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Effectiveness of self-modeling as a social skills training and status improvement technique for neglected children.

Item Type	Dissertation (Open Access)
Authors	Mehaffey, Joyce I.
DOI	10.7275/fkmb-3m57
Download date	2026-04-15 22:02:03
Link to Item	https://hdl.handle.net/20.500.14394/11173

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EFFECTIVENESS OF SELF-MODELING AS A SOCIAL SKILLS
TRAINING AND STATUS IMPROVEMENT TECHNIQUE
FOR NEGLECTED CHILDREN

A Dissertation Presented

by

JOYCE I. MEHAFFEY

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 1992

School of Education

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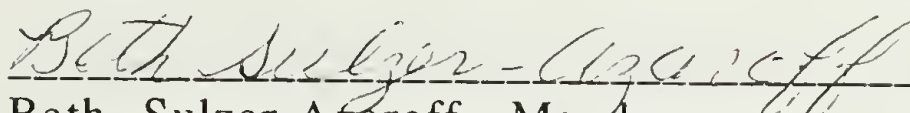
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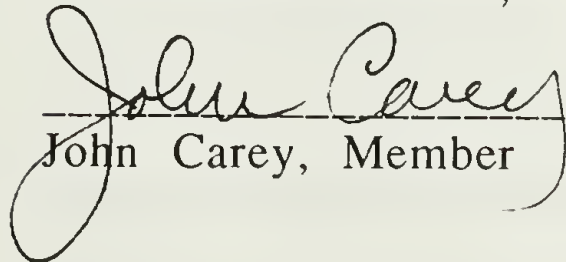
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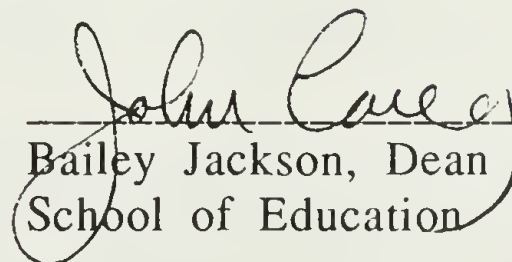
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ACKNOWLEDGEMENTS

Now that I have finished writing the dissertation, the most difficult writing is about to be tackled . . . the thanking of everyone who made my research and the attainment of my degree possible.

I want to start by thanking my Committee. Marla Brassard, Chair; John Carey; and Beth Sulzer-Azaroff deserve acknowledgement for their support, guidance and help in the design and implementation of this research. A special and heart felt thank you to Marla for her faith in me and for supporting me through my bouts of anxiety. My Committee's gradual shaping of this task made it approachable. I am glad to have had the opportunity to work with and learn from them.

I want to thank all the participants and school staff whose cooperation and support allowed this study to take place. Donna Cusimano, Debbie Finck, and Jana Standish deserve a special thanks for their dedication and willingness to adjust their busy schedules to do the observations. I particularly thank Donna for her humor and help in recruiting Debbie and Jana. I also want to thank Eugenia Lynch for helping supervise recess so that the observations could occur. Without these four women I could not have completed this research.

Tremendous gratitude is extended to John Coie and Robert Terry of Duke University, and to Susan Fowler of the University of

Illinois at Urbana-Champaign for their timely responses to my requests for information.

This dissertation is dedicated to my father and mother. To my father for teaching me the value and enjoyment of learning and to my mother for modeling that women can achieve outside of the home.

Last of all I thank my husband, Bob. Without his support, encouragement, and willingness to do more than his 50%, I could not have completed this process.

ABSTRACT

EFFECTIVENESS OF SELF-MODELING AS A SOCIAL SKILLS
TRAINING AND STATUS IMPROVEMENT TECHNIQUE
FOR NEGLECTED CHILDREN

MAY 1992

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A number of researchers have developed treatment packages to improve social competence in young elementary school age children. Such programs assume that children are deficient in the area of social skills, therefore, by learning appropriate social skills unliked children's social status and resulting prognosis will likely improve. These treatment programs have demonstrated that more positive social behaviors can be learned by the targeted children. Yet, despite behavior improvements within the treatment setting, gains have not consistently generalized across settings or time and low social status is maintained.

The purpose of this study was to examine the effectiveness of self-modeling as a social skill training and status improvement technique. Could the use of this technique decrease negative interactions and isolation while increasing positive interactions

during the subject's recess play? Also evaluated was whether the treatment and resulting behavioral changes affected the subjects' sociometric status. This research utilized a multiple baseline across subjects design. Subjects were selected by peer nomination from grades one through three in a rural elementary school in western Massachusetts. Three children (2 second grade boys and 1 first grade girl) were selected from those identified as having low social status within their respective grade. The subjects were regular education students and did not exhibit any idiosyncratic behaviors that would set them apart from their peers. Observations and data collection were conducted during morning recess. Observations continued throughout the study and documented decreased rates of negative and isolate behavior and increased rates in positive interactions as a result of the treatment condition for two of the three subjects. Treatment consisted of the targeted children viewing videotapes of themselves playing appropriately with peers during recess. At the end of treatment the peer nomination instrument was again administered to assess whether changes in status accompanied the behavioral changes. Two subjects improved their rates of positive interaction and one of those two also significantly improved her social status. Results for the third subject are less clear. A trend toward the positive is evident but the study was ended before any clear pattern was established.

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CHAPTER I

STATEMENT OF THE PROBLEM

Competence in social skills has been associated with high social status and academic success. Since the 1930's, studies have found that young children's social interaction abilities correlated with later adult adjustment (Parker & Asher, 1987). Social competence is considered to be an indication of better adjustment in life and social incompetence is an indication of future adjustment problems (Dodge, McClasky, Feldman, 1985; Bullock, Ironsmith, & Poteat, 1988). Social incompetence correlates with a spectrum of adult behaviors that range from adult involvement in criminal activity to possible hospitalization for emotional problems in adult years (see Parker & Asher, 1987 for a review of the literature). Adolescents who have a history of peer rejection are more likely to become involved in drugs, drop out of school, or become involved in criminal activity. Studies have documented that poorly accepted children (about 10% among girls to over 50% among boys) have criminal records as adults (Parker & Asher, 1987). Peer rejection is likely to continue without intervention and disliked children remain at risk for the above mentioned problems. Therefore, deficits in this area of development are of concern.

Research has demonstrated that social competence can be improved through various training procedures (e.g., coaching, peer modeling, video models, and peer facilitators) (Bierman, & Furman,

1984; Coie & Krehbiel, 1984; Gresham & Nagle, 1980; Ladd, 1981; Ladd & Mize, 1983; LaGreca & Santogrossi, 1980; Oden & Asher, 1977; Strain, 1981). Treatment packages for elementary school children have been an important focus because of the desire to intervene early (Coie & Krehbiel, 1984; Guevremont, MacMillan, Shawchuck, Hansen, 1989; Hansen, St. Lawrence, & Christoff, 1989; LaGreca & Santogrossi, 1980; Middleton, Zollinger, & Keene, 1986; Oden & Asher, 1977; Rotherham, 1982; Sagotsky, Wood-Schneider, & Konop, 1981; Strain, 1981). Intervention during the primary grades or earlier is important "since children as young as 4 years old develop stable perceptions about the likability of various group members" (Ladd, 1988, p. 231). Ladd (1988) also states that peer reputations among preschoolers appear to be relatively stable "both within the same peer group and from group to group" (p. 231).

Typically interventions are conducted as follows: targeted children's skill deficit areas are identified and a curriculum for remediation is developed and implemented. Goals included in treatment are: a) helping the subjects acquire concepts of appropriate social behavior, b) developing social skills and c) helping subjects make evaluations and inferences that will lead to greater self confidence in interactions (Ladd & Mize, 1983). Programs train targeted children in their skill deficit areas or train peers in modeling and/or in the reinforcement of appropriate behaviors. To date, programs which have focused upon teaching the targeted child a variety of skills have had favorable outcomes. Coaching has been

effective in producing skill improvements and also has led to greater peer acceptance (Bierman & Furman, 1984; Coie & Krehbiel, 1984; Ladd, 1981; Oden & Asher, 1977). This has also been the case with peer facilitators, academic tutoring, and the use of peer models (Gresham & Nagle, 1980; Guevremont, MacMillan, Shawchuck, & Hansen, 1989; LaGreca & Santogrossi, 1980; Middleton, Zollinger, & Keene, 1986; Rotherham, 1982).

Current treatments are expensive. They typically take place in a structured setting over a period of weeks. Both counselor and student must commit a substantial amount of time, with the student being removed from his/her regular classroom for the weekly training sessions. Since children with social competence problems often have academic difficulties as well (Byrnes, 1984; Li, 1985; Puttallaz & Gottman, 1981), removing students from the classroom for 30 to 45 minutes per week for social skill improvement programs is problematic. More efficient interventions to improve social skills and status are sorely needed.

Self as a model or self-modeling, as referred to in this dissertation, is a behavioral modification technique which has demonstrated significant results with relatively little time invested in comparison to other treatments. Self-modeling is defined as the "behavioral change that results from the repeated observations of oneself on videotape that show only desired target behaviors" being performed by the subject (Dowrick & Dove, 1980, p. 51). The steps

proposed by Hosford and Brown (1975) when using self-modeling include many additional techniques that could affect outcome. They recommend the following steps be followed:

- 1) the client be taught how to observe and record his own behavior;
- 2) the client list each behavior he/she might like to change and to note instances in which a different response might be more appropriate;
- 3) the client is asked to rank those behaviors listed by them and is asked to identify the behavior he/she wants to change and to what frequency he/she wants to change the behavior;
- 4) graduated sequences are constructed in which the client is shown performing the desired behavior in the manner he/she desires;
- 5) the client is taught to monitor and chart his/her own progress and brings the chart to each counseling session (p. 2).

This method contains several components that could effect behavioral change, however, the collection of baseline data reflects the impact these procedures are having and significant gains over baseline data have been demonstrated when self-modeling videotapes are introduced. In studies where Hosford was one of the researchers, it is assumed that the above steps were followed. When other researchers define self-modeling they have tended only to

explain the taping procedure. Therefore, the above steps may not have been followed by everyone using self-modeling nor were they used in the present study. This study did not follow the above procedures.

Self-modeling derives from operant learning and social learning theory. Hosford (1981) cites Mower's theory that "viewing someone perform some behavior who is then rewarded for it, predisposes the observer to emulate the behavior modelled" (p. 46). Similarly, Bandura (1977) states that viewing the positive consequences of a model's behavior is helpful in getting subjects to imitate the modeled behavior. When the observer is positively reinforced for imitating the model, it can be predicted that the observer will continue to exhibit the modelled behavior (Flanders, 1968). This supports operant behavior theory since the rate or probability of behavior occurrence "is controlled (at least in part) by its consequences" (Sulzer-Azaroff & Mayer, 1986, p. 397) since the behaviors displayed in a self-modeling videotape and later imitated are presumably reinforced in the environment by observers of the newly demonstrated behavior.

Hosford (1981) speculates that self-modeling is effective because it provides the subject with a view of him/herself that may conflict with previously held perceptions which manifested themselves in self-defeating behaviors. New perceptions need to be accommodated within the person's self image. Subsequent behavior changes may have been promoted by self perceptions which were initiated by

viewing oneself performing appropriate behaviors. This is supported by Bem's (1967) self perception theory where the subject is an observer of his own behavior. Individuals come to know their own emotions, attitudes, and other internal states by observing their behavior. When internal self perception states are weak the subject is in the same position as an outside observer and relies on external cues (Bem, 1967). Viewing oneself performing behaviors not previously in one's repertoire causes one to change one's self perceptions and/or one's behaviors.

Self-modeling has been successful in changing behavior and is in concert with the above theories. Self-modeling informs subjects that they are capable of the desired behavior. Self-modeling of appropriate behavior can be very reinforcing if the subject views him/herself receiving positive reinforcement within the film for the new behavior. Seeing oneself perform tasks one previously thought were too difficult may give the observer a sense of mastery and self gratification. This will affect previously held self perceptions. Since the changed behaviors are most likely in a positive direction there will probably be reinforcement from the environment as well as pride in oneself for the newly acquired behaviors. Although self-modeling has produced dramatic change in various skill areas such as: swimming skills, interviewing techniques, expanding play behaviors and social skills (Dowrick, 1983; Dowrick & Dove, 1980; Hosford &

Brown, 1975), previous self-modeling research examining social skills has not to the knowledge of this author investigated social status changes.

Purpose of Study

The purpose of this study was to determine the feasibility of using self-modeling to increase prosocial behaviors among rejected or neglected children. Self-modeling involves relatively little direct service involvement, freeing the counselor for other responsibilities. It is relatively unintrusive and does not require extended periods of time for training. This author's research identified neglected and rejected children and attempted to help neglected children improve their social competence through self-modeling. Targeted behaviors for change were negative interactions initiated by the subject, time spent alone or with the playground supervisors and prosocial peer interactions. Also measured were the subjects' social status pre- and post-treatment, through a sociometric instrument, in order to assess possible changes in social standing within the targeted child's class. Children's behavior was recorded throughout the study through direct observation.

Previous self-modeling research demonstrated improved social behaviors of subjects. These improvements may have affected the quality of social interactions however, we don't know that because data collected focused only on the occurrence of particular behaviors. There was no data collected on the frequency of negative interactions initiated by peers towards the subjects or vice versa. Previous

studies also did not look at the impact of changes in interaction on social status of the targeted child.

Hypotheses

Null H_{01} = Self-modeling videotape treatment will not be related to changes in rates of prosocial behavior.

Null H_{02} = There will no change between pre- and post-test sociometric scores for the targeted children.

CHAPTER II

REVIEW OF THE LITERATURE ON SELF-MODELING

This section reviews studies utilizing self-modeling as a behavior change technique. The types of behaviors targeted, the ages of subjects, as well as any additional techniques used to produce results will be discussed.

Self modeling was mentioned in the literature by Creer and Miklich (1970). They used self-modeling to modify socially inappropriate behaviors in "Chuck", a 10 year old asthmatic child living in a residential hospital. Making his bed, physically defending himself, appropriately entering a group, and appropriately interacting with adults were behaviors targeted for improvement. The researchers made two films: one positive self-modeling film and one film showing Chuck's inappropriate behaviors. During the positive self-modeling part of the study "he abruptly began to exhibit appropriate behavior" (Creer & Miklich, 1970, p. 92). When Chuck was shown his inappropriate behavior film his inappropriate behaviors increased and appropriate behavior decreased. When the self-modeling film was reintroduced, appropriate behaviors sharply increased. The researchers mentioned that to keep Chuck interested in viewing the videotapes, he was allowed to set up the videotape equipment for himself. This does not appear to have affected the treatment since his behavior was a function of what film he was viewing.

Table 1 lists studies utilizing self-modeling. They are divided according to the behavior targeted for change. Various behaviors have been targeted and, in most cases, the interventions have resulted in clinically significant improvements.

Behaviors Targeted

Self-modeling has been utilized successfully with withdrawn behaviors (elective mutism), various skill improvements (swimming, interviewing skills), anxiety, noncompliance, social behaviors and speech (Barmann, 1982; Clark, Beck, Sloane, Jensen & Goldsmith, 1990; Creer & Miklich; 1970; Davis, 1979; Dowrick, 1978; Dowrick, 1979; Dowrick & Dove, 1980; Hosford, Moss, & Morrell, 1976; Johnson, 1989; Kahn, Kehle, Jensen, & Clark, 1990; Kehle, Clark, Jensen & Wampold, 1986; Kehle, Cressy, & Owen, 1990; Miklich, Chida & Danker-Brown, 1977; Miklich & Creer, 1974).

Results have varied. Kahn, Kehle, Jensen, and Clark (1990) demonstrated that self-modeling was an effective method for treating depressed, latency-age students within a public school setting. Self-modeling was compared to a cognitive behavioral treatment group, a relaxation group, and a wait-list control group. Subjects were randomly assigned to one of the four groups. Self-report measures were administered initially to screen for depression and then again one month later to identify cases of depression that were not situational or transitory. After this second assessment treatment was begun with those who were consistently depressed on the self report measures. All of the groups showed improvements in self-esteem

Table 1

Self-modeling Studies Categorized According to Targeted Behaviors

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Aggression and noncompliance</u>				<u>Add'l techniques</u>
			<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	
Clark, Beck, Sloane, Jensen & Goldsmith (1990)	6 preschool boys	Reduce aggression & noncompliance. (1 per ch.)	4-5 min (1 per ch.)	10 weeks	None that can be attributed to self modeling	No follow up	None stated
Davis (1979)	11 yrs boy	fighting & verbally abusing teacher.	not mentioned (2- one for each behavior)	45 days	YES	YES	Positive comments given at end of viewing.
Dowrick (1978)	3 yr. old boy & mother	film A-cooperative behavior film B- positive reinforcement by mom.	3 minutes however, only watched for 2 minutes. (1per subject)	6 weeks film viewed every 2 days	YES	YES	None stated Relapse after 4 mos. 2 booster sessions. Gains maintained at 1, 3, & 6 mos.

Continued, next page

Table 1 cont.

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	Anxiety			<u>Add'l techniques</u>
			<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	
Kehle,	4 elementary	behaviorally	11 minutes	5 days	YES	None stated.
Clark,	age males	disordered.	(1per child)			
Jensen & Wampold, (1986)	(10- 13 yrs.)	7 specific behaviors touching, vocalizing, aggression, playing, making noise, out of seat, & disorienting				
Hosford, Moss, & Morrell (1976)	Adult prison inmate.	Highly anxious	Viewed tape once per week. (2)	9 weeks	YES	Relaxation training. Hierarchy of desensitization. Self monitoring of progress.
Johnson (1989)	17 graduate students	counselor trainee anxiety	8 minutes	5 viewings	Yes	None stated
	22 - 50 yrs. old	& evaluation preoccupation	(1)		No follow up	

Continued, next page

Table 1 cont.

		Affective behaviors					
<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	<u>Add'l techniques</u>
Kahn, Kehle, Jensen, & Clark (1990)	sixty eight 10-14 yr. old depressed subjects	moderate to severe depression	3 minutes	6-8 wks 10-12 min sessions	YES	YES	None stated
Domestic tasks							
Miklich, Chida, & Danker-Brown (1977)	12 subjects 7.75-12.8 yrs.	Bed making	(1)	16 weeks Multiple baseline.	YES	YES	Children were unaware of behavior change expectation.
Social - play behaviors							
<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	<u>Add'l techniques</u>
Dowrick (1983)	4 yr. old boy	expand play behaviors to include more boy stereotyped behaviors.	3 minutes (3) (A<B<&C)	4 viewings per film	Film A- no gains. B-striking changes but relapse after one month C-dramatic changes	YES at 2&8 months	None stated

Continued, next page

Table 1 cont.

Dowrick & Raeburn (1977) boy 4 yrs. play activity 6 minutes 3 times/wk. YES Required to watch film for a minimum of 3 min.

Social-peer interactions

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	<u>Add'l techniques</u>
Miklich & Creer, (1974)	10 yr. old boy	4 inappropriate behaviors-bed making, physically defending self, initiating social interactions, babyish behaviors	approx 5 min (1)	2 months	YES	YES	None stated
Miklich & Creer, (1974)	12 yr. old boy	table manners 14 behaviors	???	2 months	YES	YES	None stated
Miklich & Creer, (1974)	12 yr. old boy	peer relationships thumb sucking, physical interactions, & verbal interactions	???	3 months	YES	Thumb sucking & verbal interactions returned to baseline.	None stated

Table 1 cont.

marked improvement
he would receive a prize.

Pigott & Gonzales (1987)	boy 9 yrs old	selectively mute for 4 yrs in school. Targeted answering questions & volunteering.	3 1/2 min (1)	2 weeks	YES ans. ques.	YES	Self monitoring verbal reinforcement on tape & verbal reinforcement by parents after viewing. Self monitoring.
			3 minutes (1)		INITIALLY volunteering	YES, when self monitoring introduced.	

Misc.

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	<u>Add'l techniques</u>
Barmann (1982)	parents from abusive families	Decrease abuse increase positive parenting skills & p/c interactions.	not stated	??????	YES Self modeling more effective than peer models.	not stated	Parents were trained in parental commands contingent praise, & time out procedures.

Continued, next page

Table 1 cont.

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	Speech		<u>Gains maintained</u>	<u>Add'l techniques</u>
			<u>Length & (# of films) program</u>	<u>Length of program</u>		
Dowrick (1979)	boy 5 yrs.	selectively mute	3 minutes	2 times per wk.	YES	No comments.
		multiple baseline	(one for each behavior being worked on)	17 weeks		5 milligrams of diazepam(valium)
Hosford, Moss & Morrell (1976)	26 yr. old	Stuttering. prison inmate	Listened to audiotape of self 3 hrs./wk. (1)	12 weeks	YES	Behaviors were self selected. Also given relaxation therapy and systematic desensitization. Self monitoring of progress.
Kehle, Cressy, & Owen (1990)	6 yr.boy	selectively mute	6 minute seconds of talking (1)	?????		
			5 minutes seconds of talking (1)		YES	Reinforced with baseball cards or candy after verbal response (6 per viewing). Child told if showed a

Continued, next page

Table 1 cont.

<u>Author</u>	<u>Subjects</u>	<u>Targeted behavior</u>	<u>Length & (# of films)</u>	<u>Length of program</u>	<u>Gains</u>	<u>Gains maintained follow up</u>	<u>Add'l techniques</u>
Hosford & Brown (1975)	11 teaching assistants	Improve 2 self selected teaching skills.	10 minutes (2 - one for each selected behavior)	5-7 viewings	YES	No follow up For 8 out of 10 behaviors.	Behaviors were self selected. Provided with weekly feedback and a graph of their progress.
Hosford & Johnson (1983)	3 Counselor trainees	Interviewing skills.	15 minutes (5)	5 weeks	YES	No follow up	None stated.
Dowrick & Dove (1980)	boy - 10 yrs boy-5 yrs girl-5 yrs All have spina bifida	swimming multiple baseline	2 minutes (1 per child)	viewed film 3 times per wk. for a minimum of 3 weeks	YES	YES	Comments avoided Instruction given in the skills needed by the child

and decreases in depression relative to the control group but they did not differ from each other.

Hosford and Johnson (1983) successfully utilized the technique to decrease any of seven undesirable interviewing behaviors among graduate students being trained as counselors. The behaviors were lack of eye contact, closed arms, crossed legs, fidgeting, hands in face, swaying, and looking at hands. Self-modeling "*completely extinguished*"(p. 68) five of the seven identified inappropriate interviewing behaviors 100% of the time. The extinguished behaviors were lack of eye contact, closed arms, hands in face, swaying, and looking at hands. This was in contrast to a 75% - 94% reduction of inappropriate interviewing behaviors demonstrated by the self-observation group.

Of the self-modeling studies presented in Table 1, only three reported no significant results. Those studies are: a) Clark, Beck, Sloane, Jenson, & Goldsmith (1990), b) Dowrick (1983), and c) Kehle, Cressy, & Owen (1990). The Kehle, et. al. (1990) and the Dowrick (1983) studies made subsequent films and were able to demonstrate improvements at the end of treatment and also at follow up. In ascertaining why the self-modeling procedure was not effective Kehle, et. al. (1990) examined how long the targeted behavior was being performed on the film. They found that the subject who was electively mute, spoke on the initial film for only 3.78 seconds during a six minute film. A new film was made consisting of 13.47 seconds

speaking time. Results were gained after the second viewing of the new film.

Dowrick's (1983) subject was a 4 year old boy who displayed "exaggerated mannerisms, dedication to female apparel and stereotyped toys, and verbally expressed a desire to be a girl" (p. 60). Intervention was aimed at expanding the subject's behaviors to include more male stereotyped behaviors. Two self-modeling films were made. A trained actor was filmed playing with the subject and eliciting more male stereotypic playing behaviors from the child. From this tape, film A was made showing the subject his play behavior that was not "female stereotyped" (Dowrick, 1983, p. 62). After 4 viewings of the self-modeling film no apparent change was observed and Dowrick decided to make a new film. Film B involved a child the same age and sex as the subject to elicit the desired behaviors. The child selected to play with the subject was of slight build, had fine features and fair shoulder length hair. "The boys played exclusively with an engineering set, animals, soldiers, Indians and vehicles with which they appeared to become quite competitive"(Dowrick, 1983, p. 62). Change was dramatic after the first viewing of the second film. A relapse did occur and a third film was made using the same child as a playmate. Again, dramatic results were attained and appeared to be maintained six months later. The match of the child involved with the subject had a dramatic impact on the effectiveness of the success of the program. The

amount of time a child is engaged in the desired behavior change in the film appears to affect outcomes. Inclusion of others in the film also appears to have an impact if they are viewed by the subject as being similar to him/herself.

Clark, et. al. (1990) propose several possibilities as to why the "pure" self-modeling treatment did not work in their study. Their use of quotation marks around the word "pure" implies that other researchers are using additional techniques. They suggest that some of these additions include behavioral prompts and directed role plays. To rule out the effects of role playing Davis (1979) continued baseline data collection after having the subject, Eric, role play for self-modeling films. Eric, an 11-year-old fourth grade student exhibited behavioral excesses (e.g., fighting, and inappropriate response to teacher control) like the children in the Clark, et. al. (1990) study. In order to ascertain if the role playing had any impact on the targeted behaviors Davis continued taking baseline for two more weeks. He found there was "no measurable effect" (p. 128) from the role playing and that the inappropriate behaviors continued similarly to the previously recorded baserate.

Clark et. al. (1990) also comment that most self-modeling studies have involved older subjects and suggest that preschool children may not consistently benefit from self-modeling. Older children were the subjects in studies examining aggressive behaviors. The young age of the children in the Clark et. al. (1990) study, the type of the behavioral change wanted and the self-modeling tape's contents may

be more indicative of the problems they encountered. They attempted to diminish aggressive, acting out behavior by showing their subjects an edited tape depicting compliant and non-aggressive in-class behavior. Videotapes possibly should have focused on showing the preschool subjects successfully negotiating situations that had previously triggered their aggressive non-compliant behavior. Self-modeling has been used successfully with other preschool age children, however, the targeted behaviors have been withdrawn not excessive behaviors. The age of the subject may need to be taken into account when aggressive behaviors are being targeted.

Subject's Age

As can be gathered from the information presented above, successful results have been gained using self-modeling with subjects ranging from preschool ages through adulthood. The age of the subject may be an important variable when coupled with the behavior being targeted. Preschoolers may not be good candidates when aggressive behavior is targeted (Clark, et. al., 1990). However, the videotape's contents must address the behavior that needs improvement and the stimuli that triggers undesirable behavior. This allows the subject to see him/herself successfully negotiating difficult situations. Although to date no studies with adults have revealed nonsignificant effects, this does not rule out the possibility that some adult behaviors, when treated with self-modeling, will resist change.

Additional Techniques

Table 1 identifies where additional techniques have been part of the treatment program. Studies utilizing additional techniques have concluded that the self-modeling was the critical variable responsible for the subsequent behavior changes. However, this may be an erroneous assumption. Although Davis (1979) ruled out the effects of role playing on self-modeling, the subject viewed himself on the self-modeling tape being verbally reinforced by his teacher for behaving appropriately. Because the reinforcement is contained within the tape this author feels it confounds the results of the study.

Kehle, Cressy and Owen (1990) compromised the clarity of the results by reinforcing an electively mute subject's verbal responses with baseball cards or pieces of peppermint candy. Their results may not be as confounded as the Davis (1979) study since even with these contingencies, results were not gained after three treatment sessions. Kehle, Cressy and Owen (1990) then showed the tape to the subject's class to show them he could indeed speak. Again, no verbal responses were recorded over the next three days. It was then decided that the self-modeling tape did not depict a sufficient amount of speaking time by the child and a new tape was made. Positive results were then achieved. Although it would appear that results were dependent upon the length of time the child was engaged in the desired activity on the tape, the previous additions may have also contributed to the behavior change and sufficient time may not have been allowed to elapse to rule out their effects.

Clark et. al. (1990) raises the point that influencing factors need to be taken into account when designing treatment programs. Additional techniques have been utilized with populations of varying ages, including self monitoring, concrete reinforcers, self-selection of behaviors, and positive reinforcement. The researchers who have utilized additional techniques concluded that self-modeling was responsible for the behavior changes and not the other variables.

The steps proposed by Hosford and Brown (1975) when using self-modeling include many additional techniques that could affect outcome. When other researchers define self-modeling they only explain the taping procedure and probably Hosford and Brown's (1975) steps have not been utilized by everyone using this method. This raises the issue that the technique is not consistently employed. In the Hosford and Brown (1975) technique, the subject is motivated to change and is included in the decision as to what behaviors are treated. This is not the case in studies where Hosford is not one of the authors, nor is it the case in the present research.

Summary

Self-modeling has proven effective in improving a variety of skills (i.e., swimming, interviewing, speech, play behaviors & cooperation). Several studies have successfully addressed counselor's interviewing techniques and elective mutism while other skill areas have only one study utilizing self-modeling as an intervention.

Subjects' ages have ranged from three through adulthood with positive results gained across all ages. Only in the Clark, et. al. (1990) study was age mentioned as problematic. Further research needs to be conducted with young children to determine the viability of using self-modeling with preschoolers.

Seventy-two percent of the self-modeling studies reported in Table 1 collected follow up data. Of those demonstrating significant improvements in behavior, all reported maintenance of gains. This is an impressive and important aspect of this technique.

Self-modeling appears to be an efficient and effective use of film and time. Self-modeling tapes are short in length, varying from two to eleven minutes. The technique is not intrusive and research indicates that behavior changes occur without additional intervention. Films made within the desired setting address the issue of generalization to the natural environment. The child receives feedback concerning his/her functioning ability and cannot doubt his/her ability to perform at the observed level.

CHAPTER III

METHODS

Subjects Selection

Subject selection was made on the basis of peer nomination sociometric instrument results. Prior to any interviews with the children, permission was gained to conduct the study from the Principal, Superintendent, School Committee, the parents of each child, and the children themselves. Letters were sent to all the parents/guardians of children in grades one through three explaining the use of videotape in this research project and that the purpose of the program was to help children become better friends (see Appendixes A, B, & C). The program was explained to the children in their classrooms as a group. Children, whose parents had given written permission, were asked individually prior to their interview if they would like to participate. All of the children who had parental permission agreed to participate. The percentages of grade participation follow: 64% of the first grade, 80% of the second grade, and 79% of the third grade. Children were individually administered Coie, Dodge and Coppotelli's (1982) peer nomination interview (see Appendix D for sociometric questionnaire) of 24 characteristics in a quiet, sound proofed office. Additionally, children were asked to name three children they liked most and three children they liked least. Responses were scored according to the Coie, Dodge, and Coppotelli (1982) system of rating. The sum of each child's

nominations within each category were tabulated and converted into a standardized score. Criteria for being identified as a rejected or neglected child was as follows: rejected are those children who received a liked-least standardized score of greater than 0 and a liked-most standardized score of less than 0; neglected children received an "absolute liked-most score of 0" and received few liked-least scores (Coie, Dodge, & Coppotelli, 1982, p. 564).

Interviews were administered individually and orally because it was faster for the children to verbally state their responses. Upon entering the office a roster was read to each child of all the children in their grade. At the beginning and the end of each interview the interviewees were told that it was very important to keep their answers confidential. Sociometric data also were collected from the targeted children's respective classmates at the end of treatment. The pre- and post-peer-nomination scale of acceptance was utilized to demonstrate any occurring status changes of the subject's. Each child's pre and post liked-most and liked-least ratings were compared to ascertain if any significant changes in social status occurred within the non-treated population.

Six neglected and seven rejected children were identified. Six of the rejected children were eliminated because they were in special education due to cognitive or emotional difficulties. This finding correlates with research demonstrating the relationship between peer

rejection and low academic standing (Mash & Terdal, 1988). It also underscores the disabling effects of social isolation. Children receiving Special Education services for mental retardation, learning disabilities or other sensory deficits were excluded from this study. Due to the small sample, this researcher did not feel a child's special needs classification could be adequately assessed in regard to its impact on the child's ability to benefit from the type of intervention being utilized.

Because the second grade had the highest participation rate, three second grade children (2 neglected, 1 rejected) originally were selected as the subjects for this research. However, due to the inconsistent attendance of the rejected child, a neglected first grade girl was substituted for him. All three of the final subjects were identified as being neglected according to the Coie, Dodge and Coppotelli (1982) peer nomination interview and scoring system. The children were either nominated as being SHY (7 times for the first grade girl) or they were apparently overlooked and not nominated for anything.

Due to the limited number of available observers, the three remaining neglected children did not participate in the study. Outside of the study as time permitted, two of the rejected special education children were treated using the self-modeling method. Those two children were selected due to the staff's feeling that they desperately needed intervention in their social functioning. Treatment was

implemented for them during the last two weeks of school. Their behavior vacillated between being very aggressive towards other children to playing quite appropriately. Aggressive behavior would occur without warning. No baseline or treatment data were recorded for these two students and outbursts of aggression continued. The lack of data doesn't allow for an evaluation of the treatment in their cases. However, this researcher feels treatment did not work since outbursts continued. Possible reasons for the lack of treatment success will be addressed in the Discussion section.

Subjects

Three children were chosen as subjects for the purposes of this study. One was from grade one and two were in grade two in a rural elementary public school that serves a Kindergarten through sixth grade population in Western Massachusetts. In the description that follows, each targeted child is given a fictitious name. All of the children who participated demonstrated good hygiene and were appropriately dressed for school. All were within appropriate weight limits and they did not exhibit any distinguishing characteristics that would set them apart from their peers. In addition to observing the targeted children, 8 random popular children (4 first grade girls and 4 second grade boys) from each subject's grade were also observed on the playground for levels of positive interactions in order to compare the various rates of behavior to some standard. Figure 1 shows that

the popular children were observed positively interacting with peers during a minimum of 96% of the recess time.

Matthew was a nine-year-old, second-grade child. He was a handsome child with a devilish grin which was frequently directed at his observer while leading her from one end of the playground to the other. From the first day of observation he appeared aware that he was being observed. Observers stated that he played a game with them as he would whisper to peers, glance at the observer, and take off across the playground. This lasted for the first five observations. The sixth day of observation the observer stated that Matthew did not appear to care that she was there.

Typically second grade boys appeared interested in organized sports where as Matthew was often observed walking or running around the playground. He seemed to follow the directions of other children and often did not initiate activities. Although not nominated as someone who was uncooperative, when observed on the playground he occasionally engaged in negative interactions (e.g., he would call other children names or quietly tease them). His percentage of negative interaction is notably high (7-8% negative interactions) when compared with observations of more accepted children (0% negative interactions).

Christopher was an eight-year-old, second grade boy. On the playground he participated in group activities or spent time alone. In

a field game, such as kickball, his behavior differed according to whether he was captain or not. When he was captain he did not play a position but followed the ball around the field. (He was the captain approximately five times over the course of this study.) As a team member, his participation was less enthusiastic than other team members and it was often hard to tell if he was even playing the game. Christopher did not appear to know how to enter ongoing games as a team member. His sequence of behavior follows: He would stand in the outfield of a kickball game and when the ball came near him he would scramble to get it and would then continue to play on that team; or he would wait for someone to notice him and ask if he wanted to play. To adults he was a very polite child and was well liked by all of the adults in school.

Michelle was a seven-year-old, first-grade girl living with her paternal aunt, uncle and three cousins, whose ages ranged from 4 through 9. Her biological mother had left when she was two and her father was an alcoholic. She has a younger biological sister and brother, who lived with other relatives. She visited her father periodically on weekends. Her father was living with a new woman friend and her son. This personal information is important since during the course of treatment Michelle's younger sister revealed being sexually abused by a non-relative when visiting her father. Michelle was also said to have been abused and to have witnessed her siblings' abuse. Visitations were stopped.

With her peers Michelle was quiet and often waited for them to address her before engaging in conversation. Her aunt related that one time when children were playing at her home they changed their location and because the children did not personally direct an invitation to her niece, Michelle perceived them as not wanting to continue playing with her. On the playground Michelle typically stood close to the playground supervisor or would converse with the adult on duty. Her teacher described her as being a very sweet child. Michelle often observed the children around her. She did not initiate conversation and often replied only if a statement was clearly directed to her. When children would push in front of her in line she merely stood behind them. At one point her hearing was checked because it was observed that if children standing behind her spoke to her she did not appear to hear them. Observers stated that Michelle appeared to either ignore or withdraw from her peers unless it seemed unmistakable that they wanted her company.

Observational Staff and Training

Observers were recruited from the staff and community. This was done by placing notices in the school newsletter as well as by contacting people directly who were mentioned by staff as being interested. Obtaining observers was difficult and ultimately only three were recruited. Observer training consisted of scoring a videotape of children from another school for appropriate and inappropriate behaviors. When observers reached 80% agreement

they scored children's playground behavior in vivo at the subject's school. Training consisted of a total of 3 hours of viewing and scoring videotapes and scoring one recess period prior to beginning the taking of baseline data. Initially tapes were viewed for 5 minutes and comparisons of record sheets were made. Observers compared scored intervals and discussed their reasons for scoring and clarified behavioral definitions to insure a consensus of interpretation.

During baseline and treatment one observer was assigned to each child for the morning recess. On a daily basis observers were randomly assigned to a targeted children to avoid any relationships developing that would influence recording. Reliability checks were done by the author on 20% of all observations.

Materials and Apparatus

A videotape camera was utilized to tape children playing during lunch recess on the playground. This filming occurred during a regularly scheduled recess when the children were not being observed for baseline information or for treatment effects. Self-modeling tapes were made from this film footage. A videotape player was used to show the subjects their self-modeling films during treatment.

Individual self-modeling films were made consisting of each targeted child playing appropriately with peers. Also included in the

self-modeling films were the positive responses directed at the subjects by peers.

Treatment consisted of viewing videotapes of appropriate play performed by the subject with their peers on the playground. New videotapes were made after each subject viewed tapes three times. Five treatment tapes were made for Michelle, three treatment tapes were made for Matthew and two treatment tapes were made for Christopher. Treatment was followed by a return to baseline phase for two of the three subjects. Due to the number of weeks baseline and treatment data were collected for Matthew, there was no time to institute a return to baseline phase for him.

The peers who appeared in Matthew's and Michelle's videotapes remained fairly constant throughout this project. Michelle had three peers who appeared in each of her self-modeling tapes. These were the same three children who named her as being one of the children they liked most during the post-treatment sociometric interview. Matthew had two children who were consistently present within his tapes. For Christopher the children filmed were determined by which kickball game he joined. However, only two films were made for him. The implication of who is in the films is discussed in the Discussion section.

Pocket size tape recorders with earphones were utilized for standardizing the six second observation intervals. A Sony Walkman or other type of tape player that can have earphones and be placed in

a pocket was used as the auditory signaling device. A tape indicating the interval being scored (i.e., A1, A2, A3, etc.) every six seconds was distributed to each observer, as well as, a clipboard, recording sheets, and pencils.

The behaviors targeted for observation during recess were subjects' time alone or with the playground supervisor, the amount of time subjects engaged in positive or negative interactions and the incidents of negative behavior directed at the subjects by peers (see Appendix F for more detailed definitions). The subjects were observed on the playground during their morning recess periods three days per week.

Measures

Observation Measure

Data collection focused on the percentage of time subjects spent alone, with the playground supervisor, engaged in positive or negative interactions with peers and the percentage of negative behavior that was directed towards the subjects by peers. The observation data collection technique was adapted from the Dougherty, Fowler, and Paine (1985) study. This method was utilized because it has been proven to be effective in the observation of children on the playground, yields good inter-rater agreement, defined behavior clearly, and covered behaviors of interest.

Dougherty et. al. (1985) used an interval observation code which included scoring for the gain or loss of points. A subject accumulated

points which were traded for an individual daily reward. Weekly rewards were earned by the subject for his/her class (i.e., popcorn party). The present research did not include a point system or rewards. Therefore, scoring for the acquisition or loss of points was dropped from the observation sheet and rewards for appropriate behavior were not given. A category was added to account for time a child spent socially with the recess supervisor to the exclusion of spending time with peers. This was added since one of the subjects, although not interacting with peers, was not alone. The lack of this category would have presented a skewed picture of what was occurring. As in the Dougherty et. al. (1985) study, behavior was scored for positive and negative interactions initiated by the targeted child, rule infractions, negative initiations from peers directed at the targeted children and the nonoccurrence of interaction with peers (i.e., time spent alone or with the playground supervisor) (see Appendix E for observation instrument) (Dougherty, et. al., 1985; Fowler, Dougherty, Kirby, & Kohler, 1986).

For purposes of making observational decisions, descriptors were behaviorally defined. For example, cooperative play was defined as sharing, taking turns, participating according to the rules of the game, and/or being congenial in conversation, it also included any neutral behavior the child exhibited while with peers. Negative interactions were both verbal or physical. Negative verbalizations included those

that are derogatory, rejecting, accusatory, taunting, or threatening as well as negative behaviors such as: rough or harmful bodily contact, offensive gestures, property destruction, taking materials without permission, and ignoring requests from peers. Rule infractions were violations of the school's established playground rules. Examples are going into the woods, wrestling, going beyond the boundaries of the playground, and eating snack in the play areas. The above definitions of behavior are from the Dougherty, et. al. (1985) article and the observation instrument is an adaptation of the one used in their study (see Appendix F for more specific behavioral definitions and for scoring symbols). In their study interobserver agreement was consistently at or above 70%. Interobserver agreement percentage throughout this study ranged from 75%-100%. The average reliability was 95%.

Interval recording (6 second intervals) was utilized, with the scoring of negative behavior taking precedence over the scoring of positive behaviors. When more than one instance of a behavior occurred within an interval, the behavior was scored only once and was recorded at the time of the 6 second audiotaped signal. Observations were taken in continuous 6 second intervals throughout the entire recess on the playground. Reliability checks required that both observers listen to the same tape to insure that the interval timing was the same.

Data were collected on 8 popular children during the course of the study. This data was important as it served as a comparison measure on play interaction behaviors for the subjects' data. Popular children were observed by this researcher or one of the trained observers. Inter-rater reliability for the popular children's data was 100% on the two occasions it was computed.

Direct observation and videotaping of play behavior was done on the playground during regularly scheduled recess periods. The weather was good throughout this study and recess was held outdoors for all observations except one.

Measure of Sociometric Status

Sociometry is a method used to determine a person's status within a group based upon some common criteria (Moreno, 1953). Nomination techniques are commonly used because they are able to identify the position of individuals within a group (Hops & Greenwood, 1988). Nomination of peers for various behaviors (e.g., who starts fights, cooperates, is helpful, is shy) helps to predict a child's acceptance level (Coie, Dodge, Coppotelli, 1982). In the Coie, Dodge, Coppotelli (1982) study with third, fifth, and eighth graders, the median test-retest reliability for the 24 behavioral descriptions was .65, reliability ranged from .46 to .88. Reliability for like-most and like-least scores were .65 each. A significant advantage of this method is that it identifies behavioral characteristics that accompany children's perceptions of a child fitting into the various

classifications of acceptance. This nomination method was also used in study involving first graders, however, test-retest reliability was not stated (Coie & Dodge, 1988).

Design

A multiple baseline across subjects design was utilized. After administering the peer nomination instrument and determining the subjects, baseline (A) data collection for each individual began. Phases were continued until a trend in behavior was established within each phase. Treatment (B) followed baseline and a return to baseline (A) was implemented for 2 of the 3 subjects.

Procedures

Baseline

After subjects were recruited through the Sociometric Interview (Coie, Dodge, & Coppotelli, 1982), baseline data were collected by direct observation during morning recess. Morning recess is an unstructured play period lasting from 15 to 20 minutes. Treatment was begun when it was decided through visual inference by the author and two faculty members that a pattern of typical behavior was established and could be used for comparison with the treatment phase results. For Michelle baseline lasted 2 weeks, for Christopher 5 weeks, and for Matthew baseline lasted 7 weeks. The beginning of treatment was staggered across three subjects so that each subject could act as a control. Staggering the beginning of treatment across

subjects demonstrated that the results obtained from treatment for the first subject were replicable.

Self-modeling Condition

Together the researcher and each subject viewed his/her tape just prior to morning recess, three days a week over a period of weeks. No comments were made by the researcher concerning the child's behavior on the tape at any time. However, the children were allowed to comment. Viewing the tapes appeared to be a pleasant experience for the children. They smiled at various points and also commented occasionally. During one viewing Michelle stated, "I remember doing that. It was fun."

CHAPTER IV

RESULTS

Levels of Positive Interactions

Figure 1 shows levels of positive interactions demonstrated by the popular and the targeted children. Popular children were not observed interacting negatively with others and May 29 was the only date where one of the popular children briefly spent time alone. Popular children were never the targets of negative behavior from others. On one occasion a child bumped into one of the popular children and was observed apologizing.

Overall, all the targeted subjects improved their rate of positive interactions relative to baseline. Figure 1 shows that on May 29, after not viewing her self-modeling tape for four days, Michelle reverted to baseline levels of positive interaction. However, with viewing the tape she quickly improved and continued her trend of interacting more and more. On the last day of treatment, Michelle was interacting at a rate commensurate with the popular children. A decrease in positive interactions was also observed when treatment stopped. However, Michelle improved her level of positive interactions without subsequent intervention. Her positive interactions with peers averaged 20% during baseline, 66% during treatment, and 78% after treatment ceased. Speculation as to why improvements occurred during the reversal phase are discussed in the Discussion section.

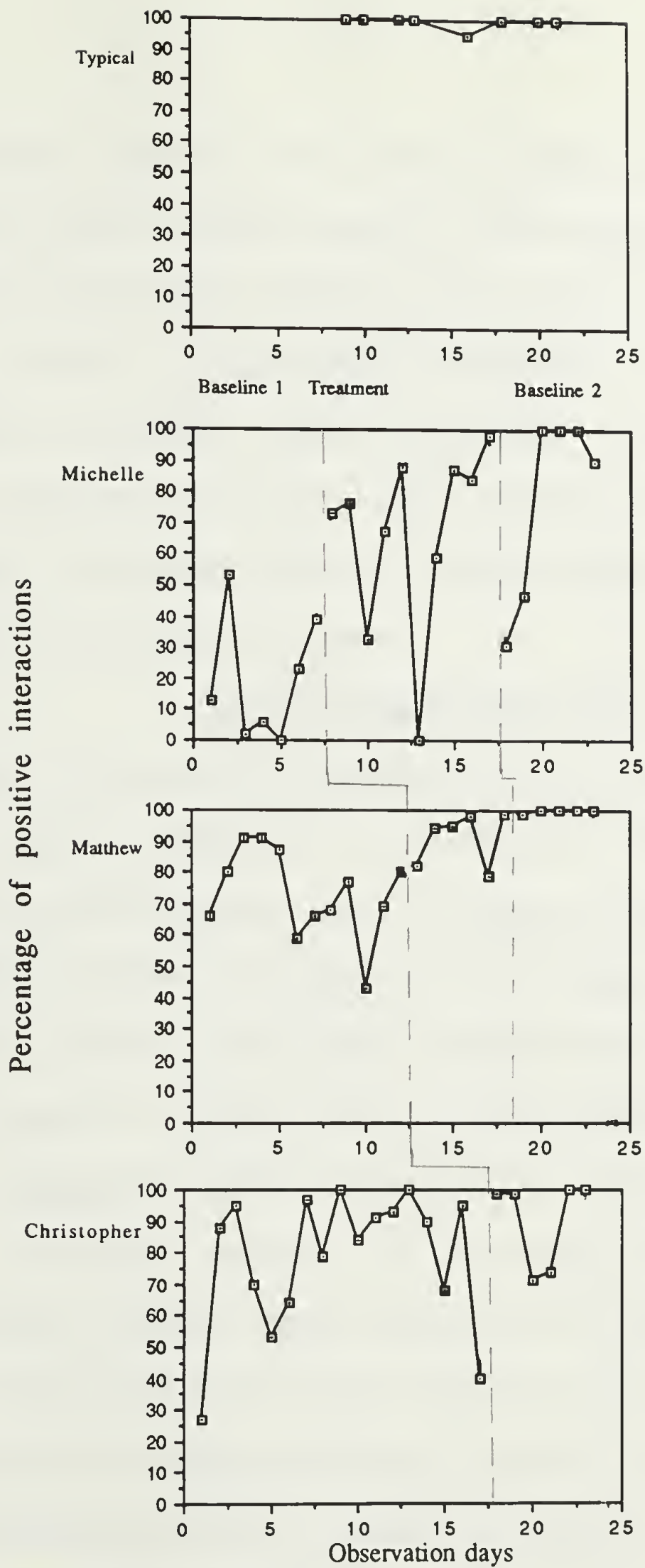


Figure 1 Levels of positive interactions.

Matthew's behavior also improved during treatment and was maintained when treatment stopped. His averages of positive interactions for baseline, treatment and during the return to baseline condition are 73%, 91%, and 100%, respectively. Christopher's day to day results are variable. However, during his 7 days of treatment positive interactions were above 70%, whereas during baseline 7 out of 17 days demonstrated 70% or less of the time was spent engaged in positive interactions with peers.

Levels of Negative Interactions

Figure 2 presents the percentage of time targeted children initiated negative interactions towards others. Christopher's and Matthew's average baseline levels of negative interactions (5% and 10% during baseline, respectively) are substantial when compared to the popular children's levels (0%). Matthew and Christopher were observed teasing or telling others they could not play a game. Matthew engaged in negative interactions an average of 10% during baseline, 4% during treatment, and 0% during maintenance, demonstrating a steady decline throughout the study. Christopher averaged 5% during baseline and dropped to .1% during treatment. Michelle's rate of negative interactions was 0% on all except one day during treatment when she aggressively pushed a child who had gotten in front of her in line.

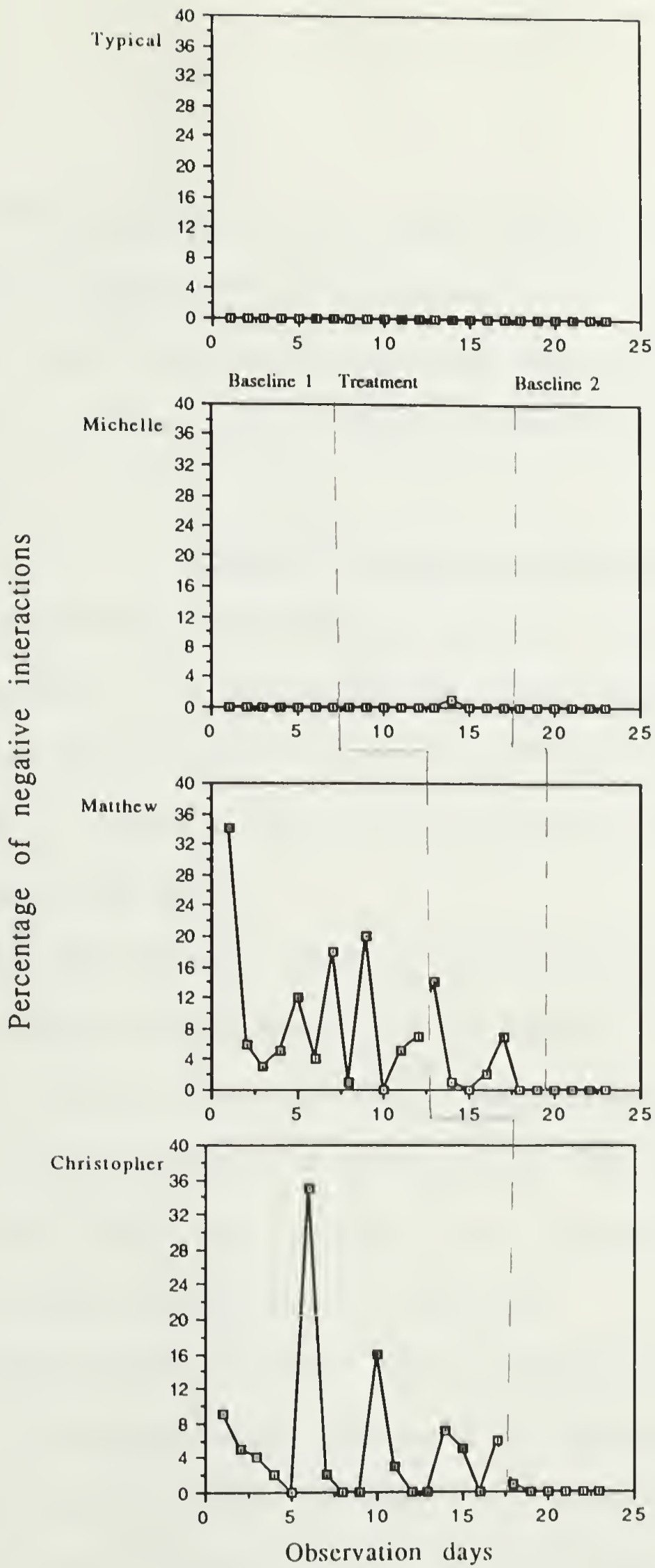


Figure 2 Levels of negative interactions.

The percentage of time others initiated negative behavior toward the subjects was also observed. Few incidences of negative behavior (less than 1%) were aimed at Michelle or Christopher, however, a higher level of negative behavior (6%) was aimed at Matthew.

Levels of Non-peer-involved Behavior

Not interacting with peers in any way was characteristic of all three subjects. The boys spent time alone whereas Michelle would primarily "hang around" the recess supervisor and occasionally spend time alone. Figure 3 shows the percentages of time the subjects did not engage with peers.

Michelle spent time alone or with the playground supervisor during baseline an average of 78% of the time. During treatment this dropped to an average of 32%. When treatment ceased Michelle's level of not interacting with peers rose the first day to 68%. However, time spent without peers dropped to an average of 18% during the reversal phase without further intervention.

During baseline Matthew spent approximately 14% of his time alone. This dropped to an average of 5% alone time during treatment and less than 1% during the reversal phase. During treatment and the reversal phase Matthew began to participate in organized games such as kickball. This behavior was never observed during baseline.

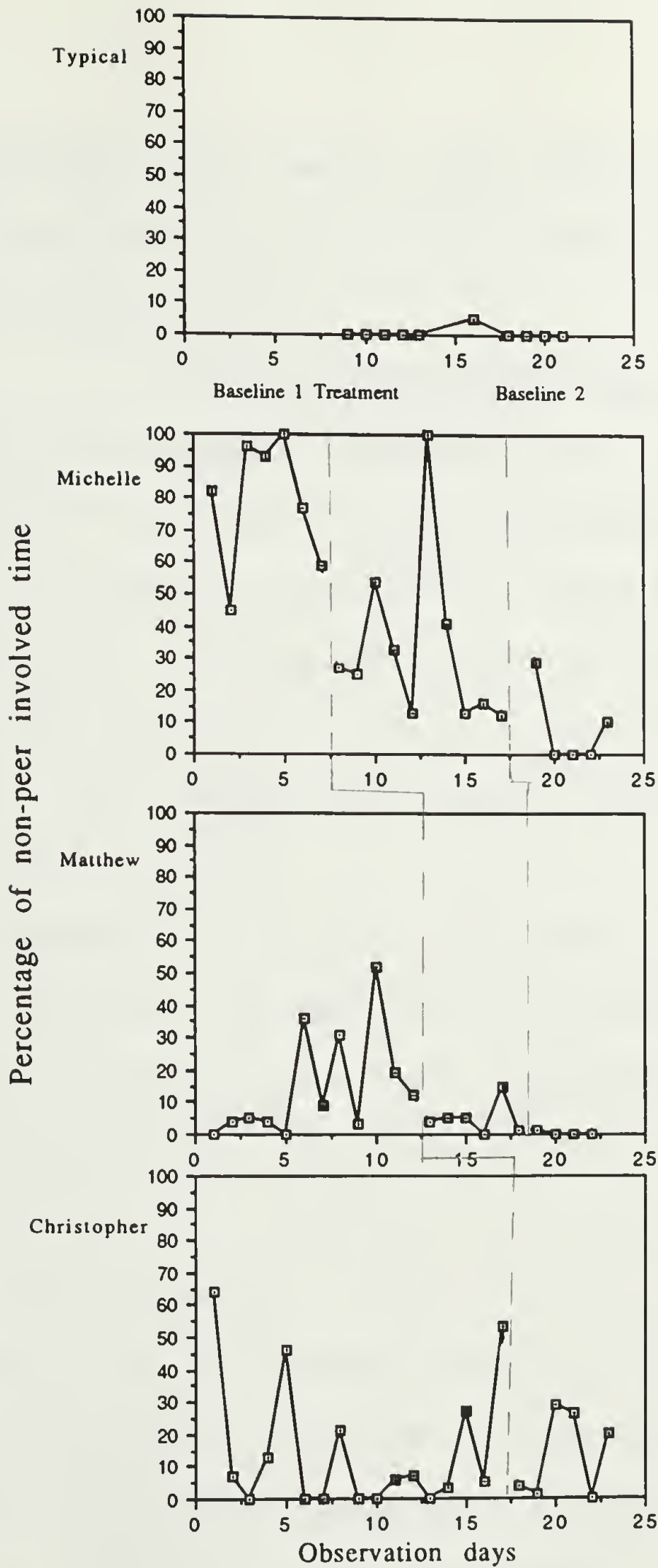


Figure 3 Levels of non-peer involved behaviors.

Christopher's alone time was quite variable during baseline and was often low (average of 12%). During treatment his average of alone time remained at 12%.

Post-treatment Sociometric Ratings

On the post sociometric interviews there did not appear to be any movement in Matthew's or Christopher's status. Michelle, however, was chosen by three children as being a most liked child within her grade. She was nominated by two children she had named as liked most also. This is in contrast to no nominations previously. These children were frequently involved with Michelle when she playing at recess.

A comparison of pre- and post-treatment nominations for the categories liked-most and liked-least for all participants indicates that the majority of children did not shift significantly in their status within their peer group. However, a girl from Michelle's class did increase her liked most standing by three nominations, going from one nomination at the time of the pre-treatment interview to four nominations at the post-treatment interview. In the pre-treatment interview this child had been named as cooperative by 17% of those interviewed and as having a good sense of humor by 8% of those interviewed. She did not receive any negative nominations (i.e., starts fights, easily angered) in either the pre- or post-treatment nomination interviews. Since being cooperative correlates with being

chosen as a liked-most candidate, this child's movement was predictable. Michelle in the pre-treatment interview was identified by 30% of those interviewed as shy and was not named as being cooperative or having a good sense of humor by anyone. Michelle's sociometric movement was not predictable since her peers previously viewed her as shy which does not correlate with a liked most choice.

Discussion

Self-modeling produced changes most clearly for Michelle and Matthew. Figure 1 shows that both children demonstrated increased levels of positive interaction during treatment and continued to improve during the reversal phase. What caused the continued improvements in behavior? Were they a reflection of the peer reinforcement of the subject's positive behavior? The increase in positive interactions for the above two children was exciting to observe and this author feels it was related to the reactions of peers observed on the self-modeling videotapes and received on the playground during treatment and after treatment was stopped.

Self-modeling may make it easier for children to risk new behaviors in desired settings since viewing the videotape shows them they are quite capable of performing. It also shows them the reaction of others to their new behaviors which may decrease their uncertainty about others' reactions.

Continued improvement of targeted behaviors during the reversal phase may be one of the benefits of the self-modeling

technique when used to improve social skills. According to Stokes and Baer (1977), selecting behaviors for treatment that would normally meet maintaining reinforcement within the environment to which the subject returns is one way to obtain successful generalization and continued improvement. This appears to have been what occurred with the subjects in this research. Increases or decreases in the subjects' interactions may have been dependent upon the reactions engendered in peers in the subjects' natural environment. Peers reacted to the change in the subjects' interactions which may have influenced the continued improvements.

The use of videotape allows one to film within the environment where the desired behavior is expected. Viewing oneself perform an activity within a particular environment gives one the sense that one is capable of performing that activity. Therefore the subject is likely to attempt the new behaviors. Figure 1 demonstrates the improvements in positive interactions by Michelle and Matthew. Peers reacted favorably to their increased positive interactions. This probably increased their positive interaction behavior even more, thereby influencing the improved percentages of positive interaction observed during the reversal phase of this study. The use of self-modeling within this research introduced the children to the natural reinforcers inherent in positive peer play interaction during recess. Stokes and Baer (1977) state that as "the group's natural consequences for interaction" take over, behavior does not need to

continue to be controlled by a treatment program (p. 353). Self-modeling may decrease the need for generalization procedures because behavior is able to be filmed within the environment one wants it performed and natural contingencies are able to take control. When subjects appear to have the required social skills to get along, self-modeling may be the preferred technique for increasing the subject's awareness of his/her capabilities and of others' positive reactions to them.

Further improvements in performance during the reversal phase may also be a result of the implicit positive message embodied in no longer receiving treatment. In elementary schools, children are most often removed from their classrooms for remediation. Although they may enjoy the special small group or individual attention this process is based on having a deficit. Special programs typically cease when remediation is no longer required. The end of being segregated may result in the child feeling better about him/herself since a message is implied that they are no longer in need of special help. This may be a powerful message and may result in a positive self fulfilling prophecy. In this study improvements continued after treatment ceased. This may have been related to the above speculation that when the subjects stopped receiving special individual remediation (i.e., self-modeling) they felt better about themselves in relation to their social interaction and therefore acted as if it were no longer a

problem. However, this hypothesis for continued improvements is purely speculative.

The subjects appeared to enjoy watching themselves and made positive comments concerning their viewing. After Christopher's first viewing he often wanted to bring someone with him. He may have wanted company to help ease anxiety or he may have wanted others to see his athletic ability, or his stardom in the film. Matthew never commented during viewing but would smile frequently. Michelle commented on what she was viewing and sometimes requested to see certain tapes over again and at the end of treatment Michelle wanted to see all of her tapes at once. All requests were denied. This author was fearful that lengthening her viewing time and/or allowing Chris to bring peers for viewing would confound the results of this research. Confounding variables in the self-modeling literature have already been discussed and this author did not want to add to the list.

Michelle's peers were very interested in being filmed and would ask when filming would occur. Since Michelle was always in the film and was the only child allowed to view the films others may have initially interacted with her so they would be filmed. The subjects were viewed by classmates as being involved in something fun and special. Some peers became interested in what the subjects were watching and thus sought out the subject to obtain information. Classmates would ask if they could view the tapes. Each subject

became a source of information concerning his/her videotape's contents. The videotape element moved the neglected subjects from the periphery of the group more into the center. It helped increase interaction while not requiring the subjects to always be the initiators of contact. This may have made the subjects feel more valued by their classmates. It also may have made the subjects less anxious in interacting with peers.

Michelle's increase in interaction with peers may have caused her peers to change their perceptions of her. She appeared to enjoy participating in activities with peers and did not have difficulty executing the activities in which they engaged (i.e., tumbling, cartwheels, climbing on the bars). Research suggests that mutual liking, sharing, and the pursuit of common activities are the basis for early friendship choices (Price & Ladd, 1986). Michelle's increased level of positive interaction and mutual sharing of activities indicate she is a competent friend. If friendship demands were greater (i.e., wanting support, sharing personal information) perhaps her sociometric improvements would not have occurred. However, that leads to implications concerning the videotapes contents. If a child is at a developmental level where friendship is based on support and personal sharing it would be important to have tapes depicting this type of behavior from the subject.

It is also notable that the three children who named Michelle in the post sociometric interview as being a child they liked most were

consistently in Michelle's self-modeling videotapes. Their presence suggests that they did learn that they enjoyed her company. She may have also developed a comfort level of being with them since extended time was spent with them. This allowed her to initiate play with them more frequently without uncertainty concerning their reaction to her. Figure 1 revealed low levels of interaction during the baseline phase. Positive interaction gradually increased and showed a gradual upward trend when treatment is stopped. While Figure 1 demonstrated increased interaction, Figure 3 showed that Michelle was spending less and less time alone or with the adult supervisors. The combination of these data suggests that she was enjoying the time spent with peers and was becoming more comfortable in the presence of peers.

Christopher's results were less conclusive than the above two subjects. This appears to be more because of the behaviors targeted for observation than the treatment ineffectiveness. If he was not a team captain, Christopher did not appear to know how to enter a game. His strategy of standing in the outfield or hovering near the line of the team that was up to bat often worked. Since he would not disrupt ongoing activities and he followed the rules he was often scored as positively interacting. This is true in the sense that he could play team sports. However, it missed the critical element of his way of interacting with peers. He may have benefitted from discussing

with the researcher the content of his self-modeling film. Perhaps he should have been encouraged to ask to play. The self-modeling films were made from the subjects' actual interactions. None of the situations were role played. For Christopher, this may have been a mistake.

It is interesting to note that the boys were targets of negative behavior more often than Michelle. These boys held a less prestigious place within their class and as a result may have been more likely to experience negative behavior from their peers. This may be because some peers knew that these children typically were passive and unlikely to retaliate. This is in concert with Coie and Dodge's (1988) finding that neglected boys were avoidant of aggressive interactions. Another possibility is that peers may have felt that they would gain support from classmates by picking on less prestigious peers. Whatever the reason, it is interesting to note that the negative behavior directed toward the subjects of this study decreased as the study progressed. Perhaps it was the presence of the observer, although it appeared to be clear to many of the children that the observers did not intervene in interactions. The decrease may also have a result of subject's improved behavior changes.

Michelle's data revealed that she became more likely to stand up for herself after the treatment phase than she was during baseline. During baseline, children pushed in front of her in line without retaliation from her. During maintenance she pushed a child who was

trying to get in front of her in line. It was felt by her observer that this was progress. Perhaps she felt more confident and more capable of asserting for herself.

Previous research has demonstrated that movement in social status frequently is not obvious after interventions that last only a few months (Hughes & Sullivan, 1988). This seems to be because friendships are developed over time and tend to remain fairly stable. This makes Michelle's social status improvements remarkable. Her improvement suggests that she possessed all the necessary social skills. Berndt (1983) states that some children may be neglected because of their avoidance of their peers. This may have contributed to Michelle's status; she was not interacting a sufficient amount of time for her classmates to evaluate whether they liked her. Her improved status was the most exciting by product of her interaction improvements for this author.

The fact that status improvement did not occur with the two older subjects may be supportive of the effects of early intervention. By second grade friendships may be more difficult to change, requiring more intensive interventions. Thus, when children are observed having peer relationship problems well into their Kindergarten year, interventions should be developed and implemented.

Alternately, the results may indicate that a longer period of time was required for change to unfold for the second grade boys. If more

time had been available sociometric changes may have also occurred for them.

Matthew's results on Figures 1, 2, and 3 demonstrated that he changed his behaviors. His positive interactions increased, time alone and negative interactions decreased yet his social status did not change. In his case, this may be reflective of the fact that he had been retained and was now beginning to once again play with same-age peers instead of classmates. Sociometric choices were limited to classmates and Matthew spent his time playing with children in third grade. Therefore, changes in social status for him may have been evidenced if sociometric choices were open to others pupils in the school.

The self-modeling technique was implemented during the last two weeks of school for two children identified as being rejected. Both children were not included in this research because they did not fit the established criteria of regular education. The technique was implemented because of the children's aggressive behavior on the playground. Although no direct observation data was collected it was apparent from office referrals that the incidences of aggression did not decrease for one of the children. It is difficult to assess whether it had an impact on the other child since no pattern of aggressive behavior was recorded, however, he too continued to engage in aggressive behavior. This author feels that the technique was not

successful in the above cases for several reasons. The children did watch themselves playing appropriately with other children on the self-modeling tapes, however, the children they were filmed playing appropriately with were not the same children with whom they would typically fight. Also aggressive acts appeared to be an impulsive means of resolving conflicts for them and the films did not show them involved in conflict situations. Film content for these children should have focused on vignettes that contained conflict situations with appropriate resolutions being implemented by the targeted children. Because these aggressive children appear impulsive in their physical responses, they may require a more comprehensive social skills training program, including focus on conflict resolution and impulse control.

The content of the videotape for self-modeling appears to be critical. It seems important for the researcher to be precise concerning what about the child's behavior one is trying to change. When attempting to increase conflict resolution skills students appear to need to see themselves negotiating what previously was difficult. Further research concerning the content of an individual's self-modeling tape and the results achieved needs to be done.

Although the content of the tape appears important, other factors also appear to influence the effectiveness of self-modeling and it may be inaccurate to attribute the results of this research solely to the self-modeling condition. The component parts of this study and the

resulting environmental changes (i.e., someone taping specific children, the natural reinforcement of interactions) appear to also have impacted the subject's resulting behavior. Certainly, many things changed when the videotaping occurred and was viewed by the subjects. Each subject appeared to be moved into a position of prestige and power. Each knew his/her film's content and was always a target of the filming.

In this research self-modeling was utilized to increase social skills, however, the ultimate goal was to improve social status. The behavior of these children suggested the potential importance of filming a consistent peer group. Michelle was able to change her status and was frequently filmed with the same three children. Increasing social status probably needs to define a reference group for a child and include the defined group within the film.

Although observers did not interact with the subjects or children on the playground, observers did impact the behaviors of all initially. This was evidenced by the subject's early responses to them (i.e., looking at the observers and then running to opposite ends of the playground). Initially, observers were asked by children for help, however the observers directed children to the playground supervisors. Eventually all the children acclimated to the observers presence and negative interactions occurred in their presence.

Conclusions

The intention of this study was to assess the use of the self-modeling technique as a method for helping neglected children improve their social skills and ultimately improve their social status. The research was designed to record positive and negative behavioral interactions, and time spent without peer involvement. This research assessed whether these behavioral changes were related to sociometric changes within the subject's peer group. The sociometric and observation instruments were reliable measures. Inter-rater reliability was high throughout the study and data collected indicates that self-modeling clearly changed behavior. The results indicated positive behavior changes occurred for both Michelle and Matthew, with Michelle's behavior resulting in a social status increase. Christopher's data indicated a trend toward positive behavioral changes, but the study ended before a clear picture was obtained concerning his behavior. These results indicated that self-modeling was a viable intervention with these three socially neglected children.

Statements concerning the results are not strong because of the small size of the study, the lack of a non-treatment group, the length of time in which the study was conducted, the limited number of comparison observations on popular peers, and that comparative data are not available on average peers as well. Average children should have also been observed. A comparison of average children's data

with the neglected children's interaction data might not have appeared so dramatically different as the comparison in Figure 1 with popular children's interaction.

Previous research examined the use of self-modeling to train and increase specific skill areas. Social skills have been included in those studies however, levels of positive interaction have not been reported. Also this researcher does not feel that videotape content has been stressed strongly enough. Self-modeling must be used very precisely. In the Clark, et. al. (1990) study, her efforts to decrease aggressive behavior in preschool children may have failed because videotapes showed children playing appropriately while not showing the children appropriately handling situations which triggered their aggressive responses.

Future research should continue to study the effect of using self-modeling as a social skills training method. This research demonstrated its use with neglected children. The use of this technique with young children should be further explored as well as the impact of specific film content. The beauty of self-modeling is the ability to utilize the technique within the environment where the changes are desired.

APPENDIX A: LETTER TO SUPERINTENDENT

Dear (Mr. XXXXX),

I am requesting permission to do research on peer relationships within the (name of school). This research program is aimed at 1) identifying children who have difficulty making and maintaining peer relationships and 2) helping those identified children to improve their social skills. The ability of children to form positive peer relationships and to form lasting friendships has been found to correlate with learning and later adjustment. Given this relationship social development is a very important aspect of a child's growth.

Grades one through three would be the focus of this research. This study will assess each child's social status within the classroom and will provide interventions for those children who appear to be at risk for peer relationship problems. Children will be interviewed in small groups by me to ascertain how they view their classmates. The results of these interviews will be confidential and solely used for research purposes. This interview will take about 20 minutes and will occur at the beginning and again at the end of the research project (approximately 8 weeks later).

After the initial interview, identified children will be observed playing at recess. This will be done to see how children are interacting. Children, identified as having difficulty making friends, will be videotaped. Individual videotapes will be edited to show the each identified children interacting appropriately. Each identified child will be shown the videotape with him/herself interacting appropriately. Separate tapes will be made for each child. The tapes will not be shown to anyone else.

Parents/ guardians will have the right to withdraw their child from this research at any time without any penalty to the child.

Attached you will find a letter to the parent/guardian and a parental permission form which will be distributed to parents/guardians in grades one through three. The program will not begin until permission forms are returned from a minimum of 50% from each class. Unreturned permission forms will be counted as a denial of participation from the parent/guardian and that particular child will not participate in any part of the study.

I look forward to hearing from you concerning your decision. If I can answer any questions in the interim please let me know.

Sincerely,

Joyce I. Mehaffey

cc: (Mr. XXXXX), Principal

APPENDIX B: LETTER TO PARENTS FOR PERMISSION

Dear Parents,

I, Joyce Mehaffey, School Psychologist, am requesting permission for your child to participate in a research program aimed at 1) identifying children who have difficulty making and maintaining friends(e.g., children who are shy) and 2) helping those children to be better friends. The ability of children to form positive peer relationships and to form lasting friendships has been found to correlate with learning and later emotional adjustment. Given this relationship social development is a very important aspect of a child's growth.

This program will assess each child's friendships within the classroom and will provide interventions for those children who appear to be at risk for friendship problems. Children will be interviewed in small groups by Joyce to ascertain how they view their classmates. The results of these interviews will be confidential and solely used for research purposes. Interviews will take about 20 minutes and will occur at the beginning and again at the end of the research project (approximately 8 weeks later).

After the initial interview, identified children will be observed playing at recess. This will be done to see how children are interacting. Children, identified as having difficulty with friends, will be videotaped. Individual videotapes will be edited to show each identified child interacting appropriately and tapes will be shown to the child. Separate tapes will be made for each child and will not be shown to anyone else.

Grades one through three will be participating in this program. When the program is completed I will be happy to share relevant findings with parents. Since the information that is gathered from this study is strictly for research purposes, it will not be included in any school records or files.

It is hoped that you will allow your child to participate. Should you give permission and then change your mind your child can withdraw at any time without any negative consequences.

Please indicate your decision on the attached permission form and return it to your child's classroom teacher as soon as possible. If you have any questions or concerns please contact Joyce at (work phone number) on Monday, Wednesday, or Thursday.

Thank you very much.

Sincerely,

Joyce I. Mehaffey
Nationally Certified School Psychologist

APPENDIX C: PERMISSION FORM

PERMISSION FORM

I have read the attached letter and understand that the information gathered is for solely for research purposes, will be confidential and will not be included in any school records or files. I further understand that my child may withdraw at any time without any negative consequences occurring.

Should I desire to know the results of this study I can contact Joyce Mehaffey and she will share all relevant information with me.

I am this child's legal guardian or parent and I am completing this form on his/her behalf.

I do/do not give permission for my child,
_____, to participate in the project focusing on making friends which is being carried out in the primary grades.

Parent's Signature

Date

Thank you very much. Please return this to your child's classroom teacher by Wednesday, March 6.

APPENDIX D: SOCIOMETRIC QUESTIONNAIRE

SOCIOMETRIC QUESTIONNAIRE

- Cooperates Here is someone who is really good to have as part of your group because this person is agreeable and cooperates-pitches in, shares, and gives everyone a turn.
- *Disrupts This person has a way of upsetting everything when he or she gets into a group - doesn't share and tries to get everyone to do things their way.
- *Supports peers If you need help or something was bothering you, this is the person you'd go to. This person is kind and really seems to care about how you feel.
- Affiliates with peers This person likes to be with others more than being alone. They're almost always part of the group.
- *Shy This person acts very shy with other kids, seems always to play or work by themselves. Its hard to get to know this person.
- Acts snobbish This is someone who doesn't want to join in with what other do. They act snobby and seem to stay by themselves as if he or she were better than other people.
- Gets rejected by peers This person tries very hard to be a part of the group. Tries to do what they think kids will like, but somehow this person doesn't get accepted.
- Defends self in arguments This person will defend themselves and fight back, but they don't usually start fights.
- Aggresses indirectly This person gets even with others by waiting till later to do something nasty like break something or tattle, or tell lies about others.

Gets teased by peers This person often gets picked on or teased and doesn't seem to be able to defend themselves very well.

*Fights This person starts fights. They say mean things to other kids or push them or hit them.

*Has a short temper This is someone who flies off the handle right away and is very hotheaded. Gets so mad they don't know what they're doing.

*Remains calm This person has a good sense of humor and can take a joke. This is someone who is good natured and doesn't get all upset when things don't go just right.

*Feelings easily hurt This person is very touchy. Their feelings are easily hurt.

Acts independent This person likes to do things for themselves. They only ask for help if it is really necessary.

Braggs This person is always bragging or showing off. They boast about themselves and are always trying to be the center of attention.

Seeks help This person is always looking for help, asks for help even before they've tried very hard.

Achieves much Who is really smart and usually knows how to figure things out.?

Achieves little Who is very slow to learn things?

Attractive physically Who are the best looking boys and best looking girls?

Unattractive physically Who are the least attractive or good - looking boys and girls?

*Leader This person gets chosen by the others as the leader.
Other people like to have this person in charge.

Gets into trouble with the teacher This person gets into trouble with
teachers and other adults

Tried to be teacher's favorite This person tries very hard to be the
teacher's favorite.

*Good at sports This person is good at sports. They play by the rules
and kids like having them on their team.

* designates those categories that are set up for analysis by computer
program
SOCSCORE

APPENDIX E: OBSERVATION INSTRUMENT

OBSERVATION INSTRUMENT

Child's Name: _____

Observer's Name: _____

Date: _____ AM Recess Grade: _____ Teacher: _____

- interv. _____ - interv rate _____ % - interv _____

+interv. _____ + interv rate _____ % + interv _____

R interv _____ R interv rate _____ % R interv _____

· interv _____ · interv rate _____ % · interv rate _____

O interv _____ O interv rate _____ % O interv _____

Other observer: Y/N %Agreement: _____

1 2 3 4 5 6

A - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

B - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

C - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

D - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

E - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

F - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

G - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

H - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

I - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

J - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

K - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

L - + · R S - + · R S - + · R S - + · R S - + · R S - + · R S

APPENDIX F: BEHAVIORAL DEFINITIONS FOR OBSERVED BEHAVIORS

BEHAVIORAL DEFINITIONS FOR OBSERVED BEHAVIORS

(taken from Dougherty, et. al. 1985)

1. Negative interactions with peers (-) This category includes the following behaviors:

a) Negative verbalizations: the observed child spoke to a peer in a derogatory, uncomplimentary, or angry manner. Examples include: name calling, bossy commands, quarrelsome statements; accusations; critical or uncomplimentary statements; aggressive threats and pestering or taunting statements.

b) Negative physical contact: The observed child physically contacted or touched another child in an aggressive, rough or painful manner. The contact was punitive, designed to inflict pain, or occurred against the other child's protests.

c) Other negative behavior: The child behaved in an aggressive, deliberately annoying, or uncooperative manner with others without using words or physical contact. Examples include:

(1) Noncompliant and uncooperative behavior: obstructing play equipment such that other children could not use it; taking a toy from a peer and refusing to return it; using another's material when asked not to do so; withholding objects in a game from the players.

(2) Threatening or offensive gestures: making a fist and threatening to hit; making obscene gestures; sticking out one's tongue; making faces; imitating another person in a mocking fashion.

(3) Property destruction: knocking down a child's sand structure; smashing an object that belongs to another; purposefully stepping on a child's chalk drawing; writing on a peer's coat; throwing a peer's hat into water.

(4) Disputes over play materials: grabbing an object out of someone's hand (other than in the context of a basketball game); struggling over a toy by trying to pull it away from a peer; shoving a toy into a child's hands in an angry manner.

(5) Ignoring of requests: not responding to a peer who is attempting to make a reasonable request (i.e., ignoring peer when asked to move out of the game area where the peer is playing.)

2. Negative Interactions from a Peer (O): This category refers to instances in which a peer interacts in a negative fashion toward the observed child. The same criteria used to determine will be used to code negative behaviors from peers.

3. Positive Interactions with Peers (+): All peer directed social behavior which is not aggressive or otherwise negative will be considered to be positive. Positive social behavior will range from giving a compliment or providing assistance, to playing with a peer. Positive behavior will not be recorded in an interval in which a negative behavior was scored.

4. Rule Infractions (R): Rule infractions refer to instances in which the observed child violates established playground or school rules.

5. No Codeable Behavior (·): When the observed child is not engaged in either positive or negative interactions with peers, a no codeable category will be scored for the 6 second interval. This code could be scored in the same interval as (R). Examples of such behavior include playing alone, wandering about the playground.

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