CHANGES IN THE BEHAVIOR OF CLINIC - REFERRED CHILDREN DURING PLAY INTERACTIONS WITH TRAINED AND UNTRAINED UNDERGRADUATES

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ABSTRACT

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By

Loretta R. Laurenitis

The present study was designed to investigate the process of play encounters between children and trained and untrained high and low potential undergraduates in reference to six dimensions of children's behavior - Leadership, Dependency, Affection, Aggression, Contact and Role-playing. On the basis of theoretical assumptions, clinical observations, and research findings, the development of particular patterns for each of the six variables was predicted. Leadership was expected to increase over sessions,diminishing in the last phase as the child engaged in more egalitarian activities with the undergraduate. Dependency and Role-playing were expected to decline in frequency over time, whereas Contact was expected to increase over sessions. It was anticipated that Aggression would also increase in frequency, reaching a peak and then declining. For Affection, the trend expected was a decline in frequency followed by a rise in occurrence in the later phases as negative feelings were expressed and resolved. The following specific hypotheses were then formulated in reference to the six behavioral variables: 1) Significant differences over sessions would be found for the dependent variables in the direction of the

anticipated trends. 2) The behavior of children interacting with trained undergraduates would more clearly fit the expected patterns than the behavior of children encountering untrained undergraduates. 3) The behavior of those children playing with high potential undergraduates would more closely approximate the predicted patterns than the behavior of children engaged with low potential undergraduates. 4) Training would tend to reduce the differences in behavior between children interacting with high potential undergraduates and those playing with low potential undergraduates. However, children playing with trained high potential undergraduates would show greater levels of the dependent variables in the predicted directions.

Subjects were twenty-seven clinic-referred children divided into the following four groups depending upon the type of undergraduate with whom they interacted: Trained High Potential (THP), Trained Low Potential (TLP), Untrained High Potential (UHP), or Untrained Low Potential (ULP), Due to the small N's and unequal cell frequencies, only within-session statistical comparisons could be made between groups. Thus, the first hypothesis could not be tested. Determination of which session scores to analyze statistically for each dependent variable was made on the basis of deviations in the mean scores between groups. In those instances where the possibility of significant differences was indicated by inspection of the means, a 2(trained-untrained) X 2(high potential-low potential) analysis of variance was performed.

An analysis of simple effects was carried out in the one case where a significant interaction effect was found.

The results showed few significant differences between groups, no hypothesis receiving definitive support. Interpretation was difficult because the results were few and scattered. No statistical analysis over sessions could be performed because of the small N's and unequal cell frequencies.

It was concluded that additional data is needed to clarify the scattered findings and suggestive trends which resulted from this study. Modifications of the scoring system were proposed. Limitations of the present research, such as the small number of children seen, the short time period, the restriction of the play setting, and the need for consideration of variables like age, sex, and presenting problem of the child were reviewed. The need to study the interactional relationship between the undergraduates' and children's qualities and behaviors was discussed. Directions for future research were explored.

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To Bob, whose caring and love
have enriched my life

To my grandparents, Zidur and Susan,
for their many sacrifices
and great love

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INTRODUCTION AND REVIEW OF THE LITERATURE

The purpose of this research was to investigate differences in the behavior of clinic-referred children in play encounters with trained or untrained, "high potential" or "low potential" undergraduates. Differences between groups were studied for the following behaviors: Leadership, Dependency, Affection, Aggression, Contact, and Role-Playing.

Current Status of the Mental Health Field

Within the last ten years, mental health professionals have become alarmingly aware of the ever-increasing demands for mental health services and the limited supply of trained professionals available to meet those needs (Cowen, Gardner, and Zax, 1967; Gordon, 1965; Guerney, 1969; Hobbs, 1964; Joint Commission on Mental Health of Children, 1970; Smith and Hobbs, 1966). Cowen and Zax (1967) note that "Merely in terms of demand for mental health services (rather than need which is inferred to be many times greater), present resources, measured by almost any criterion, are grossly insufficient" (p. 15).

Hobbs (1964) suggested that twenty-five percent of mental health resources be used to mount a holding action against the problems of adults and 75 percent be devoted to the mental health problems of children. He proposed that

such action would be the only way to make substantial changes in the mental health of our adult population a generation later.

The Joint Commission on Mental Health of Children titled its 1970 report Crisis in Child Mental Health and called our lack of commitment to the problems and needs of children "a national tragedy." They cited National Institute of Mental Health estimates that in 1966, nearly 1,000,000 of the 1,400,000 children under 18 having serious difficulties and needing psychiatric care received no treatment (p. 5).

Clearly, the mental health needs of our nation cannot be met by the traditional approaches and the training of more professionals. Smith and Hobbs (1966) noted that "The present and future shortage of trained mental health professionals requires experimentation with new approaches to mental health services and with new divisions of labor in providing these services" (p. 40).

Nonprofessionals as Psychotherapeutic Agents

One way to help alleviate the current shortage of mental health professionals and the critical demand for services is through the use of trained nonprofessionals to assume some of the responsibilities and tasks of professional change agents. Research has been conducted in this direction using parents (Berkowitz and Graziano, 1972; Guerney, 1964; Guerney, Guerney, and Andronico, 1966; Guerney and Stover, 1971; Hawkins, Peterson, Schweid, and Bijou, 1966; Shah, 1967;

Stover and Guerney, 1967), teachers (Becker, Madsen, Arnold, and Thomas, 1967; Harris, Wolf, and Baer, 1964; Zimmerman and Zimmerman, 1962), housewives and other underemployed individuals (Harvey, 1964; Rioch, Elkes, Flint, Usdansky, Newman, and Silber, 1963), college students (Cowen, Zax, and Laird, 1966; Davison, 1965; Goodman, 1967; Kreitzer, 1969; Linden and Stollak, 1969; Reinherz, 1964; Stollak, 1968, 1972, 1973a), and high school students and peers (Fellows and Wolpin, 1969; McWilliams and Finkel, 1973; Perlmutter and Durham, 1965).

Results of such research have been promising. Rioch, Elkes, Flint, Usdansky, Newman and Silber (1963), in one of the earliest studies, achieved positive results in using married women to do therapy with adults. Carkhuff and Truax (1965) found that they could train graduate students and lay hospital personnel in less than 100 hours to function at levels of therapy nearly commensurate to those of experienced therapists. Poser (1966) used trained undergraduate students as therapists for groups of hospitalized patients and found that these lay therapists, in comparison to an untreated control group, achieved somewhat better results than psychiatrists and psychiatric social workers doing therapy with similar groups of patients. Stover and Guerney (1967) and Guerney and Stover (1971) found that mothers could be trained to assume the role behavior of a client-centered therapist and that their behavior effected concomitant changes in the behavior of their children.

Carkhuff (1968), Cowen, Gardner, and Zax (1967), Guerney (1969), the Joint Commission on Mental Health (1970), Matarazzo (1971), Riessman (1965), and Rioch (1966), all have encouraged the use of nonprofessionals and cite the benefits which may be achieved. Carkhuff (1968), in reviewing research findings on the use of nonprofessionals, notes the evidence indicating that lay persons can effect significantly constructive changes in the clients they see and that "lay trainees function at levels essentially as high or higher (never significantly lower), and engage clients in counseling process movement at levels as high or higher, than professional trainees" (p. 118). Carkhuff (1968), Riesman (1965), and Rioch (1966) also note evidence indicating that those people giving help undergo constructive change themselves as a result of being in the helping role.

College Students as Mental Health Agents

In attempts to expand mental health services through the use of non-professionals, college students constitute a relatively untapped resource pool. Although their services have been used in programs such as "Big Brothers" and various other volunteer activities, only within the last few years has there been recognition of their potential usefulness as psychotherapeutic agents and studies conducted to research this issue.

Gruver (1971), in a review of the research using college students as mental health agents, found that very few studies

have been done and that "further, most of those investigations which have been conducted are so methodologically inadequate that it is impossible to draw firm conclusions about the relative effectiveness of college students as therapeutic agents" (p. 123). Gruver also noted, however, that there is sufficient evidence to conclude that the therapeutic relationship has a definite, positive effect upon the college student therapist himself.

Stollak (1968) trained college students to act as play therapists with clinic-referred children under 10 years of age. The student's role was modeled after that of a client-centered therapist. The basic task was to be empathic, non-directive, and understanding in the play sessions and to convey acceptance and understanding to the child. Training was accomplished in ten sessions. Students discussed the nature and purpose of their role, observed play therapy sessions, and practiced playing with normal children, At the end of the training each student was assigned a child who had been referred to the Psychology Clinic at Michigan State University or to the Lansing Child Guidance Clinic. Results obtained after ten play sessions indicated that the undergraduates' behavior did change significantly. "Reflection of content" and "Clarification of feeling" were behaviors which increased over the sessions. (Results obtained with regard to the children's behavior will be discussed in a later section.)

Linden and Stollak (1969) further investigated undergraduates and children in play encounters. They found that

those students who were in a more didactic and structured training group (as opposed to an experiential group in which students sought to discover their own method of responding to a child) reflected significantly more feeling and content of behavior, gave significantly less direction and unsolicited help, asked fewer questions and restricted the children less. The authors concluded that the ability to communicate empathy is not an innate ability but must be specifically taught.

Reif and Stollak (1971), in a study using "normal" children, compared a group of nine undergraduates trained in specific techniques of play interaction based on a client-centered play model with an untrained control group. Results indicated that the trainees demonstrated greater frequencies of the following behaviors: "Reflection of verbal content," "Reflection of motor behavior," "Interpretation," "Compliance clarified," and "Reciprocal participation of fantasy behavior." These results were in the expected direction and were considered effective responses in interaction with a child. The trainees were also rated significantly higher than the control students on the measure of warmth for the last two sessions. (Again, results with regard to child behaviors will be reviewed in a later section).

Stollak (1972, 1973a) conducted an expanded study investigating the behavior of trained and untrained, "high potential" and "low potential" undergraduates in play encounters with clinic-referred children. (Since the present

report is based on this project, a comprehensive description may be found in the Method section). Schreiber (1972) found that trained undergraduates showed higher levels of "empathic" behavior with children than did the controls, particularly with regard to "Communication of Acceptance" of the child. There were also some significant training effects for the remaining two categories, "Allowing Self-Direction" and "Involvement."

In summary, current research indicates that college students can be trained to alter their behavior in a therapeutic direction. This study, however, is concerned with the changes occurring in children's behavior during play encounters with undergraduates. Clearly, children's behavioral patterns need to be researched in order to assess the impact of the undergraduates' behaviors.

Play Therapy - A Theoretical Overview

A major psychotherapeutic treatment approach with children is play therapy as developed by Allen (1942), Axline (1947, 1955), Dorfman (1951), and Moustakas (1953, 1959). Although often referred to as "client-centered" or non-directive play therapy, Moustakas (1959) distinguishes his method as "relationship therapy." He views "client-centered" therapy as focusing on the therapist and child as separate individuals, the therapist conveying empathic understanding and unconditional regard, making reflections and clarifications. In "relationship therapy" Moustakas views the

relationship as the significant growth experience, as "both means and end." Guerney, Guerney, and Andronico (1966) also emphasize the importance of the relationship between the therapist and child as the critical factor in psychotherapy.

Although Moustakas makes this distinction between client-centered play therapy and relationship therapy, the approaches as exemplified by Moustakas and Axline are very similar and based on the same principles. For Axline (1955) the overall objective of any psychotherapy is "to provide a relationship with a client that will enable him to utilize the capacities that are within him for a more constructive and happier life as an individual and member of society" (p. 619). Moustakas (1953) conceptualizes play therapy in terms of "a set of attitudes in and through which children may feel free enough to express themselves fully, in their own way, so that eventually they may achieve feelings of security, adequacy, and worthiness through emotional insight. The three basic attitudes in child-centered play therapy are faith, acceptance and respect" (p. 2).

Axline (1947) suggests eight basic principles to guide the non-directive play therapist:

1. the establishment of a warm, friendly relationship with the child in which good rapport is established;

2. the therapist's acceptance of the child "exactly as he is;"

3. the establishment of a feeling of permissiveness in the relationship to allow the child to feel free to express his feelings;

4. the therapist's ability to recognize and reflect the child's feelings;

5. a deep respect on the therapist's part for the child's ability to solve his own problems;

6. no attempt by the therapist to direct the child's actions or conversation, but rather allowing the child to take the lead;

7. the therapist's view of therapy as a gradual process, one not to be hurried; and

8. the establishment of only necessary limitations (p. 73-74).

Within the warm, accepting, permissive environment characterized by Axline's eight principles, it is believed that a child can develop his potentials and innate capacities, work through conflicts and disruptive feelings, and become a more independent and self-confident individual.

Stollak (1973b) stresses the importance of sensitive and effective communication with children which he feels includes the following elements:

1. a clear, unambiguous verbal and nonverbal communication indicating to the child that the adult is aware of, and understands his or her feelings, needs, and wishes and how the child's actions derive from such thoughts and feelings;

2. a clear and unambiguous communication indicating that the adult accepts the child's feelings, needs, and wishes as natural and valid human experiences - but not necessarily the child's actions, which might be unacceptable to the adult;

3. a clear and unambiguous communication indicating how the adult thinks and feels about the child's thoughts, feelings, and actions;

4. if appropriate (i.e., if the child's actions are unacceptable), a clear and unambiguous communication indicating alternative ways for the immediate expression of the child's thoughts, feelings, and needs; and

5. if appropriate (i.e., if the child's actions are unacceptable), a clear and unambiguous communication indicating alternative ways for the child to express his inner experiences in the future (p. vii-viii).

In summary, the conditions some consider important aspects of adult-child encounters in which a child can express his feelings, gain self-confidence, and grow as an individual are acceptance, empathy, sensitive and effective communication of the child's feelings, permissiveness, and respect for the child.

Research in Play Therapy

In spite of the fact that play therapy is a widely used approach in attempts to help clinic-referred children, research in this area has been insufficient. Advocates of play

therapy espouse its effectiveness and beneficial outcomes through theoretical dissertations and clinical reports of the process of "successful" cases. However, as Levitt (1971) noted, evaluation research in child psychotherapy has failed to demonstrate unequivocally the effectiveness of child psychotherapy. Research relating specific therapeutic interventions to specific changes in particular children and under specific conditions still needs to be done in the field. Ginott (1964) stressed that many of the most important questions about play therapy, such as what the process is and what variables affect that process, have been left unanswered. Levitt (1971) also noted that surveys of play therapy practices, such as Ginott's and Lebo's (1961) investigation of play therapy limits and theoretical orientation, indicate that variation in the behavior of child therapists in the therapy situation is considerable and may not be related to theoretical orientation. Therefore, it is possible that there are broad individual differences among therapists in effectiveness.

Levitt (1971) recognized that one reason for the dearth of objective studies in child psychotherapy may be the methodological difficulties unique to child therapy research. He cited the following two:

1. The child is a developing organism. Therefore, in children who are basically normal, symptomatic manifestations often seem to disappear as a function of the child's development. That is, "spontaneous remission" or the child's

"growing out" of problematic behaviors is quite apt to occur. Another common occurence is developmental symptom substitution, "Symptoms that are pathognomic of an underlying emotional illness may...disappear as a function of development, but will then be replaced by other symptoms" (p. 477).

2. Often persons other than the child may be directly involved in the treatment (e.g. the mother or parents). When this occurs, a primary research problem lies in separating effects. Both these considerations make the task of designing sound research studies in individual child psychotherapy more complex.

Lebo (1953) summarized the status of research on play therapy as follows:

> The principles and methods of nondirective play therapy are frequently presented as though they were firmly established. The assured manner of writing of many of the authors and the large-scale possibilities held before the reader, tend to make one believe that, at long last, 'the way' has been found...Actually, this is not so. Indeed, it may not be the specific procedures of play therapy per se that effect the rather remarkable personality changes. The children may be benefiting from having someone constantly and consistently interested in their welfare...
>
> Nondirective play therapy, while promising when evaluated subjectively, has been seen to have rather serious methodological lacks. One cannot concur...that play work with children...'has come to stay' until play therapy has been established by objective means. In the long run, nondirective play therapy should stand or fall on the results of experimental studies investigating its effectiveness in relation to other procedures.
>
> ....To be admitted to the ranks of approved therapeutic methods nondirective play therapy needs more than enthusiasm, belief, and the shibboleth, 'It works, if you only try it.' (p. 430)

Research on the Process of Play Therapy and Play Encounters

As already noted, the research in the area of child psychotherapy is minimal. This section will review those few studies which focus on the process of play therapy and play encounters, with specific emphasis on children's behavior during therapy and play interactions.

Landisberg and Snyder (1946) were the first to use an objective approach in an attempt to analyze what occurred in client-centered play therapy. They studied the protocols of four children (three "successes" and one incomplete case), ages five to six, seen by three nondirective therapists. Children's statements were categorized as to the content, attitude or emotion expressed, and the activity.

With regard to the children's behavior, Landisberg and Snyder (1946) reported a rise in the amount of physical activity in the last three-fifths of treatment and increased expression of feeling. During the first two-fifths of treatment, approximately fifty percent of the children's actions and feelings were those of emotional release. For the last three-fifths of the process, this rose to seventy percent. Feeling was discovered to be significantly related to the action rather than to the verbal responses. It was found that negative feelings were expressed with increasing frequency while the expression of positive feelings remained fixed at about thirty percent of the responses. Although negative feelings initially comprised less than twenty percent of the responses, they increased to almost forty

percent near the end of treatment and then dropped off in the final fifth to thirty-three percent, or exactly the same as the percentage of positive feelings. There was a marked increase in the expression of feelings toward other persons or situations, the major part of the children's feelings not being directed toward themselves or the therapist. It was noted that the children did not change markedly in the amount of feelings expressed toward themselves or their counselors but were able to bring out both negative and positive feelings toward other individuals during the play therapy process. This ability increased over the period of treatment. In the final stages, these expressions fell off somewhat, the authors speculating that the child's need for such expression may have decreased.

The small N, lack of a control group, and lack of a behavioral definition of "success" for the three cases are serious shortcomings of this study. In particular, without the control group, one cannot assess whether "success" was due to the therapy and/or to the presence of an interested adult or instead was a developmental phenomenon.

Finke (1947) analyzed the complete protocols of six children ages five to eleven seen by six different therapists for behavior problems. Expressions of feeling were emphasized in the belief that this category would reflect the child's changing emotions resulting from the play therapy.

The results showed that similar trends emerged in the therapy of the different children which divided therapy into

three stages:

(1) Child is either reticent or extremely talkative. He explores the playroom. If he is to show aggression at any time during therapy, a great deal of it will be exhibited in this stage.
(2) If aggression has been shown, it is now lessened. The child tests the limitations of the playroom. Imaginative play is frequently indulged in here.
(3) Most of the child's efforts are now expanded into attempted relationship with the counselor. The child tries to draw the therapist into his games and play. (Lebo, In Haworth, 1964, p. 423).

Lebo (In Haworth, 1964) notes that Finke (1947), like Landisberg and Snyder (1946), found no pattern for positive statements. A major difference from their study, however, was that Finke also found no pattern or trends for negative statements.

Finke's (1947) study suffered from the same limitations noted above for the Landisberg and Snyder (1947) study. Both, however, showed changes in the children's behavior over the period of play.

Lebo (1952) researched the relationship between chronological age and the kinds of statements children make during play. He felt Finke (1947) had failed to recognize that age and maturation might effect the types and levels of verbalizations made by children. Lebo (1952) studied twenty children in three play sessions given by the same therapist. Five age stages (four, six, eight, ten, and twelve years) were selected with two boys and two girls in each stage. Fifteen pages of verbatim notes were randomly chosen and categorized by three experienced play therapists according to Finke's (1947) categories.

Lebo (1952) found that age, indicative of maturation, did have an effect and was related to the types of expressions made. As children became older, they tried less to draw the therapist into their play, expressed more likes and dislikes while telling the therapist fewer of their decisions, and did not take as much time exploring the limitations of the situation. Hence, it appears that the process of play therapy differs in particular ways depending on the child's age.

Moustakas and Schlalock (1955) studied therapist-child interactions in play therapy sessions. Two groups of four year olds (N = 5 for each group) were selected. Group A consisted of children without emotional problems while Group B was composed of children with severe emotional difficulties as unanimously determined by three sets of ratings. Each child was seen in two forty minute play sessions about three days apart. Behavior over these sessions was assessed every five seconds with respect to seventy-two categories. Although the results of this study do not cover changes in children's behavior over time, if one considers that the purpose of play therapy is to help a child with emotional problems become less "disturbed," or achieve a healthier adjustment, then one might expect that if treatment were successful for children in Group B (those with emotional problems), they would at the end of their play therapy sessions exhibit behaviors similar to those of children in Group A (children without emotional problems).

The results of this study in reference to the nature of the interaction behaviors of the children were the following:

(1) Children with serious emotional problems were more like than different from the children without such problems (correlation of .694 for the two groups). Their behavior patterns, in general, were similar. Ninety-five percent of the interaction behavior of both groups was represented by these seven categories: Nonattention, Attentive Observation, Statement of Condition or Action, Seeking Information, Giving Information Verbally, Recognition of Stimulation, and Nonrecognition of Stimulation. Minor differences were revealed in the approach of the two groups to the therapist. Group A (without emotional problems) used the following behavior categories more frequently: Joint Participation in Activity, Orienting the Role of the Therapist in Play, Seeking Help, Directing by Suggestion, Seeking Permission, Rejection by Changing the Subject, and Rejection by Denying the Validity of the Therapist's Statement. Group B children used more often all categories of Threat to Attack, Forbidding, and Physical Attack.

Moustakas and Schlalock concluded that the differences in the behavior between the two groups seemed related to the problem of the Group B children.

> These children spent much of their time in noninteractive behavior - in fantasy, play, and other activity that excluded the therapist - or they responded to him in a way that did not encourage interaction. In contrast, the children of Group A showed considerable verbal interaction with the therapist, talking about friends, school, home, and

other conditions in their lives, explaining their behavior and giving the therapist clues to an understanding of their behavior. ....Group A is much more verbal in a social sense, while Group B is more often nonattentive, that is, does not interact with the therapist, or interacts in a way that does not elicit interactive responses from him. (pp. 148-149)

(2) The second major difference between the two groups was the large number of hostile feelings exhibited by Group B. However, this finding was not unexpected since the emotional difficulties described for all children in Group B related to hostility affecting their nursery school behavior. Although a significant difference was found between the hostility rankings of Groups A and B, hostile and attacking behavior was still a rather infrequent occurrence in both groups.

Minor differences related to Group B's pattern of greater hostile behavior were also found. Group B children:

tended to be more forbidding, more prone to attack and threaten to attack, and more likely to use physical barriers to block or restrain the therapist. There was some indication that dependency, often associated with hostility, was more frequently expressed by Group B, in the sense of frequently asking questions...Along with the tendency of Group A children toward more verbal interaction on a friendly, social level, there was more Joint Participation in Activity with the therapist and more Seeking Permission. These children were also more assertive in the sense of orienting the therapist to his role and function, directing by suggestion, and denying the validity of the therapist's statements or actions when his behavior did not satisfy the child. (p. 149)

Stover and Guerney (1967) conducted a study of filial therapy to determine

(1) whether parents of disturbed children could be trained to assume a reflective, empathic role in play sessions with their children and

(2) whether the children's behavior would reflect concomitant changes as a result of the mother's new role behavior.

Two control and two experimental groups of six to eight mothers were randomly formed from those applying to the Rutgers University Psychological Clinic. The children had previously been diagnosed as having emotional difficulties. The experimental groups received training in client-centered play therapy principles, with an emphasis on the reflective role and the building of an empathic relationship with the child. The control group received no training but had the same number of play sessions with their children as the experimental group mothers. For the purposes of the research, the fourth play sessions (third training session) were compared with the initial (base-line) session.

Multivariate analysis of variance was used to study the data acquired with regard to the children's behavior. They found that for children in the experimental groups, nonverbal aggression increased; whereas for control group children, this behavior decreased. The differences between the experimental and control groups were found to be statistically significant. The experimental group children also increased in expression of verbal negative feelings rather than decreasing as with the control groups. The results of one experimental group reached statistical significance. No significant difference was found for the variables of verbal leadership and verbal dependency. Thus, some trends did emerge although there were only four play sessions involved in this study.

Stollak (1968) used Guerney's filial therapy procedures and techniques to train college undergraduates to act as play therapists with clinic-referred children under ten. Students had been selected as "high potential" or "low potential" therapists based on several personality questions. Children's behavior was analyzed in the first, fifth, and tenth sessions to determine what changes occurred on measures of aggression, leadership, dependency, and negative feelings. Due to the lack of significant differences between the "high potential" and "low potential" therapists, data for the children were combined. Stollak found that expression of negative feelings increased significantly from the first to the tenth session, but not from the first to the fifth, or fifth to the tenth. Leadership behavior also increased from the first to the fifth, but not from the fifth to the tenth sessions. There were no significant changes over the three sessions in expressions of either aggression or dependency.

Another study of children's behavior and the training of undergraduates in play techniques was conducted by Reif and Stollak (1971). Two groups of nine undergraduates each were randomly selected to play with "normal" children (ages 4 to 7) from the community. One group, the experimental or trainee group, was given training in play techniques based on a client-centered model of play therapy. The control group received no such training but played with their children once a week as the trainees did. Twenty 20 minute play

sessions were conducted. Four of these sessions, the first, seventh, thirteenth, and twentieth were videotaped and used for the analyses of students' and children's behavior. Results indicated that the experimental group children showed overall significantly greater increases in "statements of personal thought or behavior in the context of fantasy," "statements of interpersonal awareness in the context of fantasy," "fantasy behavior," "fantasy aggression," and "nonrecognition." Experimental children's fantasy behaviors showed significant increases with respect to both time and training in the final play session.

The most comprehensive study to date of the efficacy of filial therapy and the process of play sessions conducted by trained nonprofessionals was carried out by Guerney and Stover (1971). The children were between four and ten years old, all with serious emotional difficulties, all screened very carefully from cases referred to Rutgers Psychological Clinic and the Hunterdon Psychiatric Clinic. Of seventy-one who began, fifty-one children completed the project. Mothers were divided into groups of six to eight members. These groups met two hours each week with one or two mothers conducting a twenty minute play session with her clinic-referred child. The mothers were trained to use play techniques modeled after Rogerian client-centered play therapy, the emphasis being on the development of an empathic relationship with the child. These groups were conducted for a period of

twelve to eighteen months. Following the demonstration training sessions of six to eight weeks, the mothers conducted weekly play sessions at home with their children. The group meetings were used to discuss those sessions and the mothers' feelings and concerns. Each mother also was observed monthly in a play session with the child at the clinic.

Children's behavior in play sessions with their mothers was coded at the time of the diagnosis and each month throughout the course of treatments for the entire twelve to eighteen months of involvement in the program. The coded process variables studied were Aggression toward the Mother, General Aggression, Dependency, Leadership, Affection, Affection toward the Mother, Role-playing, and Contact with the Mother. Data derived from some 49,000 fifteen-second observations occurring in some six-hundred play sessions were assessed by thirds of the treatment period, determined individually for each child depending upon his number of recorded sessions. The average number of responses per child per session for the full sample and selected sub-samples was used.

Following are the results and variable patterns discerned:

Aggression toward the mother - Peaking of aggression occurs toward the midpoint of the sessions, followed by a decrease. At the last phase of therapy, aggression toward the mother is slightly lower than at the start of treatment. When data for aggressive and withdrawn children are separated out, there is a noteworthy difference in the pattern. For the aggressive children, aggression toward the mother rises sharply and then declines, remaining well above the starting point. For withdrawn children, however, aggression toward the mother declines from the first to second period, and somewhat further in the third.

General aggression - Hardly any peaking of this variable occurs. There is, however, a very slight decline at the last phase relative to the beginning one.

Affection - Expression of affection declines throughout the treatment phase, the rate of decline being the same for the second to third phase as from the first to the second.

Affection toward the mother - This variable shows the same pattern of straight-line decline as for affection.

Contact with the mother increased steadily from the beginning to the end of the sessions.

Role-Playing declines throughout the sessions, the largest rate of decrease being from the first to second phase of treatment.

Dependency shows a sharp and steady decline over the three phases.

Leadership - A small rise initially is followed by a decline to a point slightly above the starting level.

Although Guerney's and Stover's (1971) research sheds important light on the process of play interactions, because statistical analysis was not performed, we do not know if the changes over time are significant. Since no placebo or no-treatment control groups of children applying to the clinic were employed, the findings must be viewed cautiously. We do not know how or whether the patterns occurring in the children's behavior differ from those which would occur in sessions led by other adults or untrained mothers over the same period

of time.

In summary, research related to the process of play therapy or play encounters does indicate that some changes occur in children's behavior. However, much of the research suffers methodologically. At times statistical analyses to determine significance are lacking or control groups have not been used, making it almost impossible to draw definitive conclusions regarding the findings. Variables such as the age of the child, sex of child and therapist, and degree and type of disturbance of the child have not usually been taken into consideration. Time sequences and behavioral categories are not often directly comparable and hence preclude comparisons between studies. Clearly, research in child psychotherapy still leaves much to be desired. Many important questions remain unanswered and inconclusively studied.

Research Questions and Process Variables

Based primarily on theoretical writings and clinical impressions, and in some cases supported by research, there is a generally expected pattern of positive and negative responses in individual client-centered or nondirective play therapy. That process is usually conceptualized as follows: In the warm, accepting, permissive play therapy environment, the child begins to feel accepted and liked, to recognize his freedom, and to express his feelings and conflicts through his play, actions, and speech. Negative and aggressive feelings are often displayed, initially diffuse and

pervasive in their expression. As the relationship develops, these feelings become sharpened and more specific. That is, they are more often focused on and directed toward particular persons in the child's life. As these feelings are expressed, released, and worked through in the accepting presence of the therapist, the feelings become less intense and diminish (Moustakas, 1953, 1955a, 1955b, 1959). With regard to positive feelings, once the initial period of socially desirable responses passes by, the child is believed to express fewer positive feelings since some of these are thought to have been pseudo-positive ones. Later, as the child releases and works through his negative and aggressive feelings, he is able to express more positive and affectionate emotions. As the sessions progress and the child becomes more self-confident, it is expected that dependent behavior, thought to occur frequently at first, will decrease steadily, while leadership behaviors will increase steadily. Also, as a child's conflicts and feelings are expressed, there is less need for the child to engage in fantasy and role-playing behaviors. Therefore, the occurrence of these behaviors is expected to fall off as attempts to engage the therapist in activities increase.

The objectives of this research were to study six children's behaviors - Aggression, Affection, Leadership, Dependency, Contact, and Role-playing - occurring in play interactions with undergraduates who were divided into the following four groups: Trained High Potentials (THP), Trained Low

Potentials (TLP), Untrained High Potentials (UHP), and Untrained Low Potentials (ULP). Changes over sessions as well as differences between groups were to be assessed. We were interested in determining whether different patterns emerged for the different experimental groups and whether significant changes occurred in the frequency of occurrence of the six variables over the first, sixth, eleventh, and fifteenth sessions of play interactions. As already noted, methodological inadequacies and differing time intervals make it difficult to draw definitive and precise conclusions from previous research. However, based on Guerney's and Stover's (1971) recent filial therapy project as well as the generally accepted pattern of the process of play therapy derived from the literature and clinical accounts, the following trends were expected to occur for the six variables considered:

(1) Leadership was expected to increase over sessions, diminishing in the last phase as the child engaged in more egalitarian activities with the undergraduate.

(2) Dependency was expected to decline in frequency over the sessions.

(3) Aggression was expected to increase in frequency and intensity, reaching a peak, and then declining.

(4) For Affection, the trend anticipated was a decline in frequency which would be followed by a rise in occurrence in the later phases as negative feelings were expressed and resolved.

(5) It was thought that Role-Playing would diminish over sessions.

(6) Contact was expected to increase in frequency over time.

The children's play participants in this study were all college undergraduates selected as having "high" or "low" potential for being able to assume an empathic, sensitive, and responsive role with children. The hypotheses studied were as follows:

(1) Significant differences over sessions will occur for the variables in the directions of the trends noted above.

(2) Children encountering trained undergraduates will display the anticipated trends to a greater degree than children playing with untrained undergraduates. That is, the frequencies of occurrence of the six variables in sessions will be stronger in the anticipated direction for children interacting with the trainees.

(3) The behavior of children encountering high potential undergraduates will fit the predicted patterns more closely than the behavior of children whose play participants are low potential undergraduates. That is, the frequencies of the variables in sessions will be more strongly in the expected direction for children of high potential undergraduates.

(4) The behavior of children encountering trained high potential undergraduates will most clearly conform to the anticipated patterns in comparison to the behavior of children encountering undergraduates from the remaining three groups.

That is, the frequencies of the variables will be more strongly in the anticipated directions for children of trained high potential undergraduates. Also, training will tend to reduce the differences between high potential and low potential undergraduates, resulting in more similar behavioral trends for the two trained groups.

METHOD

This section is derived from Stollak (1973).

Selection of Undergraduates

Recruitment of undergraduate students to serve as play therapists was accomplished through an advertisement placed in the University newspaper. Volunteers who were interested in working with children and learning how to respond to and communicate more sensitively with children were solicited. Students attending the initial meeting were asked to complete three inventories: the Parent Attitude Research Instrument (Schaefer and Bell, 1958), a Sensitivity to Children projective questionnaire developed by Stollak and consisting of sixteen parent-child problem situations, and a Personality Questionnaire, also devised by Stollak and used to determine general "mental health" of the respondents. Undergraduates were selected on the basis of their scores for these three inventories. Ten males and ten females who scored "highest," that is, who had more " 'child-oriented,' 'liberal' values and attitudes, were able to communicate understanding and acceptance of children's needs and feelings, and presented themselves as being within the 'average' range on various psychological dimensions" were selected as "High Potential" (HP) subjects. Another ten males and ten females who scored

"lowest" on the inventories were designated "Low Potential" (LP) subjects. Ten HP's and ten LP's were then randomly selected to be the experimental (trainee) group. The remaining ten HP's and ten LP's became the control (untrained) group. Equal numbers of females and males were included in both of these groups.

Control Group Activities

Each of the twenty control group subjects met individually with Stollak and was informed of the random selection procedure. The importance and necessity of a control condition to evaluate the effect of training and supervision on the undergraduate's and child's behavior were discussed. Control subjects were told they would be called when there was a clinic-referred child for them to play with, and that although they would receive neither training nor supervision during those sessions, an observer would be present behind a one-way mirror. The purpose of the observer, usually a graduate student, was to insure that neither the undergraduate nor child were destructive toward one another. Control subjects were also informed that they could participate in training similar to that of the experimental group once the research was concluded. In the meantime, the control subjects were given a list of books on play therapy which they could read if they wanted but which they would not be allowed to discuss with the graduate student observers.

Trainee Group Activities

The twenty trainees were randomly assigned to one of three groups, each group consisting of six or seven trainees and approximately equal numbers of females and males, HP and LP subjects. Stollak met with one group while graduate research assistants supervised the other two groups.* Each group met two hours weekly.

Until the trainees began play sessions with their clinic-referred children, their first nineteen weeks of training consisted of various activities. The Sensitivity to Children questionnaire was discussed. The group's task was to attempt to reach consensus on how best to handle each of the problem situations. Once collective answers were acquired, discussion centered on the effects of each "solution" upon the child's needs and feelings. Principles of sensitive and effective communication with children were studied through the readings of Axline, Moustakas, Ginott, and others. "Behavioristic" concepts such as reinforcement were also discussed to help students become aware of how they might be reinforcing a child's behavior. The majority of time during this first training phase was devoted to Discussion Topics. One-half the group served as the "panel of experts" for handling problems for each Discussion Topic; the other half served as questioners. As the experts and questioners

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*The graduate research assistants were Sharon Berliner and Allan Scholom.

discussed child behavior problems related to the specific topic, they attempted to work out solutions based on their readings and on the principles of communication they had learned.

Trainees also began to play with a "normal" child as soon as they could find one. Selected readings and material from five one-hour edited videotapes consisting of sensitive and insensitive handling of various child behaviors served as main discussion sources. Role-playing and use of examples and problems one might encounter with children were helpful learning aids as well. In addition, each student was videotaped with his or her child and these sessions were then observed and discussed by the group. Emphasis was on the importance of empathy, sensitive communication with the child, and the effect of the student's behavior on the child's actions and feelings. Trainees continued to play with their "normal" children until assigned a clinic-referred child some fifteen weeks into the new school year.

Selection of Children

Children for this project were selected from referrals of four to nine year olds made to the Psychological Clinic. Cases were assigned to Stollak if the Clinic staff worker felt that there was an emotional or social problem and that more than an assessment seemed needed. Each case was comprehensively evaluated by a graduate student. If the evaluation indicated that the child did have emotional or behavioral

problems, was of average intelligence without neurological or physical impairment, was not psychotic, and did not have parents who were psychotic, suicidal, or homicidal risks, then the recommendation was made for individual play assessment sessions.

Upon completion of the evaluation, the graduate student met with the parents and, if appropriate, suggested fifteen sessions of "play interaction" at no cost with a "therapist in training" whom the graduate student would be observing. It was decided that the fifteen sessions would serve as a continuing assessment of the child's feelings, needs, and fantasy expression, as well as possibly being beneficial to the child due to the special individual kind of attention provided. If the parents accepted the recommendation, the graduate student, by means of a randomization process, called a trainee or control subject. A time convenient to the undergraduate, the graduate student, the parent and the child was arranged and the play sessions were begun. The first, sixth, eleventh, and fifteenth sessions were videotaped for the purposes of the research project. Trainees received immediate feedback and supervision from the graduate student who was observing through a one-way mirror.

At the end of the fifteen play sessions, the graduate student again conducted an evaluation and assessment of the case. If at that time the parents did not wish to continue with the procedure, or if as a result of the evaluation it was felt that the treatment of choice should be marital

counseling or individual therapy for another family member, then these issues were discussed with the parents and the child was dropped from the project. The option to continue individual play sessions also existed. If parents were satisfied with the program and it seemed that at least some progress was being made by the undergraduate participant with the child, then another fifteen play sessions were begun.

Analysis of Children's Play Session Behavior

In this study, six variables were chosen for the analysis of children's behaviors over the fifteen play sessions. The variables selected were those developed and used by Guerney and Stover (1971). (See Appendix A for descriptions of the variables). They were coded as follows:

Leadership as having occurred (1) or not occurred (0).

Dependency as having occurred (1) or not occurred (0).

Affection as having not occurred (0) or having occurred along a dimension of intensity from mild (1), to moderate (2), or intense (3).

Aggression as having not occurred (0) or having occurred along a dimension of intensity scored mild (1), moderate (2), or intense (3). (Adopted from Siegel, 1956).

Contact as having occurred (1) or not occurred (0).

Role-playing as having occurred (1) or not occurred (0).

A rating was made for each variable during each fifteen second interval of the videotape. The first, sixth, eleventh, and fifteenth play sessions were used. Each session was thirty

minutes long.

Table 1 presents a breakdown by session for the subjects for whom results were obtained.

Table 1. Subjects (N = 28)

Group	Session	1	6	11	15
HP - Trainees	(N = 6)	5	3	5	4
HP - Control	(N = 7)	7	4	4	2
LP - Trainees	(N =10)	9	8	3	7
LP - Control	(N = 5)	4	2	3	2

The low number of tapes is readily apparent from the table. Mechanical failures of the video-equipment resulting in loss of the audio and/or video portions was largely responsible for the reduction in data. Also, only twenty-eight of forty undergraduates received clinic cases because of a lower referral rate than anticipated. Stollak replicated the project during 1972-73.

Reliability

Raters were given the description sheets of the variables (See Appendix A) and asked to study the specific examples closely, while submitting the categories and general descriptions of the variables to memory. After a training period of approximately twelve hours involving practice coding and

discussion, three raters* independently coded three half-hour videotapes of undergraduate play sessions not used in this project. Because these three coders left school before the study was completed, two new assistants** were trained to rate the remainder of the tapes. In order to obtain reliability, one new coder rated three half-hour tapes and the other rated six. In all five cases, scores from the coder were compared with scores of the experimenter, designated as "expert," and a mean percentage of agreement with the "expert" was obtained for each rater across categories. These scores across coders and categories ranged from 66.0 to 100 with a mean agreement of 82.1. (See Table 4 in Appendix C for complete results.)

Once adequate reliability was established, coders independently rated the half-hour play sessions which were available. Coders were unaware of the purpose of the study, the session number, or the characteristics of the undergraduates. Except for two tapes which could only be coded once each because of difficulties with the tapes, each session was coded twice by two different raters. Inter-coder reliabilities were calculated using Pearson product-moment correlations. Note that ratings of one of the original three raters were

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*These raters were Alex De Yonker, Barry Jay, and John Healey.

**The new coders were Mary McCaslin and Michael Harding.

deleted from this study because they were too few in number to use in calculating inter-coder reliability. These correlations for each pair of coders over the six behavior variables are presented in Appendix D. They ranged from .36 to 1.00. Mean correlations for the six variables were as follows: Leadership, .83; Dependency, .84; Affection, .81; Aggression, .96; Contact, .93; and Role-playing, .92.

RESULTS

This study assessed the behavior of children interacting in play sessions with undergraduates. The dependent measures selected for analysis were the following six behavioral categories: Leadership, Dependency, Affection, Aggression, Contact, and Role-Playing. The undergraduates participating in these play encounters formed four groups: Trained High Potentials (THP), Trained Low Potentials (TLP), Untrained High Potentials (UHP), and Untrained Low Potentials (ULP). Trained coders independently scored the children's behavior in videotapes of the first, sixth, eleventh, and fifteenth play sessions for the six variables. Inter-coder reliability was obtained by coding each session twice (except for two which had mechanical difficulties) by two separate raters.

Analysis of the Data

Scores for each of the six dependent variables were examined by means of separate 2(trained-untrained) X 2(high potential-low potential) analyses of variance for selected sessions. Although Affection and Aggression had been scored for intensity, only the mean frequency scores were subjected to analysis because the intensity scores were so similar to the frequency scores. Table 6 in Appendix E provides the mean frequency and mean intensity scores for

Affection and Aggression for the THP, TLP, UHP, and ULP groups. Table 7 in Appendix F presents the mean intensity per session for Affection and Aggression, obtained by dividing the total of the intensity scores per session for each variable by that variable's frequency of occurrence within the specific session being examined.

Determination of which sessions' scores to analyze statistically for each dependent variable was made on the basis of deviations in the mean scores between groups. Table 8 in Appendix G presents the mean scores for the THP, TLP, UHP, and ULP groups. In those instances where the possibility of significant differences was indicated by inspection of the means, a 2(trained-untrained) X 2(high potential-low potential) analysis of variance was performed. Summary tables of these analyses of variance for the following instances may be found in Appendix H: Leadership (Sessions 1, 6, 15), Dependency (Sessions 11, 15), Affection (Sessions 6, 11, 15), Aggression (Sessions 1, 6, 11, 15), Contact (Sessions 6, 11, 15), and Role-Playing (Sessions 1, 6, 11, 15).

Due to the small N's and unequal cell frequencies, no analysis over sessions could be performed.

Hypothesis 1

It was originally hypothesized that significant differences over sessions would be found for the dependent variables in the direction of the anticipated trends. As noted, however, the small N's and unequal cell frequencies precluded a statistical analysis over sessions. Any investigation of patterns is therefore contingent upon inspection of the means.

Since there is no way to evaluate the significance of the differences between means, such an inquiry would be highly speculative.

Table 8 in Appendix G presents the means of the dependent variables. Fluctuations between sessions and generally inconsistent deviations seem apparent.

Because of the small and unequal numbers of subjects per session, this hypothesis regarding patterns of the dependent variables could not be subjected to statistical analysis.

Hypothesis 2

It was hypothesized that for children encountering trained undergraduates, the frequencies of occurrence of the six behavioral variables in each session would be stronger in the anticipated direction than for children playing with untrained undergraduates. Support for this hypothesis would be obtained from significant training effects and from higher or lower mean scores for the respective variables. Table 2 presents the mean frequencies of the six variables for the trained and untrained groups.

No significant differences were found for the two groups on Leadership or Contact behavior. A significant difference was found for Dependency in Session 11 ($F = 6.70$, $df = 11$, $p < .05$), revealing that children encountering untrained undergraduates exhibit more dependency in this session than children encountering trained undergraduates. Since dependency was

Table 2. Cell Means for the Dependent Variables for the Trained and Untrained Groups.

VARIABLE: LEADERSHIP				
	Session Number			
Condition	1	6	11	15
Trained	29.06 (N=14)	38.44 (N=11)	36.83 (N=8)	35.56 (N=11)
Untrained	21.61 (N=11)	20.75 (N=6)	39.55 (N=7)	59.25 (N=4)

VARIABLE: DEPENDENCY				
	Session Number			
Condition	1	6	11[b]	15
Trained	12.13 (N=14)	18.88 (N=11)	15.10 (N=8)	12.57 (N=11)
Untrained	15.99 (N=11)	12.38 (N=6)	30.08 (N=7)	16.75 (N=4)

VARIABLE: AFFECTION				
	Session Number			
Condition	1	6[a]	11	15
Trained	14.28 (N=14)	8.64 (N=11)	20.70 (N=8)	13.88 (N=11)
Untrained	14.06 (N=11)	21.63 (N=6)	24.50 (N=7)	16.00 (N=4)

VARIABLE: AGGRESSION				
	Session Number			
Condition	1[b]	6	11	15
Trained	30.84 (N=14)	65.88 (N=11)	96.50 (N=8)	75.02 (N=11)
Untrained	83.79 (N=11)	69.13 (N=6)	58.13 (N=7)	109.00 (N=4)

[a]Difference is marginally significant ($p < .10$)

[b]Difference is significant ($p < .05$)

Table 2 (continued).

VARIABLE: CONTACT								
	Session Number							
Condition	1		6		11		15	
Trained	22.74	(N=14)	33.88	(N=11)	50.10	(N=8)	55.74	(N=11)
Untrained	19.17	(N=11)	55.88	(N=6)	50.96	(N=7)	85.50	(N=4)

VARIABLE: ROLE-PLAYING								
	Session Number							
Condition	1		6		11		15[a]	
Trained	11.84	(N=14)	18.17	(N=11)	35.47	(N=8)	13.31	(N=11)
Untrained	2.86	(N=11)	11.00	(N=6)	7.80	(N=7)	59.50	(N=4)

[a]Difference is marginally significant ($p < .10$)

[b]Difference is significant ($p < .05$)

expected to decrease over time and it was hypothesized that the Trained group would fit this pattern more closely, the significant finding for Dependency appears to be in the anticipated direction. However, the significant finding of Session 11 disappeared in Session 15.

A marginally significant difference was found for Affection in Session 6 ($F = 4.09$, $df = 1/13$, $p < .10$), the Untrained group children displaying significantly more affectionate behavior than the Trained group children. The expectation was for Affection to decrease and later increase. Children of trained undergraduates were expected to show the pattern more clearly. Although somewhat difficult to interpret, the significant finding for Affection seems to lend slight support to the hypothesis in Session 6, the children of trained undergraduates showing less affection.

Aggression in Session 1 was significantly higher for the Untrained group ($F = 4.39$, $df = 1/21$, $p < .05$). This finding is difficult to interpret in regard to the hypothesis since it pertains only to the initial session.

Role-playing in Session 15 was significantly higher for the Untrained group ($F = 4.19$, $df = 1/11$, $p < .10$). It was expected that the Trained group would more closely approximate the pattern of a decrease in Role-playing over time. The finding for Session 15 lends slight support to the hypothesis in terms of the Trained group exhibiting less Role-playing in the last phase of the play sessions. However, one must be wary of drawing conclusions because of the small N in

the untrained condition.

Because the results obtained are so few and so scattered in regard to the variables, interpretation is difficult. However, the hypothesis with regard to Training did receive slight but inconclusive support. The results obtained must be considered with caution since they may only be chance findings.

Hypothesis 3

It was anticipated that the behavior of children encountering High Potential undergraduates would be more in the expected direction for each variable in each session than the behavior of children with Low Potential play participants. Support for this hypothesis would come from significant Potential effects and from higher or lower mean scores for the respective variables. Table 3 presents the frequency means of the dependent measures on the basis of Potential.

No significant differences were found for Dependency, Aggression, Contact, and Role-playing. A significant difference was found for the two groups' Leadership behavior in Session 15 ($F = 11.21$, $df = 1/11$, $p < .01$) revealing that children encountering Low Potential undergraduates exhibit more Leadership behaviors in the last session. This finding appears to support the expectation that children of High Potential undergraduates would fit the pattern for Leadership more clearly than children of Low Potential undergraduates.

Table 3. Mean Scores of the Dependent Variables for the High Potential (HP) and Low Potential (LP) Groups

	Session Number			
	1 (HP: N=12) (LP: N=13)	6 (HP: N= 7) (LP: N=10)	11 (HP: N=9) (LP: N=6)	15 (HP: N=6) (LP: N=9)
LEADERSHIP				
HP	25.86	29.25	41.38	[b]23.88
LP	24.81	29.94	35.00	70.93
DEPENDENCY				
HP	12.16	16.88	20.35	11.50
LP	15.96	14.38	24.83	17.82
AFFECTION				
HP	12.93	[a]9.21	[d]12.70	[c]6.63
LP	15.41	21.06	32.50	23.25
AGGRESSION				
HP	38.69	55.13	83.63	111.88
LP	75.94	79.88	71.00	72.14
CONTACT				
HP	20.59	32.13	27.23	66.38
LP	21.32	60.63	73.83	74.86
ROLE-PLAYING				
HP	6.76	22.67	20.93	50.38
LP	7.94	6.50	22.34	22.43

[a]Difference is marginally significant ($p < .10$)
[b]Difference is significant ($p < .01$)
[c]Difference is significant ($p < .025$)
[d]Difference is significant ($p < .005$)

Leadership was expected to diminish in the last phase as the child engaged in more cooperative activities with the undergraduate and did less "testing."

Significant differences between the two groups were found for Affection in Session 6 ($F = 3.40$ $df = 1/13$, $p < .10$), Session 11 ($F = 14.80$, $df = 1/11$, $p < .005$), and Session 15 ($F = 8.39$, $df = 1/11$, $p < .025$). In all three instances, the children in the Low Potential Group exhibited more affectionate behavior than those in the High Potential. The anticipated increase in Affection for the HP group in the later phases was not observed. For Sessions 6 and 11, the findings for Affection in the HP group appear to be in the expected direction.

In summary, several significant differences were found between groups for Affection and Leadership. Findings for Leadership appeared to be in the anticipated direction. Although the HP group showed less Affection than the LP group in Sessions 6, 11, and 15, the means do not indicate a steady decline. No statistical differences between groups were obtained for Dependency, Aggression, Contact, and Role-playing. Again, the results are few and must be viewed with caution.

Hypothesis 4

It was expected that the behavior of children encountering Trained High Potential undergraduates would more likely be in the expected direction in each session than the behavior of children encountering undergraduates from the remaining three groups. Also, training was expected to reduce

the differences between the HP and LP groups. Support for this hypothesis would come from significant training X potential effects, and from higher or lower mean scores for the respective variables. Table 8 in Appendix G presents the mean frequency scores of the six variables for the four groups.

A marginally significant training X potential interaction was found only for Aggression in Session 1 ($F = 4.23$, $df = 1/21$, $p < .10$). An analysis of simple effects was performed to investigate this interaction. (See Appendix I, Table 15). This test revealed that children encountering Untrained Low Potential undergraduates displayed significantly more Aggression than those encountering Trained Low Potential undergraduates ($F = 5.81$, $df = 1/21$, $p < .05$), and that those children interacting with the Untrained Low Potential undergraduates also exhibited more aggression than those interacting with Untrained High Potential undergraduates ($F = 3.88$, $df = 1/21$, $p < .10$). Thus training appeared to reduce the effects of potential. Children seen by UHP and ULP undergraduates exhibited a marginally significant difference in frequency of Aggression displayed while there was no difference between children of THP and TLP students in Aggression. In addition, training appears to have diminished the effect of the low potential undergraduates with regard to children's Aggression. That is, less Aggression was shown by children interacting with TLP than ULP students. Again, since the results are limited, they must be accepted with reservation.

DISCUSSION

Overview

The present study was undertaken to investigate the process of play encounters between children and trained and untrained, high potential and low potential undergraduates in reference to six dimensions of children's behavior - Leadership, Dependency, Affection, Aggression, Contact, and Role-playing. The children were divided into four groups depending upon whether they interacted with a trained high potential, trained low potential, untrained high potential, or untrained low potential undergraduate. Comparisons were made between these groups, as well as between the trained and untrained, and high potential and low potential groups.

Due to small N's and unequal cell frequencies, only intra-session statistical comparisons could be made.

Hypotheses

Patterns of the Dependent Variables

Statistical analyses of the dependent variables over sessions could not be performed because of the small number of subjects and the unequal cell frequencies. These factors also impeded use of the means to determine whether any patterns of the variables had occurred. Although statistical data are lacking, it seems important to consider the premises upon which the expectations for the patterns were based, as

well as any relevant observational data. Inspection of the means will be referred to as suggestive data.

On the basis of theoretical assumptions and implications drawn from Guerney's and Stover's (1971) research, it was anticipated that the following patterns would emerge for the dependent variables: As the child experienced the permissive and accepting environment in the play situation, he or she would become freer in the expression of his or her needs and feelings, approaching the situation more confidently. Hence Leadership was expected to increase over sessions, declining somewhat in the last phase as the child engaged in more egalitarian and cooperative activities with the participant-undergraduate. At the same time, Dependency would decline over sessions as the child asserted himself or herself more, seeking less approval and acknowledgment from the undergraduate. Mean scores for Leadership in all conditions showed fluctuations. No definitive conclusion could be drawn for that variable's pattern. However, children of HP subjects exhibited significantly less Leadership in Session 15 than children of LP subjects - a finding which was in the hypothesized direction. In regard to Dependency, inspection of the means does not indicate the anticipated steady decline, but rather fluctuations which at times are suggestive of an increase followed by a decrease. In observing some of these play sessions over time, it did often seem that the child showed a rise in Dependency responses as he or she tested the limits of the new situation, sought information, engaged the undergraduate in

attempts to establish a relationship, and tried to test how responsive the undergraduate was to what the child wanted. Thus it would seem that Dependency might well reveal an increase and then decline, which if it did occur in the filial sessions of Guerney's and Stover's study (1971) was obscured by the fact that their measures were taken for thirds of treatment time over a twelve to eighteen month period. It may well be that fifteen sessions is too short a time to expect the patterns of the variables to approximate the patterns established in the filial sessions. Stollak (1968) found no significant change for Dependency over ten sessions of play interaction between children and undergraduates while Leadership increased from the first to the fifth but not the fifth to the tenth sessions. Stover and Guerney (1967) found no significant differences in verbal leadership or dependency for an experimental filial therapy group and a control group from the first to the fourth play sessions. Thus, not only are our findings impaired by the small N's and unequal cell frequencies, but our fifteen sessions may be too short a time period for significant changes to occur in the behaviors studied. It may also be that this fifteen session period represents, at best, only the initial third of the pattern reported by Guerney and Stover (1971) and hence, shows fluctuations which are obscured in Guerney's and Stover's data.

Concomitant with the changes anticipated for Leadership and Dependency was the expectation that Aggression would increase, peak, and then diminish in the last phase as the child

worked through some of his conflicts and feelings. It was anticipated that Affection would decrease as the socially desirable responses dropped out, followed by an increase in the last sessions as negative feelings were resolved and more genuine expressions of positive affect occurred. Mean data is somewhat suggestive of an increasing trend for Aggression. Again, our fifteen sessions are probably too short a time period to approximate the anticipated pattern. However, the slight increase suggested for Aggression does seem to correspond to the expected increase for the first phase of play sessions.

In their study, Guerney and Stover (1971) distinguished between "Aggression Toward the Mother" and "General Aggression." The expected pattern for aggression was found for the former but not the latter category. There were also differences in the patterns of Aggression Toward the Mother which emerged for those children assessed as aggressive versus those who were categorized as withdrawn, as well as apparent differences for General Aggression between the general sample and the most improved sample. Since our study did not distinguish between types of children and presenting problems, degree of improvement, or categories of Aggression, some data may well have been obscured.

In general, inspection of the means for Affection showed fluctuations and no definite patterns. What does seem evident is that the decline of Affection followed by an increase in the last session did not emerge as expected. Again, our data

may only be indicative of the early phase of play interaction and may reveal the fluctuations hidden by more extended time analyses. It is also interesting to note, however, that Reif and Stollak (1972) excluded the variable Affection from their study because its occurrence was so infrequent. Rutledge (1974) found that over 90% of children's behavior in the first two taped sessions (1 and 6) fell into the neutral (nonrecognition) category. In studies of protocols of play sessions, Landisberg and Snyder (1946) found that expression of positive feelings remained at about the same level, while Finke (1947) found no pattern for positive statements. Guerney's and Stover's (1971) data revealed a steady decline for Affection over sessions. In this study, poor videotapes often made viewing of the children's expressions difficult or hard to determine, thus affecting our data collection and results. Clearly, further investigation of the variables of warmth, affection, and expression of positive feelings is needed to clarify just what process does occur in play sessions.

It was anticipated that as the child resolved some of his concerns, Role-playing would decrease and Contact increase, the child engaging in less distancing, child-oriented fantasy and instead becoming more conversational and attempting to engage the undergraduate jointly in more activities. Although some fluctuation between session means did seem to occur, there seemed to be quite consistent suggestive evidence over all groups for the increase in Contact from the first to the fifteenth sessions. It does appear that over time the child

begins to establish some type of relationship with the undergraduate, and participates in or shares activities with the student. Role-playing, on the other hand, seemed most commonly to indicate a pattern contradictory to the one expected. Whereas declines over sessions had been anticipated, it seems that the pattern may instead be one of increases, followed by a decrease in the final phase. This pattern would appear to be consistent with the type of play encounters in which trained undergraduates in this study were encouraged to engage. Fantasy behavior on the part of the child was viewed as a positive event and trained undergraduates often participated in, shared, and enjoyed the children's fantasies. Hence Contact and Role-playing were not necessarily mutually exclusive categories. Reif and Stollak (1972) emphasize the association of fantasy behavior with the process of achieving ego mastery and coping with internal conflicts. They suggest that fantasies involving problems of emotional integration and concerns with identification and role-behavior (hence role-playing) may represent higher levels of fantasy. The pattern then may be that as the child experiences the permissive environment and begins to trust his play participant, he moves from the lower level of fantasy (the more simple, stereotyped responses) to the higher level which would incorporate Role-playing. It could be speculated that as the child attains some emotional integration of his feelings and learns to express his feelings more directly the Role-playing behavior will drop off. The steady decline in Role-playing found by Guerney and Stover (1971)

may be, again, a result of the difference in number of sessions and the time period between our data and theirs.

Trained versus Untrained Groups

Very few significant findings resulted from analyses of differences between the means of the dependent variables for children playing with trained and untrained undergraduates. Because only intra-session analyses could be performed, these findings are limited in terms of their usefulness for an understanding of the differences between the two groups.

Aggression in Session 1, Affection in Session 6, Dependency in Session 11, and Role-playing in Session 15 were significantly higher for children encountering untrained undergraduates. Thus in these four instances training does seem to have an effect, although for Aggression one might speculate that the sample of children could have biased the results. For example, did the untrained undergraduates happen to get more acting-out children? Had we been able to include a larger number of subjects in our study, additional results may have emerged. Because analyses of the data over time could not be conducted, the findings which we did obtain are difficult to interpret with reference to specific patterns for the variables. However, having anticipated the children of trained undergraduates to exhibit the expected patterns to a greater extent, the results for Dependency, Affection, and Role-playing seem to be in the general direction. Only with additional data from the completed replication of this project, however, can the effect of training be clearly assessed and

patterns of the variables more definitely ascertained. The lack of more significant differences between the groups may have been largely a function of the small N's. Also, the effect of training may not have been as critical a factor as the amount of caring, interest, and commitment on the undergraduates' part.

High Potential versus Low Potential Groups

It was anticipated that children playing with high potential undergraduates would display the expected patterns of the variables to a greater degree than those encountering low potential undergraduates. Again, restriction to intra-session analyses made this difficult to determine. Significant results obtained revealed that children of low potential undergraduates displayed more Affection in Sessions 6, 11, and 15, and more Leadership in Session 15. These findings are somewhat consistent with our expectation for the directions of Affection and Leadership. Children of HP undergraduates were expected to show less Leadership in Session 15 when it was anticipated that they would be more engaged in egalitarian activities with the undergraduate. Affectionate behavior was expected to decrease (children of HP subjects showed less than children of LP subjects) but the anticipated increase in Session 15 was not evident. However, our data may be more congruent with Guerney's and Stover's (1971). They found a steady decline in Affection over sessions. The higher level of Affection for the children of LP subjects may indicate instead more of a desire to please and acquire the undergraduates' acceptance,

whereas there might be less concern with those issues for the HP children. Again, interpretation is difficult. The small N's and unequal cell frequencies clearly hindered determination of the differences between the behavior of children encountering high potential and those interacting with low potential undergraduates. In addition, the effect of potential may have been obscured by that of training. Initial HP-LP differences may have been diminished by training, which would then have affected the overall differences between the two categories for potential. However, it is also not unlikely that differences between the two groups were not extensive, or had a limited effect upon the children's behavior. Schreiber (1972) found that the high potential and low potential undergraduates differed significantly only on the category "Communication of Acceptance" in Session 15. No significant differences were established for the other two categories - "Allowing the Child Self-Direction" and "Involvement." It may be that the project was not long enough for significant differences between the HP and LP undergraduates to emerge. This pertains as well to the play patterns of the children. Perhaps the high potential and low potential undergraduates were not such disparate groups as expected, and were not experienced as such by the children. Just by the nature of the project, one may assume that undergraduates who volunteered were interested in working with children. A relationship with a caring, attentive individual may have been a more critical factor to the child than the degree of sensitivity displayed by the student

or the specific principles of interaction which the undergraduate employed.

Training X Potential Interaction

It was expected that children of HP undergraduates and LP undergraduates would differ significantly in the untrained condition but not necessarily in the trained. It was anticipated that the children of trained HP students would fit the anticipated patterns most clearly.

Training did seem to reduce the effect of potential in Session 1 for Aggression. Children seen by untrained low potential undergraduates displayed significantly more Aggression in this session than children encountering either trained low-potential undergraduates or untrained high potential undergraduates. No significant findings were obtained for any other behavioral variables. Because children were not divided on the basis of their presenting behaviors, we do not know how much these significant findings were influenced by this factor. It may be that the greater degree of aggression expressed by children of untrained low potential undergraduates was a function of the type of presenting problem of the children (e.g., acting-out versus withdrawn behavior) rather than the lack of training of the undergraduates. On the basis of inspection of the means, it is not feasible to attempt to draw conclusions. Fluctuations and patterns inconsistent with those expected seem apparent. It is impractical to attempt to interpret the extent of differences between the two untrained groups, or the extent to which the trained high potential group

approximates the expected pattern. Again, it is hoped that additional data from the replicated project will enable this hypothesis to undergo statistical analysis.

Limitations of the Present Study

The present study yielded few significant findings. Those that were obtained were often difficult to interpret. This section will consider some of the study's limitations and possible reasons for the lack of significant results.

One very serious shortcoming of the present study was the small and unequal number of subjects in each cell of the experimental design. As already noted, this difficulty precluded the performance of any statistical analyses over sessions. Thus our study of the patterns of the dependent variables was seriously impaired. Instead of being able to make definitive conclusions based on our data, it was only possible to note intra-session differences between groups which were difficult to interpret.

The small number of children and undergraduates was partly the result of a low referral rate. Although undergraduates were willing and anxious to begin their play sessions, some waited over a year for a case to be assigned to them. In several instances parents withdrew their children from participation before the fifteen sessions were concluded. Videotaping errors and mechanical difficulties with the equipment also reduced the total number of tapes which were available for analysis. Very often even when tapes had been completed for a session the

sound was poor or it was hard to distinguish a child's facial expressions. Scoring of such tapes was difficult and subject to error. Hopefully, new and more reliable videotape equipment and the addition of data from the replication of this study will help to clarify the results presently obtained.

The videotaping itself was also an interfering factor in the sessions. The camera was clearly visible to the child. Some children became so involved with their activities that they completely ignored the camera's presence. Others, however, were obviously affected by the equipment. Responses ranged widely. Some children were shy and embarrassed, and slow to begin playing. One child hid under a table throughout a major part of one session. Another made faces and clowned in the playroom. Still another became angry, shot at the camera and attempted to block its view with a hat. To what extent the taping influenced the occurrence of the children's behavior (e.g., the aggression noted in the previous example) is uncertain. However, it was a factor. Since only those sessions needed for the project were taped, they were special times to the child. Use of videotape equipment behind a one-way mirror would alleviate this problem.

In reviewing the research on child psychotherapy, Levitt (1971) cited some studies which show no relationship between outcome and number of treatment hours. However, children in this study participated in only fifteen half-hour play encounters. Can we really expect that significant changes will occur within that short a time interval? Often, too, these

sessions were interrupted by quarter breaks and sometimes even the whole summer. It is impossible to assess just what effect these interruptions had. However, they clearly interfered with the constancy of the relationship and, quite likely, the patterns of the children's behavior which emerged over time. Perhaps we would have acquired more meaningful results and clear patterns for the variables if we had extended a study over a longer period, or increased the number of weekly sessions.

An important variable which was not considered in this study was the classification of the children's presenting problems. Children in Guerney's and Stover's (1971) study were classified as either Withdrawn, Mixed-Intermediate, or Aggressive. Withdrawn and Aggressive children showed very different patterns of behavior in Aggression Toward the Mother. It may be that some of our data were obscured because of the lack of classification. It is likely that children who tend to act-out will show the development of quite different patterns of behavior over sessions than withdrawn children. For some variables perhaps the patterns would be similar, but the period of time over which they evolved might differ for the two categories of children.

Sex of the undergraduate and child was another variable which was not taken into account and which may have important implications. In a study of the effect of children's behavior upon parents, Osofsky and O'Connell (1972) studied 5-year old girls in dependence - and independence-producing situations. They found that the children's behavior did have an influence

upon the parents, who showed some differences in their responses. Fathers were more action oriented; they were more likely to help the child physically or, at times, to withdraw or become detached. In contrast, mothers were more supportive and encouraging of the children's efforts, being more likely to question, explain, and make comments, and to resist giving direct help immediately. Although the children's behaviors seemed to be generally consistent with mothers and fathers, there were also some differences with each parent. For example, girls in the independence-producing situation showed more task-oriented behavior with their fathers than with their mothers. Thus it appears that children do exhibit some contrasting behaviors in their interactions with their parents, and that mothers and fathers show some differences in their responses to their children's behavior. These findings have direct bearing upon the current study. Had we been able to have a much larger sample we could have divided male and female children into different groups depending upon the sex of the undergraduate with whom they were interacting. Perhaps differences in the patterns of behavior would have emerged, dependent upon the sex of both the child and the student. Research is needed to determine just what impact the sex variable does have upon the children's and the undergraduates' behavior. Do girls tend to exhibit more affectionate responses with female undergraduates? Are male undergraduates more likely to promote dependent behaviors in the child? Do cultural factors predispose females, for example, to be more empathic and sensitive to children's

feelings, and to touch children more often, whereas males are more task-oriented? Is there more of a need for males to "prove" themselves through their accomplishments, and does this result in a competitive element with male children? I am thinking in particular of an untrained low potential male undergraduate who often "out-did" the child with whom he was playing, either in their role-playing, at games, or in building with tinker toys. The child's attempts to master his feelings of inadequacy were impeded. When the undergraduate was obviously able to complete a more elaborate building project, the child gave up on his own, immediately exhibited more dependent responses (e.g., "Will you make one for me?") and withdrew from that activity in later sessions. A high level of Aggression occurred throughout many of these play interactions, and much of the Aggression was directed at the undergraduate. Some of this behavior must clearly have been in response to the interactions which the child had with the student. Even in role-playing, if the child "shot" the undergraduate and locked him in jail, the undergraduate always escaped and then "captured" the child. Of course, it may be that the lack of training and the student's selection as a "low potential" participant affected these interactions, but it would still be important to determine whether the sex of the child and the undergraduate were factors as well. In a study of nonverbal behaviors in the first session, Ducat (1973) found that untrained male subjects spent less time than either untrained female or trained male subjects in looking at a child and

watching the child's play activity. Thus there were male and female differences in this instance and training altered the male behavior. Perhaps we need to establish what other differences exist between males and females to evaluate training procedures and determine whether those procedures should be varied somewhat for the two sexes.

An additional variable which needs to be considered in its relation to children's behavior is the child's age. Lebo (1952) noted that differences were apparent in children's play when their behavior was assessed on the basis of age. Thus children's sex, classification as to the problematic behavior, and age are all relevant factors to be taken into consideration.

As already noted, one of the possible reasons for our failure to acquire more significant and meaningful results is related to our small number of subjects and the unequal cell frequencies as well as the limited time period employed. The selection and training of the undergraduates may be additional factors. Perhaps the training procedures were not as productive as expected, and may need to be altered in some respects. Because the groups for the trained undergraduates were led by a senior faculty member and two clinical psychology graduate students, it is possible that there were differences across groups. If so, these differences might have affected the undergraduates' performance in the play sessions and consequently, the children's behavior as well. It may have been necessary to have one trainer work with all the trained undergraduates. It may also be that different methods should

be employed. Perhaps some time should be spent initially in developing listening and feedback skills with one another. Such a procedure might stimulate the growth of trust in the group while allowing the students to develop their sensitivities with one another and become more attumed to their own feelings. This type of method would also be helpful in terms of teaching students how to give constructive criticism to one another. In one particular group with which I worked as part of the 1972-73 replication project, one individual who obviously knew, or thought he knew, the "right way" to respond to children (something he learned through classes and readings) was extremely insensitive and condemning in his comments about another member's answers on the Sensitivity to Children Questionnaire. The other member felt attacked and humiliated. It was clear that the group would feel very wary about exposing themselves and their uncertainties, and hesitant to take risks in trying out new behaviors if even one member was going to act as a critical judge who already knew all the answers. If undergraduates are going to learn how to be sensitive, empathic, and non-directive with children, it seems apparent that they should also develop these skills with one another, and that the leader should serve as a model. In their study of filial therapy, Stover and Guerney (1967) found that of the two experimental (trained) groups, mothers in the one led by the more experienced clinician showed higher levels of reflective behavior in sessions with their children. It seemed that the more experienced group therapist was able to

provide higher levels of empathic understanding in his relationship to mothers in their weekly meetings. Thus the mothers were able to explore their feelings in a therapeutic climate similar to the one they were being taught to provide for their children. It seemed that mothers were able to be more helpful with one another in this group, and had a stronger model in their leader. Thus greater learning of empathic behavior seemed to occur and was evident in the play sessions. These findings support the idea that undergraduates need to learn how to be sensitive and responsive with one another in order to be more effectively empathic with children.

Another consideration in training undergraduates should be some experience in observing children's behavior. Many times undergraduates just do not seem to know what to look for in their sessions with a child. When asked to describe a session, an undergraduate will often respond that, "It was O.K." or "Well, we played with the dolls for a while. Then Susie painted. That's all." Specific references to the child's or undergraduate's feelings are often lacking, as well as more detailed content or an understanding of what seemed to be happening with the child in that particular session and over time. Learning how to observe the play interaction may well be combined with more experience in playing with children. Perhaps in addition to videotaping the undergraduates' play sessions with their "normal children," "live supervision" could be carried out simultaneously. Feedback is usually more helpful if it is given immediately and while the session is still "fresh"

in the undergraduates' memory. Perhaps, too, more role-playing and discussion of problematic situations and childhood disturbances would ease the transition from playing with a normal child to the experience of encountering a "clinic-referred" child, an adjustment which may have been quite anxiety provoking for some undergraduates.

Few significant differences were found with regard to Potential. Possibly the measures used to discriminate High Potential and Low Potential undergraduates were not as selective or sensitive as had been anticipated, or perhaps the scoring systems were not precise enough. The measures themselves may not have tapped those characteristics which were directly related to the undergraduates' performance in the play situation. Further research is needed to determine exactly what therapist or adult behaviors are related to successful outcomes in play therapy and play encounters. When these variables can be more clearly delineated, new tests and scoring methods may need to be devised. In this project, it was quite apparent that students who volunteered and were willing to make a long-term commitment were interested in working with and learning about children. In this sense, the undergraduates involved were a select group. Having observed at least one undergraduate in each of the four groups - trained high potential, trained low potential, untrained high potential, and untrained low potential - I was struck by their perseverance,interest, and commitment. Even those untrained subjects who received no feedback and only minimal encouragement and support over the 15 sessions remained enthusiastic about their encounters

with the children. Even though some students had been selected as "low potentials" they usually seemed just as interested in children as the "high potentials." For example, one untrained undergraduate, whom I later learned was a "low potential" student, was working in a volunteer tutoring project with elementary school children at the time of her play sessions. When these sessions ended, she maintained contact with the child involved by visiting and essentially becoming a "big sister." Students I encountered also followed-up "their" children after the post-assessment to learn what recommendations had been made. In fact, some undergraduates actively participated in the post-assessment process. Clearly interest was high among these students - regardless of potential. Perhaps, at least in these fifteen sessions, for children to experience the warmth, liking, and mere presence of an interested undergraduate was more critical then properly reflective and empathic statements. Over a longer time period, other factors might be more influential. It seems though that the child's perception of the undergraduate as a caring adult would be a vital factor influencing his behavior and actions - and a factor not necessarily accurately assessed by observers' measurements. Schreiber (1972) found that trained undergraduates in this project exhibited significantly more "empathic" behavior, especially "Communication of Acceptance," than untrained undergraduates. However, this study revealed few significant and conclusive differences in children's behavior between the two groups. Perhaps other variables - such as the

child's perception of the undergraduate, the student's degree of interest in and liking for the child, and the student's warmth and commitment - were more determining factors. Only future research can clarify this issue. Some way of assessing the effect of commitment and interest seems needed. Results may have been affected also by the children involved in the project. Post-analysis revealed that children seen by untrained undergraduates were perceived by the parents as having a somewhat higher initial level of dysfunctioning (See Stollak, Green, Scholom and Schreiber, 1973). Both the patterns of the children's behavior and analyses of the findings on the basis of training and potential could have been affected by this factor.

An additional point must be made regarding the selection of high and low potential undergraduates. Since only paper-and-pencil inventories and questionnaires were used - albeit the Sensitivity to Children questionnaire presumably related to one's behavior in a problem situation - it may be that subjects answered with what they considered a proper response rather than the actual way they would behave. Hence their answers may not necessarily be reflective of how they would act. Perhaps some type of interactional measures would need to be made of the undergraduates' behavior in actual play sessions or role-playing situations.

Rutledge (1974), in an interactional study of undergraduates' and childrens' behavior in the first and sixth play sessions using the same data as this study, found that 92% of the

children's time was spent in behavior of the neutral category - that is,behavior exhibiting no discernible warmth or interest in the adult present. This finding indicates that our lack of results may have been due not only to the small N, unequal cell frequencies, and other factors already mentioned, but to the play situation itself. Perhaps because of the nature of the playroom with its many different and attractive toys and varied activities, the child focused his interest on the room instead of interacting with the undergraduate. After all, the child was in a strange place with a person he had only recently met. Therefore, he was probably anxious and uncertain. Rutledge (1974) speaks of the child's "incapacity for clear and positive direction," and the child's ambivalence about approaching. Time is probably a critical factor. Perhaps as the sessions increase, the child's behavior will become clearer and more focused towards the adult. How long it takes a child to develop trust and enter into a meaningful relationship with an adult may be an individual matter. Six or even fifteen sessions is probably not long enough for some children.

One area which needs to be considered in evaluating play therapy or the efficacy of play sessions is the carry-over effect of the sessions. That is, even though a child may engage in primarily neutral behavior in the play sessions, does the child's participation in play encounters seem to affect his behavior with family and peers? Clearly some post-session behavioral indices or interactional measures would be needed.

One major issue not yet considered is the efficacy of the dependent variables used in this study and the shortcomings of their definitions. In many instances valuable information may have been lost because the categories used were so global. For example, it would have been revealing to divide Leadership into 1) Commands Directed to the Adult, Directions or Giving Ideas About Activity to the Adult and 2) Proclamations of Intended Self Activity. In that way, responses related to independence and self-assertion on the child's part could be distinguished from directive responses made to the undergraduate. With regard to Dependency, information-seeking is not necessarily a measure of dependent behavior and should be used as a separate category. Often specific requests for information (e.g., "What time is it?" "Can they see us?" "Can I shoot the windows?") are indications of curiosity, exploration, testing the limits, or simply a desire to know something. Consequently it would be more profitable to use the following three categories instead of "Dependency" - 1) Seeks Help, 2) Seeks Information, 3) Seeks Approval.

The variables Affection and Aggression need to be subdivided to provide more data. "Behavioral (nonverbal) Expression of Affection/Aggression" and "Expression of Positive/Negative Feelings" would seem to be more productive categories. A definite shortcoming with the global definition of Aggression used in this study was the contamination which resulted because a separate category for mastery - for example, Reif's and Stollak's (1972) "Behavioral Expression of Object

Mastery," - was not included. Thus although shooting darts against the wall was arbitrarily established as a #1 rating for Aggression, such activity may indicate skill mastery instead, especially when the child makes a statement such as "I'm going to try and shoot the ceiling...see if it sticks." An additional consideration may be inclusion of some type of interactional measure to determine whether a child's behavior is related to some provocation or response on the undergraduate's part,or to a modeling effect.

Reif's and Stollak's (1972) category "Joint Participation in an Activity" is similar to the category "Contact" but distinguishes what role the child assumes - i.e., Dominant Role, Submissive Role, or Discernible Role. Hence more information is derived using their category. A basic difficulty in using "Contact" as a variable was in distinguishing between parallel play and joint participation or genuine sharing. For example, a child and an undergraduate fingerpainting side-by-side are sharing in an activity, yet there may not be any real "contact" between the two. Often an activity such as card-playing, throwing a football, or playing checkers may be a "distancing" activity which impedes the development of closeness between the child and undergraduate. Perhaps some measure of involvement is needed if the category of "Contact" is to be retained.

Role-playing seems essentially to be a straightforward category. However, Reif and Stollak (1972) discuss the differentiation of various levels of fantasy behavior. More precise categories will need to be developed to explore fantasy play.

Directions for Future Research

The present study has attempted to assess the changes in children's behavior which occur in play sessions with undergraduates. As already noted, additional data is needed to arrive at any definitive conclusions regarding this process. For example, outcome measures need to be carefully analyzed to determine what changes in child behavior have occurred over time. Data analyzed from the small sample of this project showed a trend for parents of children seen by trained undergraduates to perceive more improvement in their children's behavior (Stollak, et al,, 1973). It would be useful to study just what improvements the parents noted, and then attempt to coordinate these findings with results regarding the behavior patterns in the sessions. We may find important behavioral differences between children who are most improved, and those with less successful outcomes. Such information would have implications for training procedures and, quite likely, for an understanding of the types and ages of "problem children" who might benefit from play sessions. Perhaps, too, new measures will need to be devised to assess changes in the child's feelings and self-concept instead of relying only on outcome ratings related to the perceptions of others. Although projective tests were used in the extended project, interactional tasks, objective scales, and some type of structured doll play might provide more scorable information. Before and after ratings of the children in group play sessions could be used to assess the child's behavior and interaction with peers.

As Levitt (1971) has observed, one factor which presents difficulties in studies of child psychotherapy relates to the rapid developmental changes and growth which occur in children. In this study all children participated in play sessions. A no-treatment group could have been included to assess to what extent such problem behaviors as the project children exhibited would improve over time. Additional variations such as treatment of mothers only, filial therapy, parent groups, or family sessions might be compared, and improvements in children's behavior studied. Increasingly emphasis seems to be on therapeutic methods other than one-to-one play sessions. Clearly, research is needed to assess the effects of various treatment methods. Only with such information can we provide more efficient services. Also, it would be useful to place more emphasis in research on changes in the parents' behavior, and to ascertain what effect such changes have upon their children's behavior. Levitt (1971) cites studies indicating that treatment is most effective when the focus is either the mother and father, or the mother, father, and child. Additional work such as Guerney's and Stover's (1971) is needed in this regard.

Even though future research may provide continuing support for the argument that the child should not be seen alone in treatment, there will obviously still be cases in which the parents will not, or perhaps cannot be involved. In such instances, play sessions for the child may be helpful. If future studies can provide clearer understanding of the play process, and of the effect of such variables as age, presenting

problem, and sex, we will certainly be able to offer more beneficial treatment. In this regard, interactional studies of adult-child behavior and changes over time are needed. We require more information about which adult behaviors and therapist characteristics promote the play process and produce the desired child behaviors. Then more appropriate and effective training procedures can be devised.

In recent years, focus has shifted increasingly away from treatment of illness or sickness to improvement of mental health and prevention of psychological difficulties. The human potential movement, encounter groups, and workshops to increase personal awareness and communication skills are prominent features of our current times, Emphasis is now much more on human growth and increasing positive functioning. Play sessions, too, may be viewed in these terms. If we can understand more precisely the changes which occur in play interactions and which induce positive behavioral changes in the child, then we will be better able to promote a child's growth and development. A related issue is the training of undergraduates and other nonprofessionals. Research indicates that college students can be trained to alter their behavior in a therapeutic direction (Schreiber, 1972; Stollak, 1968, 1973). Stollak (1969) regards undergraduates' age, malleability, openness to suggestion, and eagerness to learn as positive characteristics. Gruver (1971) notes the relevance of focusing upon college students, not only because of those inherent characteristics which make them suitable for working with troubled

clients, but also because of the positive developmental influence such work has upon their personalities. Rioch (1966) stressed the importance of non-professionals becoming "constructive, better integrated citizens themselves" through their training and work. Guerney (1969) notes the importance of "the education and training of parents as a way of preventing psychological difficulties, and not merely alleviating them once they arise" (p. 391). The training of undergraduates to be attentive to children's emotional needs and to be effective play participants will surely increase their abilities as potential parents, teachers, and educators. If such programs can be implemented and more widely used, it is quite probable that we can reduce the incidence of child psychopathology while at the same time easing the demand on mental health professionals.

SUMMARY

The present study was designed to investigate the process of play encounters between children and trained and untrained, high and low potential undergraduates in reference to six dimensions of children's behavior - Leadership, Dependency, Affection, Aggression, Contact and Role-playing. On the basis of theoretical assumptions, clinical observations, and research findings, the development of particular patterns for each of the six variables was predicted. Leadership was expected to increase over sessions,diminishing in the last phase as the child engaged in more egalitarian activities with the undergraduate. Dependency and Role-playing were expected to decline in frequency over time, whereas Contact was expected to increase over sessions. It was anticipated that Aggression would also increase in frequency, reaching a peak and then declining. For Affection, the trend expected was a decline in frequency followed by a rise in occurrence in the later phases as negative feelings were expressed and resolved. The following specific hypotheses were then formulated in reference to the six behavioral variables: 1) Significant differences over sessions would be found for the dependent variables in the direction of the anticipated trends. 2) The behavior of children interacting with trained undergraduates would more clearly fit the

expected patterns than the behavior of children encountering untrained undergraduates. 3) The behavior of those children playing with high potential undergraduates would more closely approximate the predicted patterns than the behavior of children engaged with low potential undergraduates. 4) Training would tend to reduce the differences in behavior between children interacting with high potential undergraduates and those playing with low potential undergraduates. However, children playing with trained high potential undergraduates would show greater levels of the dependent variables in the predicted directions.

Subjects were twenty-seven clinic-referred children divided into the following four groups depending upon the type of undergraduate with whom they interacted: Trained High Potential (THP), Trained Low Potential (TLP), Untrained High Potential (UHP), or Untrained Low Potential (ULP). Due to the small N's and unequal cell frequencies, only within-session statistical comparisons could be made between groups. Thus the first hypothesis could not be tested. Determination of which session scores to analyze statistically for each dependent variable was made on the basis of deviations in the mean scores between groups. In those instances where the possibility of significant differences was indicated by inspection of the means, a 2(trained-untrained) X 2(high potential-low potential) analysis of variance was performed. An analysis of simple effects was carried out in the one case where a significant interaction effect was found.

The results showed few significant differences between groups, no hypothesis receiving definitive support. Interpretation was difficult because the results were few and scattered. No statistical analysis over sessions could be performed because of the small N's and unequal cell frequencies.

It was concluded that additional data is needed to clarify the scattered findings and suggestive trends which resulted from this study. Modifications of the scoring system were proposed. Limitations of the present research, such as the small number of children seen, the short time period, the restriction of the play setting, and the need for consideration of variables like age, sex, and presenting problem of the child were reviewed. The need to study the interactional relationship between the undergraduates' and children's qualities and behaviors was discussed. Directions for future research were explored.

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APPENDIX A

Definitions of the Rating Scales for Scoring Children's Behavior

APPENDIX A

Child Behavior Rating Scale

LEADERSHIP

Verbal statements directed specifically to the adult describing intention of self action or expecting action from the adult (all within the play session). Nonverbal commands which clearly indicate expectation of action from the adult in the session are scored Leadership. EXCEPTIONS: (1) Statements made in the context of fantasy or role-play are not scored Leadership. (2) Positive statements which are requests for help or permission are scored D.

COMMANDS DIRECTED TO ADULT (EXPECTING SOME BEHAVIOR CHANGE OR ACTION FROM ADULT)

	Score
Wait a minute.	L
Give me a piece of paper.	L
Look what I did.	L
Give me the small part.	L
Don't take it out. (plus Ag if critical)	L plus Ag
Don't look.	L
Get away from me.	L plus Ag
You stop that! (to toy)	not scored
Let me try. (This is asking permission, even if stated positively)	D
(Placing phone in front of adult with expectation that she will pick up receiver)	L
Pointing to piece of toy, expecting adult to hand it over.	L
I think you'd better help me. (Help-seeking even if stated positively)	D

PROCLAMATIONS OF INTENDED SELF ACTIVITY

Now I'll shoot him.	L plus Ag
I'm going to make a house.	L
I'll make a pie.	L
I have to do it myself.	L
We'd better get going.	L
I'm going to paint this ugly thing.	L plus Ag
I'd better wash up.	L
I'll do whatever I want to do	L plus Ag
I want to build a house. (if followed by action)	L
I'll get it up next time. (not followed by action)	not scored

Appendix A (Cont'd)

DIRECTIONS OR GIVING IDEAS ABOUT ACTIVITY TO ADULT

Let's put him to bed	L
Not like that!	L plus Ag
Now, you go to bed. (to toy)	not scored
Don't do it that way.	L plus Ag
You should really be doing this.	L plus Ag
Make believe this is a stove.	L
This is the father, this is the mother, he's the boy.	L
This is tea.	L
Drink your tea, mother. (fantasy)	not scored
You're supposed to say "ouch."	L
You can have this one.	L plus Af
No, put him here.	L plus Ag
You be the mother. (assigning doll or puppet role)	L
We have to make it higher.	L
He's taking a bath. (fantasy)	not scored

VOLUNTEERING INFORMATION IS NOT SCORED L.

I missed it.	not scored
See, that's how it works.	not scored
This is the front of it.	not scored
That's not a nice house.	Ag
This one is the fastest.	not scored
This is a good puppet.	Af

ASSERTIVE BEHAVIOR NOT SCORED LEADERSHIP UNLESS THERE IS AN EXPECTANCY OF ACTION FROM SELF OR ADULT

I'm going to see if I can make it stick. (no action)	not scored
You're not the best!	Ag
I'll give you one of these.	L plus Af
I don't care what you draw.	Ag
Maybe I'll shoot the Bobo. (if action follows)	L
You can have it.	Af
I can't make it.	Ag
A big boy does it like this.	not scored
I have it.	not scored
I just broke the Bobo.	not scored
We need one.	not scored
No, this is thinner.	not scored
I know what we'll do.	not scored
I have it.	not scored
We need another couch.	not scored
Aren't they cute?	Af
I think so.	not scored
I'll bet it won't stick.	not scored

Appendix A (Cont'd)

I want a drink of water. (stopping other action, expecting adult to get it).	L
I know what I'll do.	not scored

QUESTIONABLE COMBINATIONS

I'm not making the feet. I don't know how.	L plus Ag
Look at this. Do you like it? (command plus question)	L plus D
Let's read some stories. All right? (if child goes on with activity, score L. If child stops to wait for OK score D).	
How did you make yours? Make it for me. (D for the question. L for command).	D plus L
I'm doing it backwards. Do you want me to do it over? (first sentence is evaluative statement, not a proclamation of intended activity. Not scored for first sentence. D for the second)	
I don't want to do this anymore. (refusal not scored if in response to adult's suggestion. If spontaneous, score L plus Ag).	
I don't have to watch. (if spontaneous)	L plus Ag
You have the wrong number. (to adult on the phone)	not scored
Blow it up, will you? (expectation of action, don't score D).	L

DEPENDENCY

Statements made to the adult which are in the form of a request. This includes looking for response from the adult before doing something (to see if it will be allowed) even if adult doesn't respond. This kind of "looking for response" doesn't have to be verbal though it usually is. Child may be busily playing but covertly or overtly watching adult to see her reaction, trying to get approval of something (this would have to be shown by more than occasional glances). Child must clearly be expecting response from adult. EXCEPTIONS: (1) Questions or dependency remarks made in the context of fantasy or role-play are not scored D. (2) Rhetorical questions in which the child goes right on with his intended action are not scored. (3) Asking opinion in a conversational way, as well as any questions referring to out of session activity, are not scored. (4) Clearly considerate or polite statements phrased as questions are not scored. (5) Seeking affection not scored D. (6) Approval of finished activity, art production, etc., not scored D.

ASKING FOR HELP FOR GUIDANCE FOR ACTION (with expectation of specific reply from adult, i.e., permission, reassurance, approval for some intended action in the play session).

I wish you would do this.	D
I think you'd better help me.	D
You have to help!	D
The air won't come out, will it?	D
Can I shoot the window?	D
You do it. (a command)	L
Want to play with me? (seeking companionship or affection, not help)	O or Af
I want a drink of water. (expecting adult to get it)	L
Look at mine. (a command)	L
Tell me, do you like this? (asking approval of finished work is not D)	L for the command
Know how I do mine?	not scored
I can't make mine so good (self critical but not asking for comment or action from adult)	Ag
I don't know if I can make this.	Ag
I can't do it. (handing it to adult to do)	D Ag
I'm not making the right kind head.	Ag
Do you like me? (seeking affection)	Af
Where do you want to sit? (politeness)	not scored
You sit here. Okay? (if action stopped, waiting for ok)	D
(fully expecting adult to sit)	L

DEPENDENCY 2

Is this Mrs. Goober? (on the phone, role-play)	not scored
I'll take a cup of coffee, can I? (expecting adult to pour it in role-play)	not scored
This is a good time for the Munsters to be on, isn't it? (refers to out of session)	not scored
You know what I'm making?...it's a house. (rhetorical, not waiting for an answer)	not scored
Do you like these toys? (asking opinion in conversational way)	not scored

ASKING FOR EXPLICIT IDEAS, INSTRUCTION OR DIRECTION IN THE SESSION

Can you do this? (this may also be asking for help)	D
Where shall I put this?	D
Now what do we do?	D
What's that? (pointing to microphone or pipe in wall)	D
What time is it?	D
Do you want me to make a rocket?	D
Who won?	D
What's behind that?	D
Why are we here? (questions must be related to activity in the play session)	not scored
Can we come back again?	not scored
You know the big raft we take to the beach?	not scored
Can they see us?	D
Who was that lady?	not scored
What color shall I make the hat? (response expected before going ahead with the activity)	D
Are you going to be the mother? (explicit instruction)	D
Do you like doing that? (opinion, not related to help of or direction of child's activity)	not scored

AFFECTION

Affection is seen in gestures and language, both with respect to the adult and toys.

0 - no affection

1 - mild affection - smiling at adult, inviting adult to participate, sitting near adult, including adult in activity (e.g. both should draw, sip tea, make clay figures - on child's invitation). Evidence of warmth - not just animated talking. Analogous behavior with dolls (e.g. smiling at doll, etc.)

2 - stronger, more demonstrable affection - leaning on adult, standing next to, whispering to adult, patting him or her. Analogous affectionate behavior with toys, acted out between dolls.

3 - most demonstrable affection - climbing on adult, hugging, kissing. Full expression and involvement - "I love you." Analogous behavior with dolls or Bobo.

AGGRESSION

The play of the child is observed for hostile, destructive, or aggressive behavior, either toward the adult or toward a toy. The aggressive behavior might occur in gesture, facial expression, physical action, or words. Included here are hitting, spitting, fighting, shooting, hurting, pinching, drowning, burying, throwing, with destruction in mind.

Verbal aggression is expressed when the child shows annoyance, anger or dislike toward an object or person. Included here are negative statements such as disparaging remarks or criticism, cursing, threat of injury, or accusations (attack by gesture or words).

The ratings denote the intensity of aggression. The score for the interval represents the most extreme form of the child's aggression, not the average.

0 - no aggression

1 - mild, perhaps playful aggression - includes any playful activity such as inspecting or handling a knife or gun, or cutting clay. Mild verbal aggression - "He's mean." Verbal criticism toward self, or toward own activity. Shooting against the wall with the dart gun has arbitrarily been established as Ag 1.

3 - intense aggression in which the child is highly involved, or a very hostile act, e.g. stabbing, shooting, slicing, with force. Swearing profusely at the adult. An act might be intensely aggressive because its aim is highly destructive or hostile, or because it is highly forceful and shows much self-involvement.

CONTACT

Sharing an activity with the adult, e.g. card playing, tinker toys, joint effort in clay, dolls or puppets, target practice, even if adult initiates the joint activity. Conversation alone is not scored contact. Adult must be physically participating on the child's level. This is shared activity. When the child invites the adult to play, the interval at which this occurs is scored for affection (1) as well as contact.

ROLE - PLAYING

Scored if the child assumes by voice or action another identity: person or animal. Action must be quite overt. Simply picking up a puppet, for example, is not role - playing.

APPENDIX B

SAMPLE SCORING SHEET FOR CODING CHILDREN'S BEHAVIOR

	D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP
1							1							1						
2							2							2						
3							3							3						
4							4							4						
21							21							21						
22							22							22						
23							23							23						
24							24							24						
	D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP
31							31							31						
32							32							32						
33							33							33						
34							34							34						
41							41							41						
42							42							42						
43							43							43						
44							44							44						
	D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP
51							51							51						
52							52							52						
53							53							53						
54							54							54						
61							61							61						
62							62							62						
63							63							63						
64							64							64						
	D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP
71							71							71						
72							72							72						
73							73							73						
74							74							74						
81							81							81						
82							82							82						
83							83							83						
84							84							84						
	D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP		D	L	Ag	Af	C	RP
91							91							91						
92							92							92						
93							93							93						
94							94							94						
101							101							101						
102							102							102						
103							103							103						
104							104							104						

Totals D ________

L ________

Ag ________

Af ________

C ________

RP ________

Child's Name ________________

Date ________________

Therapist ________________

Coder Initials ________________

APPENDIX C

MEAN PERCENTAGE OF AGREEMENT FOR RATERS WITH EXPERT

Table 4. Mean Percentage of Agreement for Raters with Expert.

	Raters:				
Variables:	M	K	B	A	$\bar{Y}$'s
Dependency	94.0	97.5	82.3	81.8	88.98
Leadership	84.5	79.5	91.6	86.8	85.60
Aggression	83.0	93.1	67.7	89.0	83.20
Affection	82.4	72.0	66.0	84.2	76.15
Contact	100.0	88.4	73.6	100.0	90.50
Role-playing	87.5	78.0	88.2	95.7	87.35
$\bar{X}$'s	88.5	84.75	78.23	89.58	85.28

APPENDIX D

INTER-RATER RELIABILITY COEFFICIENTS

Table 5. Inter-Rater Reliability Coefficients

Coder Pairs and Session Numbers:	Variables: D	L	Ag	Af	C	RP	$\bar{Y}$'s
M + K, #1	.79	.84	.98	.70	.86	.93	.85
M + K, #6	.42	.86	.95	.89	.96	.99	.85
M + K, #11	.95	.91	.98	.99	.95	.96	.96
M + K, #15	.89	.85	.95	.96	.85	.97	.91
M + B, #1	.99	.96	.99	.36	.99	1.0	.88
M + B, #6	.71	.73	.92	.99	.99	.86	.87
M + A, #1	.93	.68	.95	.57	-	-	.78
M + A, #6	.96	.77	.99	.99	.82	.99	.92
M + A, #11	.86	.82	.92	.76	.94	.65	.83
M + A, #15	.86	.91	.97	.93	.97	.89	.92
$\bar{X}$'s	.84	.83	.96	.81	.93	.92	.88

(-) = N too small to obtain reliabilities. Means N of less than 5 per rater.

APPENDIX E

MEAN FREQUENCY AND MEAN INTENSITY SCORES FOR AFFECTION AND AGGRESSION

Table 6. Mean Frequency and Mean Intensity Scores for Affection and Aggression for Children Encountering Trained High Potential (THP), Trained Low Potential (TLP), Untrained High Potential (UHP), and Untrained Low Potential (ULP) Undergraduates.

		Session Number 1	6	11	15
VARIABLE: AFFECTION					
THP	Frequency	7.00	1.83	3.70	3.38
	Intensity	7.30	1.83	3.70	3.38
TLP	Frequency	7.28	6.81	17.00	10.50
	Intensity	7.39	7.56	17.67	10.86
UHP	Frequency	5.93	7.38	9.00	3.25
	Intensity	5.93	7.38	9.13	3.25
ULP	Frequency	8.13	14.25	15.50	12.75
	Intensity	8.13	14.25	15.50	14.75
VARIABLE: AGGRESSION					
THP	Frequency	14.40	28.00	48.00	43.38
	Intensity	15.70	29.83	48.60	49.25
TLP	Frequency	16.44	37.88	48.50	31.64
	Intensity	16.83	39.50	51.33	32.50
UHP	Frequency	24.29	27.13	35.63	68.50
	Intensity	30.71	31.50	38.25	75.00
ULP	Frequency	59.50	42.00	22.50	40.50
	Intensity	61.13	42.00	24.83	42.50

APPENDIX F

MEAN INTENSITY PER SESSION

OF AFFECTION AND AGGRESSION

Table 7. Mean Intensity per Session of Affection and Aggression for Children Encountering Trained High Potential (THP), Trained Low Potential (TLP), Untrained High Potential (UHP) and Untrained Low Potential (ULP) Undergraduates.

	Session Number			
	1	6	11	15
AFFECTION				
THP	1.04	1.00	1.00	1.00
TLP	1.02	1.11	1.04	1.03
UHP	1.00	1.00	1.03	1.00
ULP	1.00	1.00	1.00	1.16
AGGRESSION				
THP	1.09	1.07	1.01	1.14
TLP	1.02	1.04	1.06	1.03
UHP	1.26	1.16	1.07	1.09
ULP	1.03	1.00	1.10	1.05

APPENDIX G

MEAN SCORES OF THE DEPENDENT VARIABLES FOR THE TRAINED HIGH POTENTIAL (THP), TRAINED LOW POTENTIAL (TLP), UNTRAINED HIGH POTENTIAL (UHP),AND UNTRAINED LOW POTENTIAL (ULP) GROUPS

Table 8. Mean Scores of the Dependent Variables for the Trained High Potential (THP), Trained Low Potential (TLP), Untrained High Potential (UHP), and Untrained Low Potential (ULP) Groups.

VARIABLE: LEADERSHIP

Condition	Session Number 1	6	11	15
THP	18.00 (N=5)	19.50 (N=3)	20.00 (N=5)	11.13 (N=4)
TLP	11.06 (N=9)	18.94 (N=8)	16.83 (N=3)	24.43 (N=7)
UHP	7.86 (N=7)	9.75 (N=4)	21.38 (N=4)	12.75 (N=2)
ULP	13.75 (N=4)	11.00 (N=2)	18.17 (N=3)	46.50 (N=2)

VARIABLE: DEPENDENCY

Condition	Session Number 1	6	11	15
THP	6.80 (N=5)	11.50 (N=3)	6.60 (N=5)	3.00 (N=4)
TLP	5.33 (N=9)	7.38 (N=8)	8.50 (N=3)	9.57 (N=7)
UHP	5.36 (N=7)	5.38 (N=4)	13.75 (N-4)	8.50 (N=2)
ULP	10.63 (N=4)	7.00 (N=2)	16.33 (N=3)	8.25 (N=2)

VARIABLE: AFFECTION

Condition	Session Number 1	6	11	15
THP	7.00 (N=5)	1.83 (N=3)	3.70 (N=5)	3.38 (N=4)
TLP	7.28 (N=9)	6.81 (N=8)	17.00 (N=3)	10.50 (N=7)
UHP	5.93 (N=7)	7.38 (N=4)	9.00 (N=4)	3.25 (N=2)
ULP	8.13 (N=4)	14.25 (N=2)	15.50 (N=3)	12.75 (N=2)

VARIABLE: AGGRESSION

Condition	Session Number 1	6	11	15
THP	14.40 (N=5)	28.00 (N=3)	48.00 (N=5)	43.38 (N=4)
TLP	16.44 (N=9)	37.88 (N=8)	48.50 (N=3)	31.64 (N=7)
UHP	24.29 (N=7)	27.13 (N=4)	35.63 (N=4)	68.50 (N=2)
ULP	59.50 (N=4)	42.00 (N=2)	22.50 (N=3)	40.50 (N=2)

Table 8. (Cont'd)

VARIABLE: CONTACT

Condition	Session Number 1	6	11	15
THPT	12.30 (N=5	19.00 (N=3)	17.10 (N=5)	25.88 (N=4)
TLPT	10.44 (N=9)	14.88 (N=8)	33.00 (N=3)	29.86 (N=7)
UHPT	8.29 (N=7)	13.13 (N=4)	10.13 (N=4)	40.50 (N=2)
ULPT	10.88 (N=4)	45.75 (N=2)	40.83 (N=3)	45.00 (N=2)

VARIABLE: ROLE-PLAYING

Condition	Session Number 1	6	11	15
THPT	4.40 (N=5)	11.67 (N=3)	14.30 (N=5)	7.88 (N=4)
TLPT	7.44 (N=9)	6.50 (N=8)	21.17 (N=3)	5.43 (N=7)
UHPT	2.36 (N=7)	11.00 (N=4)	6.63 (N=4)	42.50 (N=2)
ULPT	0.50 (N=4)	0.00 (N=2)	1.17 (N=3)	17.00 (N=2)

APPENDIX H

ANALYSIS OF VARIANCE SUMMARIES FOR THE DEPENDENT VARIABLES

Table 9. Analysis of Variance Summaries for Leadership in Sessions 1, 6, and 15.

	Source	df	SS	MS	F
SESSION 1	Training	1	78.84	78.84	0.61
	Potential	1	1.59	1.59	0.01
	Training X Potential	1	233.68	233.68	1.80
	Error	21	2725.33	129.78	
SESSION 6	Training	1	258.94	258.94	2.41
	Potential	1	0.36	0.36	0.00
	Training X Potential	1	2.71	2.71	0.03
	Error	13	1395.47	107.34	
SESSION 15	Training	1	402.66	402.66	2.84
	Potential	1	1588.32	1588.32	11.21 ($p < .01$)
	Training X Potential	1	300.06	300.06	2.12
	Error	11	1588.52	141.68	

Table 10. Analysis of Variance Summaries for Dependency in Sessions 11 and 15.

		df	SS	MS	F
SESSION 11	Training	1	200.84	200.84	6.70 ($p < .05$)
	Potential	1	17.97	17.97	0.60
	Training X Potential	1	0.39	0.39	0.01
	Error	11	329.62	29.97	
SESSION 15	Training	1	12.51	12.51	0.64
	Potential	1	28.64	28.64	1.46
	Training X Potential	1	33.38	33.38	1.70
	Error	11	215.83	19.62	

Table 11. Analysis of Variance Summaries for Affection in Sessions 6, 11, and 15.

		df	SS	MS	F
SESSION 6	Training	1	139.65	139.65	4.09 ($p < .10$)
	Potential	1	116.18	116.18	3.40 ($p < .10$)
	Training X Potential	1	2.95	2.95	0.09
	Error	13	443.95	34.15	
SESSION 11	Training	1	12.92	12.92	0.54
	Potential	1	350.88	350.88	14.80 ($p < .005$)
	Training X Potential	1	41.38	41.38	1.75
	Error	11	260.80	23.71	
SESSION 15	Training	1	3.24	3.24	0.14
	Potential	1	198.20	198.20	8.39 ($p < .025$)
	Training X Potential	1	4.02	4.02	0.17
	Error	11	259.93	23.63	

Table 12. Analysis of Variance Summaries for Aggression in Sessions 1, 6, 11, and 15.

		df	SS	MS	F
SESSION 1	Training	1	3981.28	3981.28	4.39 ($p < .05$)
	Potential	1	1970.34	1970.34	2.17
	Training X Potential	1	3834.28	3824.28	4.23 ($p < .10$)
	Error	21	19034.90	906.42	
SESSION 6	Training	1	8.74	8.74	0.01
	Potential	1	153.14	153.14	0.17
	Training X Potential	1	20.59	20.59	0.02
	Error	13	12003.06	923.31	
SESSION 11	Training	1	1317.69	1317.69	0.99
	Potential	1	142.77	142.77	0.11
	Training X Potential	1	166.26	166.26	0.12
	Error	11	14634.19	1330.38	
SESSION 15	Training	1	828.45	828.45	0.91
	Potential	1	1133.13	1133.13	1.25
	Training X Potential	1	189.68	189.68	0.21
	Error	11	9970.05	906.37	

Table 13: Analysis of Variance Summaries for Contact in Sessions 6, 11, and 15.

		df	SS	MS	F
SESSION 6	Training	1	517.55	517.55	0.84
	Potential	1	672.13	672.13	1.09
	Training X Potential	1	1116.99	1116.99	1.81
	Error	13	8025.68	617.36	
SESSION 11	Training	1	0.68	0.68	0.00
	Potential	1	1943.55	1943.55	2.50
	Training X Potential	1	196.04	196.04	0.25
	Error	11	8539.06	776.28	
SESSION 15	Training	1	635.45	635.45	0.48
	Potential	1	51.57	51.57	0.04
	Training X Potential	1	0.20	0.20	0.04
	Error	11	14519.05	1319.91	

Table 14. Analysis of Variance Summaries for Role-Playing in Sessions 1, 6, 11, and 15.

		df	SS	MS	F
SESSION 1	Training	1	114.57	114.57	0.68
	Potential	1	1.99	1.99	0.01
	Training X Potential	1	34.02	34.02	0.20
	Error	21	3554.78	169.28	
SESSION 6	Training	1	42.57	42.57	0.34
	Potential	1	216.37	216.37	1.71
	Training X Potential	1	28.10	28.10	0.22
	Error	13	1647.67	126.74	
SESSION 11	Training	1	685.25	685.25	2.37
	Potential	1	1.79	1.79	0.01
	Training X Potential	1	136.08	136.08	0.47
	Error	11	3182.83	289.35	
SESSION 15	Training	1	1530.80	1530.80	4.19 ($p < .10$)
	Potential	1	560.48	560.48	1.53
	Training X Potential	1	381.19	381.19	1.04
	Error	11	4016.90	365.17	

APPENDIX I

SIMPLE EFFECTS ANALYSIS

Table 15. Simple Effects Analysis Exploring the Significant Training X Potential (AB) Interaction for Aggression in Session 1.

		df	SS	SS	F
AB	A within B_1	1	277.75	277.75	0.31
	A within B_2	1	5265.81	5265.81	5.81 ($p < .05$)
BA	B within A_1	1	11.76	11.76	0.01
	B within A_2	1	3520.86	3520.86	3.88 ($P < .10$)
	Error	21	19034.90	906.42	