quality and quantity of aggression that is shown by a nursery school child when relating aggression to social acceptance. The tendency to aggressively attack was found to be negatively correlated with social acceptance, as measured by a paired-comparison technique (Koch, 1933). To aggressively attack was defined as hostile behaviors such as "strikes and pushes and pulls others" exhibited during free play situations. Moore and Updegraff (1946) found results consistent with Koch although their measure of aggression involved peer-rating rather than observation. The children were asked to select members of their nursery school class they judged as showing aggressive acts which include the behaviors involved in hitting, hurting, and saying angry things. Scores were computed into an Aggressiveness Scale and correlated with social acceptance. In six nursery school groups, the relation was consistently negative; correlations ranging from -.21 to -.78 with three of the groups being over -.50.

When determining the degree to which aggressive acts contribute to a child's social acceptance the intensity of the aggression as well as the degree of physical threat to the victim is also in need of study. Two assumptions given in studies of aggression which have not been systematically studied are: The more violent the aggressive act, and the more the promise of physical pain, the more this would detract from a child's social acceptance. Aggression aimed at easily frightened children would appear to detract more from a child's social acceptance than aggression at a less frightened child. "Both variables take into account the amount of pain or distress caused by a given aggressive act" (Moore, 1967, p. 291).

Aggression, like cooperation or friendliness, is not a perfect predictor of social acceptance. Studies reviewed indicate highly accepted children also display aggression, although their aggression tended to be more directed and purposeful and low to moderate in amount when compared to their positive interaction with peers. Campbell and Yarrow (1961) felt from their research the hypothesis could be offered that a "child's aggressive interaction in the context of accompanying friendly behavior is in fact socially valued within the peer culture" (p. 18).

Social Acceptance and Cooperative Peer Interaction

Social behavior has been studied by means of variables relating

directly to the status of the individual in the group and also by means of variables relating to social-interactions (Swift, 1964). Few early studies attempting to relate special behavior to social acceptance found many social variables to predict group status (Koch, 1933; Lippitt, 1941). More promising and informative results have been found in recent studies which have improved techniques for gathering observational data as well as techniques for assessing social acceptance. In Moore and Updegraff's study (1964) of sociometric status of pre-schoolers, the children were asked to respond to 30 statements, spread throughout the interview, which described various aspects of a child's social behavior. To assess friendly approach, the children were asked to select someone who a) is very friendly to the other children, b) likes to play near the other children, c) helps peers when they are hurt or sad, and d) talks with the other children a lot. The same or different person could be chosen for each item (Moore, 1967). After the items were combined into a Friendly Approach Scale, the scores were correlated with the children's sociometric scores. The correlations for six different groups of children ranged from .24 to .48 (Moore and Updegraff, 1964).

> The consistency of this relation from group to group
> suggests that friendliness (in this case "perceived friend-
> liness") is one of the accompaniments of popularity and
> may be one of its determinants, but the low magnitude of the
> correlation suggests that other factors must also be important
> in predicting popularity (Moore, 1967, p. 286).

Using the picture-board sociometric technique and recording
social behavior of children in a nursery school free play period,
McCandless and Marshall (1957a) attempted to determine what variables
contributed to social acceptance. Children's social overtures were
observed and recorded for four categories of behavior: Friendly
approach, associative play, conversation, and hostility. The
researchers found no relation between social acceptance, measured
by positive choices given during the sociometric interview, and the
amount of conversation or amount of hostility displayed during the
free play observation. Significant correlations were found between
social acceptance and friendly approach and associative play. These
correlations were positive indicating that the children who frequently
showed friendly approach, and participated in associative play, also
had high popularity scores (Moore, 1967).

From the research reviewed, social acceptance seems to be
related to friendly, cooperative behavior. The correlations of these
studies are, however, relatively low, indicating other variables are
present in the acquisition of peer acceptance.

Social Acceptance and Total Frequency
of Peer Interaction

From the studies reviewed, it has become evident that the more
actively a child participates within his peer group, the more he will
be recognized by his peers (Gregory, 1943; Campbell and Yarrow,

1961; Moore, 1967). Research has indicated that a child's social acceptance is related to the degree and direction of the outgrowing energy. Preschool children with this outward energy and initiative are found to be more highly chosen when these qualities are present in such a degree that they stimulate rather than overpower the person doing the choosing (Gregory, 1943).

The more popular, socially acceptable child has been described to be the least distracted from peer activity, to be an active participant in associative play with his peers. The negatively valued child on the other hand usually shows much less total initiated or disruptive activity. The results on aggressive behavior indicates not only the frequency of the negative or hostile interaction, but the quality or direction to do physical harm or to give a command, is also important to understanding aggression's role in the acquisition of social acceptance (Campbell and Yarrow, 1961).

Summary

Discovery of the characteristics making up interpersonal skill has been the goal of many researchers. The studies reviewed have explored some of the behaviors believed to be, in part, responsible for a child's effectiveness in social interactions. The fact that no "one" factor can be now determined as the "cause" of a child's acceptance or rejection by his peer group has been established,

leaving many areas and variables open for further research and investigation. All of the studies have indicated the extreme importance of studying a variety of interpersonal relations for determining a child's status within his peer group.

METHODS

Subjects

The data analyzed in this study were collected from 40 pre-school children enrolled in two sessions of a child development laboratory sponsored by the Family Life Department at Oregon State University. The total enrollment of 40 students was available for study but due to absences the sample size was reduced. Fifteen children, eight boys and seven girls, in the morning session and 15 children, seven boys and eight girls, in the afternoon session comprised the total sample. Table 1 gives the description of the morning and afternoon sessions by age and sex.

Table 1. Description of subjects in the morning and afternoon session by age and sex.

Characteristic	N	Mean age (year/months)
Morning session		
Total	15	3-8
Boys	8	3-8
Girls	7	3-8
Afternoon session		
Total	15	3-9
Boys	7	3-9
Girls	8	4-0

The families from which the subjects of this study came were

predominately middle class as measured by Hollingshead's (1957)

"Two Factor Index of Social Position." Information for this index was

taken from the home information sheets filled out by the parents upon

their child's acceptance into the child development program. The

subjects in this study were distributed among the following socio-

economic class positions as indicated in Table 2.

Table 2. Description of subjects in the morning and
afternoon sessions by socioeconomic class.

Socioeconomic class	N	
	morning	afternoon
I (upper)	7	8
II	4	6
III	2	1
IV	2	0
V (lower)	0	0
Total	15	15

Instruments

Two instruments were used to collect the data for the present

study: A picture sociometric interview (McCandless and Marshall,

1957a), and The Social Interaction Scale (SIS) developed by Volenski

(1971). The data from the SIS was collected as part of a larger

research project in the Department of Family Life at Oregon State

University.

The Picture Sociometric Interview

The picture sociometric interview was first developed by McCandless and Marshall (1957a) as a means for measuring social acceptance. Sociometry is concerned with discovering the preferred relationships which exist within a group at a point in time. In the picture sociometric interview, each child is asked to select preferred playmates by either naming or pointing to their picture. The selection is made during an individual interview. Three choices are encouraged for each criteria question asked; these questions pertain to activities the child actually experiences within the preschool program and which serve as criteria for choice. The activities included in the questioning are: outside play, inside play, and juice time. Specific wording of each question appears in Appendix A.

Positive as well as negative choices are elicited for each question in order to better differentiate between those children who are actively rejected by their peers and those that are simply overlooked. The disliked child will receive more of the negative choices and therefore appear at the end of the acceptance continuum while the passed over child will remain in the middle, neither rejected nor accepted by their group.

Reliability of the Test. With sociometry, only the criterion of choice is held constant while the interpersonal relationship or

behavior, on the basis of which choice is made, varies with each judge and the judges are expected to vary in their ratings. Therefore, no standard measure of reliability is available for the sociometric technique. The reliability of the interpersonal variable or behavior must be studied rather than the reliability of the test (Pepinsky, 1949).

Validity of the Test. There is no measure of validity available for the sociometric interview. Since the technique is concerned with discovering preferred choice or relationship existing in a group at a point in time, and each individual tested discloses his own and honest preference, the technique is held to be valid (Moreno, 1942; Jennings, 1950; Marshall, 1957; Northway and Weld, 1957).

The Testing Room. A small room adjacent to the main classroom of the nursery school was used as the interviewing room. All of the subjects were photographed and interviewed individually in this room. The room had windows on two sides, shoulder height to the interviewer, and was well lit. A low bench and two child-size chairs were placed in the room. Only one subject and the interviewer were present in the room during the testing period. The child was seated in one of the small chairs facing the bench which supported the picture board at the child's eye level.

Photographing of the Children. The children were approached individually and asked if they would like to have their picture taken so the investigator may use it later with them to play a game. Specifically,

the investigator approached each child and said:

> (Child's name), I brought my camera with me today, would you
>
> like me to take your picture? I will play a game with you later
>
> using the pictures of all of the children in the nursery school.

Most of the children responded willingly the first time they were

approached. The children that were involved with an activity were

asked again at a more appropriate time. The subjects were approached

three times before assistance from the head teacher was sought.

The investigator photographed each of the children individually,

in color using a Polaroid 100 Land Camera, with flash. No attempt

was made to encourage the children to smile in order to have as

normal a facial expression as possible. The photographs were taken

from the waist up and measured 3-1/4" x 4-1/4". They were mounted

in rows of four on a piece of white tag-board, 22" x 28". Photograph

placement was assigned by randomization with replacement process.

One board was constructed for the morning session and one for the

afternoon.

Presentation of the Picture Sociometric Interview. In this study,

the interview was administered individually by the researcher to each

child. All of the children were asked to participate:

> (Child's name), I have the pictures I took of all of the
>
> children, would you like to come see them and play a game
>
> with me?

All of the children were asked individually to participate in the "game" and were not forced to do so. One subject and the interviewer were present in the testing room at one time.

The child was seated in front of the picture board, and the interviewer to his right holding a tally sheet on which she indicated each child's choices (Appendix A). First, the child was asked to identify his own picture from those on the board then to identify the pictures of the other children shown. This was done to help the child become personally involved in the task and also to help him to recall and place his attention on each child in his peer group.

The child was next presented with three criteria questions. Presentation order was determined by randomization with replacement technique, which elicited the child's choice of playmate for three different activities: outside play, inside play, juice time. The specific wording of each question appears in Appendix A. Both positive and negative choices were elicited for each of the three situations presented. These choices were made from the picture board by either naming or pointing to the child selected. The choices were taken down by the interviewer and later the score for each child was calculated from the positive and negative votes given by the other children.

Collection of the data was done over a four-day period, allowing for absences. Initial rapport was established the week prior to the photographing and interviewing by the interviewer taking an active part

in the preschool program. The interview time per child was approxi-
mately seven minutes, and took place during the preschool program's
free play session.

Scoring Procedure. The scoring procedure for a positive-
negative sociometric technique was calculated by subtracting the child's
negative votes from his positive votes, yielding a composite score that
ranged from high positive (liked) to high negative (disliked). Composite
scores were then arranged in a continuum from most liked to most
disliked, highest positive score to highest negative score. The con-
tinuum was calculated separately for the morning and the afternoon
sessions.

The Social Interaction Scale

The Social Interaction Scale was developed by Volenski (1971) to
provide a measure of children's social behavior, specifically, peer
interaction. Since peer interaction, aspects of aggressive and
cooperative behavior toward peers specifically, was the focus of this
study, it is important to operationally define these behaviors. Table 3
lists the categories of behavior used by Volenski to classify cooperative
and aggressive behaviors.

The criteria utilized by Volenski (1971) for the selection of the
categories were: that they be easily recognizable in the process of
social interaction and that they must be comprehensive enough to

Table 3. Behavior categories.

Categories	Description

Cooperative contact with peers: refers to contact with peers in a positive verbal or nonverbal interaction

(CP) Cooperative play: play or activity with peers; compliance with peer request; attentive to peer.

(PP) Positive Physical Contact: Child touches another child in a friendly or affectionate manner, e. g., hug, pat, kiss, arm around shoulder, holding hands, ruffling hair, etc.

(TP) Talking with Peer: Child talks, asks questions, gives directions, approval, praise, in general any verbal exchange including giving commands or answering.

(HP) Helping Peer: Helping, offering help, or actually assisting a peer, also sharing, cleaning up after peer or doing things for peer.

(CC) Compliant Behavior: In general, any friendly behavior toward peer, including following peer, mimicing, or following directions, complying with peer requests (mere compliance without being involved in cooperative play, activity).

Aggressive contact with peer (instigation): refers to contact with peer in a negative verbal or nonverbal interaction

(BA) Bodily Attack: Hits, punches, kicking, biting, punching, pushing, choking and grabbing.

(NP) Attack with an Object: Hits with stick, throws block, runs into with bike, etc.

(NV) Verbal or Symbolic: Verbally threatens; also include derogations, assertive demands, or threatening gestures.

(IN) Infringement of Property or Invasion of Territory: Takes toy, disrupts play, etc.

Victim of Aggression (response consequence)

(PA) Passive: Does not respond to aggression, or withdraw, gives up toy, etc.

(CR) Cries: Includes whining, etc.

(DP) Defensive Posture: Covers head; also includes verbal protest; child does not give up property, moves away.

(TE) Telling Teacher

(RP) Recover Property: Grabs truck back from aggressor, etc.

Noncooperative Interaction: Child disengages himself from cooperative interaction with peer.

(IG) Ignores: Not attending, ignores or generally disinterested.

(WD) Withdrawal: Moves away when approached by peer; leaves peer group taking play material with him, for solitary activity; refuses to join in peer activity (solitary).

(NC) Noncompliant: refuses to follow peer's direction, unfriendly or rejects peer's attempt at interaction; refuses to join in cooperative play.

Independent Activity (ID): any activity which does not involved interaction with peer or teacher, most generally solitary play.

Teacher Interaction (TI): activity which involves interaction with teacher, for example, group time, attending to teacher.

cover the behaviors that would ordinarily occur during the daily

activities of a nursery school program.

The cooperative and noncooperative behavioral categories were

defined after observations by a trained psychologist at the Oregon State

University Child Development Laboratory. The observation of peer

interactions were recorded and classified into the categories of non-

cooperative and cooperative behavior described in Table 3.

The aggressive behavioral categories were based upon a study

done by Patterson, Littman and Bricker (1967) which recorded 2,583

aggressive acts and their consequences, in the natural setting of two

nursery schools. When the child acted as the instigator of an aggres-

sive act, the peer interaction was labeled aggressive and when the

child felt the response to an aggressive act, he was labeled the victim

of aggression.

Validity. Examination of the behavioral categories for content,

by three Child Development Specialists all experienced in preschool

education and holding the Ph. D. degree, and three full time nursery

school teachers, with the M. A. degree, were used to further deter-

mine whether the SIS covered a representative sample of the behaviors

to be measured. In addition to this examination, the instrument was

used during a series of "trial" observations to establish whether peer

interactions were being properly sampled by the categories listed.

These procedures provided sufficient evidence for the content and

construct validity of the SIS, and also established its usefulness for

measuring peer interaction in a nursery school setting (Volenski,

1971).

Training of Observers. Six advance undergraduate students who

had courses in Child Development and practical experience at the child

development laboratory were trained as observers. During three 2-

hour sessions, the trainees were oriented to the observational sched-

ule (SIS) and assisted in differentiating the various interactions

observed among preschool children. They also practiced the recording

of behavior in 15-second time intervals, using video tapes of pre-

school children from an earlier observational study at Florida State

University. The six observers were able to record during the same

time interval with the aid of an electronic device. The device emitted

a light and a sound every 15 seconds.

After the initial training sessions, the observers were randomly

assigned into two groups. Each group visited, for a two-week period,

a laboratory setting in which they would not be collecting data. There

they simultaneously observed children's behaviors and classified

those behaviors at 15-second time intervals. The electronic device

was used to insure consistency of the time intervals. Questions and

clarification continued in meetings with the researcher until he was

confident of their knowledge of the categories and recording system.

Observer Reliability. The data for observer reliability were

collected by the observers returning to the same laboratory settings

in the same two groups of three. They collected data, one 5-minute

observation, on each of two children again using the electronic device.

The percentage of agreement method (Walters, 1965) was the statistic

used to analyze these data as a measure of reliability.

The computation entailed comparisons of each observer's obser-

vational record with the observational record of each other observers

so that all possible combinations were considered. The reliabilities

for the two groups of three observers simultaneously viewing and

independently recording behaviors ranged from .85 to 1.00 with a

mean of .90.

Collection of Data (SIS). The observational data were collected

at the Orchard Street Child Development Laboratory on the Oregon

State University campus. The observers were stationed so as to

permit maximum coverage of the play area without blocking the normal

flow of school activities. All observers were carefully instructed to

avoid eye contact and interaction with the children, hopefully dis-

couraging the children from directing their activity toward the

observer. Before the actual recording sessions, the observers spent

six to eight hours over a two-week period in the child development

laboratory so that the children became accustomed to their presence

at the school.

Each of the observers was equipped with a battery run

tape recorder which emitted a sound audible only to the observer every 15 seconds, and a writing board with forms of The Social Interaction Scale (SIS) for listing the coded social behavior (Appendix B). Recording was divided into six 5-minute intervals, during which time the social interactions of one subject were recorded under the appropriate coded behavior. A limit of two behavioral frequencies were recorded at each interval; therefore, the total frequency during a five-minute sample ranged from 20-40. For 30 minutes of observation the frequency yielded between 120-240 behavior frequencies.

Sampling periods included three free play activities and three group activities. Free play time allowed the child to choose his activity, group activities were designated as music, story time and lunch. All data were collected within a two-week period after maximum interobserver reliability had been established to minimize observer bias. Each observer focused on one preassigned subject and began recording when the subject was near or began to interact with a peer. The recording was continuous for the time interval even though the child might have changed activity or remained at the same activity throughout the observational period.

Scoring. The frequencies were totaled under each behavior classification for the six 5-minute observations revealing a behavior profile which was expressed as relative frequencies of response under each classification. Then a total was computed for each category.

The cooperative was comprised of cooperative play (CP), positive physical contact (PP), talking with peer (TP), helping peer (HP), and compliant behavior (CC). Bodily attack (BA), attack with an object (NP), verbal or symbolic attack (NV), and infringement of property or invasion of territory (IN) were totaled to yield the aggressive interaction category. Victim of aggression (response consequence) included the behaviors of being passive (PA), crying (CR), holding a defensive posture (DP), telling the teacher (TE), and recovering property (RP). The category of noncooperative interaction included ignoring (IG), withdrawing (WD), and noncompliant behavior (NC). These relative frequencies were used in comparison with social acceptance rank of each child within the group as determined by a sociometric interview technique. This study did not use the data concerning independent activity and teacher interaction. These categories were deleted due to the focus upon peer interactions.

RESULTS

Analysis of data was accomplished by use of the Spearman Rank

Correlation Coefficient (r_s) method. Analysis was carried out by

session and sex groupings for the three sets of variables indicated in

the hypothesis. The .05 level of significance was chosen as the

criterion for the statistical analysis employed.

Peer interaction frequencies were measured by the Social Inter-

action Scale (SIS). The aggressive-hostile peer interaction category

referred to contact with peers in a negative verbal or nonverbal

interaction. The category of cooperative-friendly peer interaction

encompassed contact with peers in a positive verbal or nonverbal

interaction. To obtain a total frequency of peer interaction, the

frequencies recorded in the aggressive-hostile peer interaction cate-

gory and those recorded in the cooperative-friendly interaction cate-

gory were added. The frequencies recorded by the SIS for the cate-

gories of noncooperative peer interaction and victim of aggression

were not used in the data analysis due to the low frequencies and dis-

persion of the data. Raw data for each individual behavior frequency

by category appears in Appendix C.

A further breakdown of the data was indicated on the basis of

the obtained correlation coefficients. Therefore, frequency totals,

averages and weighted averages for the peer interaction categories by

session and sex groupings were computed. The average frequencies

reflect group size and the weighted averages refer to the number of

children who account for the frequency totals in each breakdown. The

frequencies were also separated into free play and group time, as

several earlier studies only utilized free play observations of peer

interactions (Koch, 1933; McCandless and Marshall, 1957a). Fre-

quencies for the noncooperative peer interaction and the victim of

aggression categories appear in Appendix D and E, respectively.

<u>Social Acceptance and Aggressive-
Hostile Peer Interaction</u>

Spearman Rank Correlation Coefficients for the variables of

social acceptance and aggressive-hostile peer interaction analyzed by

session are reported in Table 4.

Table 4. Correlation coefficients of social acceptance and
aggressive-hostile peer interactions.

Session	Sexes combined	Boys	Girls
Morning	.435* (N=15)	.035 (N=8)	-.471 (N=7)
Afternoon	-.081 (N=15)	-.035 (N=7)	-.019 (N=8)

*$P \leq .05$

A significant positive correlation coefficient was found for the

morning session with the sexes combined, indicating for this particular

group a positive relationship (r_s .435) existing between the degree of

social acceptance and the frequency of aggressive-hostile peer inter-

action. The correlation coefficient for the afternoon session, although

negligible, was in a negative direction (r_s -.081). Data on girls in

the morning session show a tendency toward an inverse relationship

between social acceptance and aggressive-hostile peer interaction

(r_s -.471). Correlation coefficients for sex groupings were not

statistically significant for either session.

When frequencies of aggressive-hostile peer interaction were

broken down and averages and weighted averages calculated (Table 5),

it appeared that boys in the morning session were responsible for a

larger proportion of the aggressive-hostile peer interactions than

were girls. This also held true for the afternoon session. The

aggressive-hostile interactions for boys appeared predominantly during

the free play time for the morning session and during group time for

the afternoon session.

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Social Acceptance and Cooperative-
Friendly Peer Interaction

</div>

Spearman Rank Correlation Coefficients relating the variables of

social acceptance and cooperative-friendly peer interaction appear in

Table 6.

The significant positive correlation coefficient (r_s .686) found

for the afternoon session with sexes combined indicated a significant

positive relationship between social acceptance and cooperative-

Table 5. Frequencies, averages, and weighted averages of aggressive-hostile peer interactions.

Grouping	Sexes combined			Boys			Girls		
	Free play	Group time	Total	Free play	Group time	Total	Free play	Group time	Total
Morning session									
Frequency	18.000	8.000	26.000	12.000	5.000	17.000	6.000	3.000	9.000
Average	1.200 (N=15)	.533 (N=15)	1.767 (N=15)	1.714 (N=8)	.625 (N=8)	2.125 (N=8)	.857 (N=7)	.429 (N=7)	1.286 (N=7)
Weighted average	2.000 (N=9)	2.000 (N=4)	2.600 (N=10)	2.400 (N=5)	1.667 (N=3)	2.833 (N=6)	1.500 (N=4)	3.000 (N=1)	2.250 (N=4)
Afternoon session									
Frequency	9.000	16.000	25.000	4.000	14.000	18.000	5.000	2.000	7.000
Average	.600 (N=15)	1.067 (N=15)	1.667 (N=15)	.571 (N=7)	2.000 (N=7)	2.571 (N=7)	.625 (N=8)	.250 (N=8)	.875 (N=8)
Weighted average	1.286 (N=7)	3.200 (N=5)	2.778 (N=9)	1.333 (N=3)	4.667 (N=3)	4.500 (N=4)	1.250 (N=4)	1.000 (N=2)	1.400 (N=5)

Table 6. Correlation coefficients of social acceptance and cooperative-friendly peer interaction.

Session	Sexes combined	Boys	Girls
Morning	-.161 (N=15)	.083 (N=8)	-.157 (N=7)
Afternoon	.686* (N=15)	-.065 (N=7)	.316 (N=8)

*$P \leq .01$

friendly peer interaction. This relationship was not found in the morning session (r_s -.161) or when the sessions were analyzed by sex groupings. There was a tendency, however, for cooperative-friendly peer interaction and social acceptance to be positively related among girls in the afternoon session (r_s .316).

The breakdown of frequencies, averages and weighted averages into sex groupings (Table 7) shows a higher frequency of cooperative-friendly peer interactions occurring for girls in the afternoon session and for boys in the morning session. The breakdown also shows a higher incidence of cooperative-friendly peer interaction occurring for both sessions during free play time.

Social Acceptance and Total Frequency of Peer Interaction

The categories of aggressive-hostile peer interaction and cooperative-friendly peer interaction were added to yield a total

Table 7. Frequencies, averages, and weighted averages of cooperative-friendly peer interactions.

Grouping	Sexes combined			Boys			Girls		
	Free play	Group time	Total	Free play	Group time	Total	Free play	Group time	Total
Morning session									
Frequency	818.000	231.000	1049.000	459.000	123.000	582.000	359.000	108.000	467.000
Average	54.533 (N=15)	15.400 (N=15)	69.933 (N=15)	37.375 (N=8)	15.375 (N=8)	72.750 (N=8)	51.285 (N=7)	15.428 (N=7)	66.714 (N=7)
Weighted average	54.533 (N=15)	15.400 (N=15)	69.933 (N=15)	57.375 (N=8)	15.375 (N=8)	72.750 (N=8)	51.285 (N=7)	15.428 (N=7)	66.714 (N=7)
Afternoon session									
Frequency	738.000	114.000	852.000	255.000	53.000	308.000	483.000	61.000	544.000
Average	49.200	7.600	56.800	36.428	7.571	44.000	60.375	7.675	68.00
Weighted average	52.714 (N=14)	7.600 (N=15)	56.800 (N=15)	37.500 (N=6)	7.571 (N=7)	44.00 (N=7)	60.375 (N=8)	7.675 (N=8)	68.000 (N=8)

frequency of peer interaction. Spearman Rank Correlation Coefficients

for the variables of social acceptance and total frequency of peer

interaction appear in Table 8.

Table 8. Correlation coefficients of social acceptance and total frequency of peer interaction.

Session	Sexes combined	Boys	Girls
Morning	-.298 (N=15)	.065 (N=8)	-.386 (N=7)
Afternoon	.454* (N=15)	-.798* (N=7)	.071 (N=8)

*P ≤ .05

A significant positive correlation coefficient (r_s .454) was found

in the afternoon session with the sexes combined, indicating a signifi-

cant positive relationship between social acceptance and total fre-

quency of peer interaction. A significant negative correlation coeffi-

cient, however, was obtained for boys in the afternoon session regard-

ing these two variables (r_s -.798). No significant correlation

coefficients were found for the morning session, although data on

girls in this session show a tendency toward an inverse relationship

between social acceptance and total frequency of peer interaction (r_s

-.386).

A breakdown of the frequencies, averages and weighted averages

for the category of total frequency of peer interaction (Table 9)

Table 9. Frequencies, averages, and weighted averages of total frequency of peer interaction.

Grouping	Sexes combined			Boys			Girls		
	Free play	Group time	Total	Free play	Group time	Total	Free play	Group time	Total
Morning session									
Frequency	836.000	239.000	1075.000	471.000	128.000	599.000	365.000	111.000	476.000
Average	55.733 (N=15)	15.933 (N=15)	69.933 (N=15)	58.875 (N=8)	16.000 (N=8)	74.875 (N=8)	52.142 (N=7)	15.857 (N=7)	78.000 (N=7)
Weighted average	69.666 (N=12)	23.900 (N=10)	80.692 (N=13)	67.285 (N=7)	21.333 (N=6)	85.571 (N=7)	60.833 (N=6)	27.750 (N=4)	79.333 (N=6)
Afternoon session									
Frequency	747.000	130.000	877.000	259.000	67.000	326.000	488.000	63.000	476.000
Average	49.800	26.000	58.466	37.000	9.571	46.571	61.000	7.875	68.875
Weighted average	67.909 (N=11)	13.000 (N=10)	73.083 (N=12)	51.800 (N=5)	13.400 (N=5)	54.333 (N=6)	81.333 (N=6)	12.800 (N=5)	78.714 (N=7)

indicates a higher frequency of peer interaction occurring for boys in the morning session and for girls in the afternoon session. The frequencies for both sexes occurred predominately during free play time for both sessions.

Summary

Data were analyzed using the Spearman Rank Correlation Coefficient (r_s) method. Few significant correlation coefficients were found when analyzing the data by session and for sex groupings. A significant positive correlation coefficient regarding the relationship between social acceptance and aggressive-hostile peer interaction was found in the morning session with the sexes combined (r_s .435). No significant correlation coefficients were found regarding this relationship in the afternoon session or when either session were analyzed by sex groupings.

A significant positive correlation coefficient was found regarding the relationship between social acceptance and cooperative-friendly peer interaction in the afternoon session with the sexes combined (r_s .686). No significant correlation coefficients were found regarding this relationship in the morning session or when either session was analyzed by sex groupings. With respect to the relationship between social acceptance and total frequency of peer interaction, a significant positive correlation coefficient was found for the afternoon sessions

$(r_s$ .454) with the sexes combined, and a significant negative correlation coefficient was found for boys in the afternoon session $(r_s$ -.789). No other significant correlation coefficients were found.

SUMMARY AND DISCUSSION

Summary

The subjects of the present study were 30 children attending two

sessions of a child development laboratory established by the Depart-

ment of Family Life at Oregon State University. The 15 children in

the morning session, eight boys and seven girls, ranged in age from

three years-eight months to four years-three months. The 15 children

in the afternoon session, seven boys and eight girls, ranged in age

from three years-six months to four years-five months.

The purpose of this study was to explore the relationship between

social acceptance and observed peer interactions. Peer interactions

observed included aggressive-hostile peer interactions and cooperative-

friendly peer interactions. Specifically, the hypothesis explored was:

> There will be no relationship between social
>
> acceptance and
>
> a)   aggressive-hostile peer interaction
>
> b)   cooperative-friendly peer interaction
>
> c)   total frequency of peer interaction

A picture sociometric interview and the Social Interaction Scale

were the instruments used to measure social acceptance and the

peer interactions. Data were analyzed using the Spearman Rank

Correlation Coefficient (r_s) method. Few significant correlation

coefficients were found when analyzing the variables by session and by sex groupings.

The results of this study may be summarized as follows:

1) The Spearman Rank Correlation Coefficient obtained between social acceptance and aggressive-hostile peer interaction, cooperative-friendly peer interaction, and frequency of peer interaction were inconsistent among sessions. Therefore the null hypothesis may be held tenable for the sample studied.

2) Few significant correlation coefficients were obtained. Those found seemed to emphasize differences between the two pre-school sessions chosen for the study.

3) A positive significant correlation coefficient for the morning session was indicated for social acceptance and its relationship to frequency of aggressive-hostile peer interaction when the session data were analyzed for the sexes combined. No other significant correlation coefficients were found for the morning session.

4) The r_s values obtained for the afternoon session showed a positive significant relationship existing between social acceptance and cooperative-friendly peer interaction, and total frequency of peer interaction for the sexes combined. A significant negative correlation coefficient was found between social acceptance and total frequency of peer interaction among boys.

No other significant correlation coefficients were found for the

afternoon session.

Discussion

The main assumption upon which the present study was based is

the notion that a high level of mental health is the desired state of being

for individuals. Furthermore, for optimum mental health, it seems

essential that every individual have or be capable of having positive

interpersonal relationships with his peers (Potashin, 1946).

The investigation of peer relationships among young children

provides one approach to the study of interpersonal relationships. The

peer interactions explored in the present study were aggressive-

hostile peer interaction, cooperative-friendly peer interaction and

total frequency of peer interaction and their relationship to social

acceptance.

Studies of aggressive-hostile peer interaction in children have

been conducted by a number of investigators with inconsistent results.

Lippitt (1941); Marshall and McCandless (1957a) have concluded there

was no relationship between observed hostile-aggressive behavior in

nursery school children and social acceptance. Three other investi-

gators have shown a negative relationship between aggression and

social acceptance, indicating that children with low social acceptance

displayed highly aggressive behavior (Koch, 1933; Dunnington, 1957a;

Moore and Updegraff, 1964). Moore (1967) suggested in her review of

the research that

> . . . there is some evidence to suggest that aggression is
> more closely related to the number of times a child is
> selected as a disliked peer than to the number of times
> he is selected as a liked peer (p. 290).

The correlation coefficients found between aggressive-hostile

peer interaction and social acceptance in the present study indicated

a significant positive relationship for the morning session and a

negative, although negligible, relationship for the afternoon session.

Such a discrepancy may suggest that the teacher variable may be

operative in influencing how children in both sessions are preceiving

the social acceptability or unacceptability of aggressive behavior.

No measure of teacher behavior was employed in this study suggesting

a major limitation regarding this investigation.

The positive relationship between aggressive-hostile peer inter-

action and social acceptance found in the morning session might also

be due to the quality of the aggressive act, rather than the quantity of

the aggression shown. From observational data collected in the present

study it would be impossible to run correlations for the aggressive-

hostile behavior category breakdown, due to the low frequencies of

aggressive behavior shown. If such an analysis could be carried out,

it might have given an indication of the differences existing between the

two preschool sessions regarding the quality or kind of aggressive

behavior observed.

Another possible reason for the differences found between the two sessions might be the total number of "easily frightened" children in each session. Moore (1967) suggested that aggression aimed at "easily frightened" children would appear to detract more from aggressive children's social acceptance than it would in groups with a lower number of "easily frightened" children. A negative correlation coefficient would then theoretically show a higher percentage of "easily frightened" children receiving the aggressions of the group and influencing the number of negative votes the aggressors would receive on a sociometric interview. It would therefore seem necessary, when attempting to relate aggressive-hostile peer interaction to social acceptance, to have a measure of the quality, as well as the quantity, of the aggressive act shown and, furthermore, to know what type of child toward whom the aggression was directed.

The positive relationship postulated in the research existing between social acceptance and cooperative-friendly peer interaction was borne out only for the afternoon session in the present study. Analysis of the breakdown for the cooperative-friendly behavior category might reveal certain cooperative behaviors which are themselves more indicative of social acceptance than all of the behaviors combined into a single category. A high level of such a behavior would cause one session to appear as more socially acceptable, when

in actuality it is one or two specific behaviors which are determining
the acceptance.

The assumption from past research that the more a child
participates within his peer group, the more he will be recognized by
his peers (Gergory, 1943; Campbell and Yarrow, 1961; Moore, 1967)
suggests a relationship existing between social acceptance and total
frequency of peer interaction. Social acceptance has been found to
be related to the degree and direction of a child's total outgoing energy.
The correlation coefficients found in the present study offer data only
partially supporting this relationship. A significant positive relation-
ship was found for the afternoon session when analyzed for sexes
combined, and a negative, nonsignificant relationship was indicated
for boys alone. No significant correlation coefficients were found for
the morning session; however, there was a tendency for the data from
the morning girls to show an inverse relationship between social
acceptance and total frequency of peer interaction.

The correlation coefficients on total frequency of peer inter-
action and social acceptance follow the pattern indicated by the
relationships between social acceptance and the first two variables of
the hypothesis when the following assumption is taken into account.
Preschool children who display outward directed energy and initiative
are found to be more highly chosen when these qualities are present in
such a degree that they stimulate rather than overpower the person

doing the choosing (Gregory, 1943). It would seem that the afternoon session with a higher degree of cooperative-friendly peer interaction would have a positive correlation coefficient when the total frequency of peer interaction was related to social acceptance. Conversely, for the morning session, with a high degree of aggressive-hostile peer interaction, there would be a negative correlation coefficient between the total frequency of peer interaction and social acceptance.

The studies exploring the relationship between social acceptance and total frequency of peer interaction including Dunnington (1957a), McCandless and Marshall (1957a), Moore and Updegraff (1964), and the present study, concur that no "one" factor can be delineated as the "cause" or primary determinant of a child's social acceptance. Further research is needed in this area to ensure representative observations of each child's social interactions with his peers.

Limitations of the Study

Several limitations are indicated for the present study. These limitations may be operating individually or together to influence the relationship found among the variables for the two preschool sessions studied. One factor which might have influenced the social acceptance measure is the lack of a retesting to ascertain the reliability of the sociometric interview. The positions of the children on the social acceptance continuum may have varied, causing a change in the correlation coefficients found.

Limitations regarding the observational data include the small sample size and the low level of behavior frequencies found. An observational period twice as long as that of the present study would secure a larger frequency count, enabling analysis for all categories of peer interaction. The possibility of observer bias must also be considered. A measure of reliability among all six observers would eliminate the possibility of such bias occurring.

Another limitation to the present study is the lack of a measure of teacher behavior. The uncontrolled teacher variable might have explained further some of the differences existing between the two preschool sessions. An observational schedule of the teacher's behaviors, specific reinforcement patterns and teaching practices would add valuable information on the total environment in which the child interacts. The variation in the relationships between the variables found in the present study might also be the result of assuming that the two different sessions observed were relatively similar in program and teacher philosophy. Such an assumption was questionable on the basis of the data collected in the present study. This factor is an important variable to consider if the SIS is used to correlate two or more groups with another test or behavior variable.

Suggestions for Further Research

As a result of this study on social acceptance and its relationship

to peer interactions of preschool children, suggestions can be made for further research. Present results indicated a need for the expansion of the behavioral categories used in the research instrument. Such research might include the addition of a measure for teacher behavior, taken as the children's behaviors are also being observed. This measure would allow for inferences regarding the type and quality of the preschool program examined. Possible teacher bias might appear which would have an extensive influence upon the children's perception or reactions to certain variables, for example aggressive-hostile behaviors. The possible inclusion of a longer observational period would seem to expand the frequencies reported and hopefully allow all of the variables studied to undergo statistical analysis. Further delineation of behavioral frequencies for the categories of independent activity and teacher interaction would refine and clarify the group time data.

The use of the sociometric instrument for measuring social acceptance although lacking specific reliability and validity, proved useful in the present study. Suggestions for sociometrics in future research are that the techniques be examined individually for the type of research being conducted and the specific sample to be studied. For preschool subjects involved in the present study, the picture sociometric interview held the children's attention and seemed to be of interest to them. A retest measure would be advisable to ensure

the reliability of the children's choices. Measurement of behavioral

characteristics as possible determinants of social acceptance seems

a valuable avenue for further research into interpersonal relationships.

The present study used a composite sociometric score. In this

particular study all of the children received either a positive or a

negative vote. In future research, data analysis might include an

individual analyses for positive scores, negative scores, and composite

scores. This then would present a more complete view of the dyna-

mics of social acceptance.

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APPENDICES

APPENDIX A

SOCIOMETRIC TEST

Name _____ Session   M   A   Date _____

1. Who do you like to play with inside?

    1. _____

    2. who else? _____

    3. and who else? _____

2. Who do you not like to play with inside?

    1. _____

    2. who else? _____

    3. and who else? _____

3. Who do you like to play with outside?

    1. _____

    2. who else? _____

    3. and who else? _____

4. Who do you not like to play with outside?

    1. _____

    2. who else? _____

    3. and who else? _____

5. Who would you like to sit next to at juice?

    1. _____

    2. who else? _____

    3. and who else? _____

6. Who would you not like to sit next to at juice?

    1. _____

    2. who else? _____

    3. and who else? _____

APPENDIX B

SOCIAL INTERACTION SCALE

Subject _____   Place _____

Date _____

Observer _____   Time _____

Interval
CP	Cooperative play	
PP	Positive physical contact	
TP	Talking with peer	
HP	Helping peer	
BA	Bodily attack	
NP	Negative physical attack with object	
NV	Verbal attack	
IN	Infringement of property or invasion of territory	

PA	Passive when attacked
CR	Cries
DP	Defensive posture
TE	Telling teacher
RP	Recover property
IG	Ignores
WD	Withdraws from play
CO	Compliant
NC	Non-compliant
ID	Independent activity
TI	Teacher interaction

	CP	PP	TP	HP	BA	NP	NV	IN	PA	CR	DP	TE	RP	IG	WD	CO	NC	ID	TI
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			

Behavioral frequencies of subjects as measured by the Social Interaction Scale.

Subject	Cooperative peer interaction					Aggressive peer interaction				Victim of aggression					Noncooperative peer interaction		
	CP	PP	TP	HP	CC	BA	NP	NV	IN	PA	CR	DP	TE	RP	IG	WD	NC
AB1	40	0	41	0	5	2	0	0	6	1	0	0	0	0	0	1	1
AB2	49	0	42	0	5	0	0	0	0	2	0	0	0	0	0	0	0
AB3	49	0	27	0	3	0	0	0	0	1	1	0	0	0	0	1	0
AB4	57	0	42	0	8	2	0	0	0	0	0	1	0	0	0	2	1
AB5	18	0	10	1	15	0	1	0	1	1	4	1	1	0	0	0	0
AB6	34	0	16	0	7	1	0	0	0	0	1	4	0	1	0	1	0
AB7	33	0	22	0	4	2	0	0	0	1	5	0	0	0	0	0	0
AB8	35	0	11	2	2	0	0	0	2	1	10	1	0	1	0	0	0
AG1	53	0	27	1	5	0	0	0	1	0	0	0	0	0	0	0	0
AG2	35	0	37	0	6	0	0	0	0	0	0	0	0	1	0	1	0
AG3	25	0	9	5	14	0	2	1	2	1	1	0	0	0	0	0	0
AG4	26	0	12	1	20	0	0	0	0	0	1	2	0	0	2	1	0
AG5	48	0	21	1	2	0	0	0	0	1	0	0	0	0	1	0	0
AG6	31	0	10	0	1	1	0	0	1	0	0	0	0	1	0	1	0
AG7	37	3	35	0	4	0	0	0	1	0	0	1	0	0	0	0	0
Totals	570	3	362	11	101	8	3	1	14	9	23	10	1	4	3	8	2

Subject	Cooperative peer interaction					Aggressive peer interaction				Victim of aggression					Noncooperative peer interaction		
	CP	PP	TP	HP	CC	BA	NP	NV	IN	PA	CR	DP	TE	RP	IG	WD	NC
PB1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
PB2	35	0	13	0	0	0	1	0	1	0	0	0	0	0	0	0	0
PB3	49	0	2	0	13	0	0	0	0	0	0	0	0	0	1	0	0
PB4	20	0	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PB5	44	4	16	0	0	7	0	0	2	1	0	2	0	0	1	0	0
PB6	52	0	9	0	4	0	0	0	0	0	0	0	0	0	0	0	0
PB7	22	0	24	0	1	4	0	0	2	0	1	0	0	0	0	1	0
PG1	36	0	33	0	11	0	0	0	2	0	0	0	0	1	0	0	0
PG2	18	0	7	0	2	0	0	0	1	0	0	1	0	1	0	0	0
PG3	32	2	44	0	1	1	0	0	1	0	1	0	0	0	0	0	0
PG4	45	19	3	1	0	1	0	0	0	1	0	1	0	1	0	0	0
PG5	42	2	24	0	0	0	0	0	0	1	0	1	0	0	0	0	0
PG6	53	1	18	0	1	0	0	0	0	1	2	3	0	0	0	0	0
PG7	52	0	14	0	0	1	0	0	0	0	0	4	0	0	0	0	0
PG8	58	0	22	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Totals	558	28	236	1	38	14	2	0	9	5	4	13	0	3	0	0	0

AB - morning boys   PB - afternoon boys
AG - morning girls   PG - afternoon girls

Frequencies, Averages and weighted averages of noncooperative peer interaction.

Grouping	Sexes combined			Boys			Girls		
	Free play	Group time	Total	Free play	Group time	Total	Free play	Group time	Total
Morning session									
Frequency	7.000	6.000	13.000	3.000	4.000	7.000	4.000	2.000	6.000
Average	.467 (N=15)	.400 (N=15)	.867 (N=15)	.375 (N=8)	.500 (N=8)	.857 (N=8)	.571 (N=7)	.286 (N=7)	.857 (N=7)
Weighted average	1.000 (N=7)	2.000 (N=3)	1.625 (N=8)	1.000 (N=3)	2.000 (N=2)	1.750 (N=4)	1.000 (N=4)	2.000 (N=1)	1.500 (N=4)
Afternoon session									
Frequency	1.000	1.000	2.000	1.000	1.000	2.000	0.000	0.000	0.000
Average	.067 (N=15)	.067 (N=15)	.133 (N=15)	.143 (N=7)	.143 (N=7)	.286 (N=7)	0.000 (N=8)	0.000 (N=8)	0.000 (N=8)
Weighted average	1.000 (N=1)	1.000 (N=1)	1.000 (N=2)	1.000 (N=1)	1.000 (N=1)	1.000 (N=2)	0.000 (N=0)	0.000 (N=0)	0.000 (N=0)

Frequencies, averages and weighted averages of victim of peer interactions.

Grouping	Sexes combined			Boys			Girls		
	Free play	Group time	Total	Free play	Group time	Total	Free play	Group time	Total
Morning session									
Frequency	41.000	7.000	48.000	36.000	3.000	39.000	5.000	4.000	9.000
Average	2.733 (N=15)	.467 (N=15)	3.200 (N=15)	4.500 (N=8)	.375 (N=8)	4.875 (N=8)	.714 (N=7)	.571 (N=7)	1.286 (N=7)
Weighted average	3.416 (N=12)	1.000 (N=7)	3.416 (N=14)	5.142 (N=7)	1.000 (N=3)	4.875 (N=8)	1.000 (N=5)	1.000 (N=4)	1.000 (N=6)
Afternoon session									
Frequency	20.000	7.000	27.000	4.000	2.000	6.000	16.000	5.000	21.000
Average	1.333 (N=15)	.467 (N=15)	1.800 (N=15)	.571 (N=8)	.286 (N=8)	.857 (N=8)	2.000 (N=7)	.714 (N=7)	2.675 (N=7)
Weighted average	2.222 (N=9)	2.333 (N=3)	2.700 (N=10)	1.333 (N=3)	2.000 (N=1)	2.000 (N=3)	2.667 (N=6)	2.500 (N=2)	3.000 (N=7)