PEER SELECTED MODELING: A RAPID TREATMENT FOR AGGRESSIVE-DISRUPTIVE BEHAVIOR

ALAN W. HAYDUK
University of Alberta

Abstract

This study reports the successful use of compulsory 'peer selecting modeling' for the treatment of hostile and aggressive behavior within a special education program. The treatment procedure, a brief, situation-specific variant of peer and participant modeling, was designed for routine use by classroom teachers. Use of the treatment resulted in the rapid and complete elimination of peer aggression in the eight participants completing the study. A three month follow up indicated that all in-class improvements were maintained, and in most cases the improved behavior generalized to other classes. Several parents reported simultaneous improvements in the homes. These findings suggest that the procedure can be effective in the rapid treatment of disruptive-aggressive behavior in special class situations.

Résumé

Cette étude rapporte le succès rencontré dans l'utilisation du modeling obligatoire de pairs choisis pour traiter le comportement aggressif et hostile à l'intérieur d'un programme d'éducation spéciale. La procédure utilisée est une variante du modeling de pair et de participant. Elle est conçue de sorte que tout enseignant puisse l'employer. Cette approche entraina l'élimination rapide et complète d'aggressivité parmi les huit personnes qui ont participé à l'étude. Une évaluation menée trois mois après indiqua le maintien du comportement désiré. De plus, dans la plupart des cas, le comportement amélioré se manifestait également dans les autres classes. Plusieurs parents ont signalé une amélioration semblable à la maison. Ces constatations suggèrent qu'une telle démarche peut s'avérer efficace dans le traitement rapide de comportements aggressifs-hostiles dans de telles situations.

Problems of aggressive and hostile behavior are frequently evident in junior high school special education classes. These behaviors usually disrupt other students, in addition to interrupting the individual's own learning, and interfering with other, more appropriate, behavior which could be taking place.

Previous researchers have used many methods, and combinations of methods, to deal with aggressive behavior. In their review of the related literature, Repp and Deitz (1974) considered many of these methods, along with some of the associated problems. Punishment and extinction (i.e., cutting off reinforcement for the unwanted response) have been studied and used to control aggressive behavior (Bucher & Lovaas, 1968; Madsen, Becher, & Thomas, 1968). Unfortunately these methods have some associated problems. Punishment, for example, must usually be intense to be effective; it may be prohibited in some schools; and it may be associated with an undesirable affective component. Extinction onset is usually accompanied by an initial increase in the unwanted behavior and the entire process is usually quite lengthy (Ferster & Skinner, 1957).

Because of these problems researchers have investigated alternate procedures to be used either alone, or in concert with punishment or extinction. Time out (i.e., cutting off *all* reinforcement for a period of time) has been used extensively (Ashem & Poser, 1973; O'Leary & Wilson, 1975) in institutions, but may be unwieldly in the school setting. The selective reinforcement of behavior which is incompatable with the unwanted response has been used alone (Becker, Madsen, Arnold, & Thomas, 1967), in combination with extinction of the undesirable response (Hall, Foxx, Willard, Goldsmith, Emerson, Owen, Davis & Parcia, 1971) and in combination with both time out and extinction (Zeilburger, Sampsen, & Sloan, 1968). Foxx and Azrin (1973) developed a 'restitution' procedure to eliminate aggression in retardates and brain damaged patients. Webster and Azrin (1973), also working with retardates, succeeded in reducing agitative-disruptive behavior with a required relaxation procedure.

The differential-reinforcement-of-other-behaviors (DRO) procedure (i.e., the subject is reinforced when the undesirable response is not

emitted within a specified time interval) has been used alone (Foxx & Azrin, 1973) and in combination with other methods including punishment, food deprivation, time out, verbal directions, and response cost (Repp & Deitz, 1974). Although DRO appears to be effective in reducing aggression and self-injurious behavior, it has been used primarily with retarded children in institutional settings and appears to be administratively cumbersome for higher pupil/teacher ratios in school-situated classrooms.

Modeling has been extensively investigated and used to strengthen or induce the acquisition of appropriate social behavior (Bandura & Walters, 1963; Rimm & Masters, 1974). Success in promoting new behaviors has been obtained with many presentation modes including live (physically present) models (Ritter, 1968), symbolic (usually filmed) models (Bandura & Mischel, 1965; O'Connor, 1969), video-taped models (Kanfer & Marston, 1963), and with written manuals (LaFleur & Johnson, 1972). Independent of the mode of presentation, a number of other variables including the perceived model characteristics and the consequence which the model appear to experience are major factors in the success of social modeling.

In general, greater imitation occurs when the models are perceived as being similar to the observers. Similarity includes the sex and the ethnic background of the model (Thoresen, 1964). Greater imitation occurs when the model is seen as high in prestige, expertise, and status, as well as successful in social, academic, and athletic affairs (Bandura, 1971; Thoresen & Krumboltz, 1968). Greater imitation occurs when the model is seen to experience desirable consequences following the modeled behavior (Bandura, 1971). Finally, greater imitation occurs when more than one model is used (Bandura, 1971).

The present study used high status, same sex student peers as models; first to copy the disruptive behavior, and then to demonstrate an alternate, more appropriate, behavior. Following each part of this modeling component, feedback was solicited from a second high status student concerning his emotional reaction to the modeled performances. This feedback functioned as a clear statement of the consequences (peer reactions) following both appropriate and inappropriate behavior. Following this modeling procedure, the disruptive student was invited to replay the situation by himself if he wished to do so (participant modeling). The appropriate replay by the disruptive student was intended to capitalize on the strong tendency for changes in behavior to elicit changes in values and attitudes (Festinger, 1964).

The above procedure incorporates two experimenter assumptions. First, the peer group is more aware of pre-class situations, hidden agendas, and current classroom alliances than the teacher. To capitalize on this assumption, the specific circumstances of the appropriate modeled behavior came either from the high status student model, or from other members of the class, but *not* from the teacher. In this case, the models were offering their own school and peer group accepted solutions to similar types of problems. The second assumption is that outbursts of aggressive-disruptive behavior reflect inadequate social skills, and a lack of alternate behaviors suitable for coping with a specific situation.

METHOD

Subjects and Setting

The subjects were eight male and female students aged 13 and 14 (mean age 13.5 years). They were selected from among 60 special education (primarily learning disabled) students on the basis of their high frequency or disruptive-aggressive behavior. Once a student had been selected, his participation was compulsory.

Within the school, the 60 students were grouped into four classes and rotated between six teachers with forty minute teaching periods. Three of the students were drawn from one class, and two each from the remaining three classes. All the treatments took place in one classroom from one teacher. Other teachers were not explicitly informed about the nature of the treatment or about which children were involved, however informal verbal reports were obtained from them about specific students from time to time.

Procedure

The experiment was conducted in two phases. Phase 1, a baseline condition, varied in length for each student across a range of eight to 14 school days. Because of class scheduling, a given student might be seen once, twice, and occasionally three times on any given day. At each contact the teacher recorded any outbursts of disruptive-aggressive behavior. Disruptive-aggressive behavior was defined as "any incident of physical violence, angry yelling, swearing, or displays of angry hostility of sufficient volume or intensity that class could not reasonably be continued." Instances of angry punching, kicking, or biting occurring in the vicinity of the classroom immediately prior to class and serious enough to require teacher intervention were also counted. During the baseline condition, the disruptive student was given a ten-minute detention, or placed in the hall, depending on the apparent seriousness and duration of the specific situation.

Prior to, and throughout the baseline period, an on-going effort was made to identify the most influential and high status male and female

students in each class. High peer status was inferred on the basis of observations made during noon hour and after school activities, informal talks with students, and, occasionally, group behavior in class. The high status students were seldom those whom the teacher would consider 'ideal students'. They were, however, able to cope well with school, while simultaneously wielding substantial influence in their peer groups.

Phase 2, the treatment phase, was introduced with one student at a time. The treatment method ranged from fairly simple to more complex, depending on the nature of the specific situation.

The Simple Case

The simplest version of the treatment required a maximum of three minutes of class time, usually less. Immediately following the occurrence of a disruptive behavior, the disrupting student was asked if he could "think of a better way to handle that." If he could, he was asked to replay the situation, first the way it had been done initially, and then the "new/better" way. After each performance, the highest status student of the same sex in class was asked, "If you were the teacher, how would you feel about that?" Without exception, the high status student reacted favorably to the appropriate behavior and unfavorably to the aggressive behavior.

A Hypothetical Example

The buzzer rings summoning students to class. Most of the class is already seated when John stomps into the room and slams his books onto his desk. Still standing, he turns and knocks all of a neighboring student's books to the floor. After swearing at his "victim", John picks up one book, returns to his desk with it, and sits down. Before the situation can develop further, the class is called to order by the teacher. In a calm and non-punitive fashion, the teacher now asks John, "Can you think of a better way you could have handled that?" John replies "Yes." The teacher responds with "O.K., but before we do it the new way, I'd like you to go back out the door, then come in and do it again the way you just did." John complies (usually with much less vigor than in his initial disruption). Mike (the highest status male in the room) is asked "Mike, if you were the teacher, how would you feel about that?" Mike says, "Dumb man, that was pretty dumb." The teacher asks John, "O.K., now let's see you do it your better way." John goes out, comes in calmly, and confronts the "victim" with "Gimmie my book or I'll get you at lunch." The "victim" hands over the book. The teacher now asks, "Mike, if you were the teacher, how would you feel about that?" Mike replies, "aiiy!" and give the thumbs up Fonzie sign (a clear sign of approval). Class resumes.

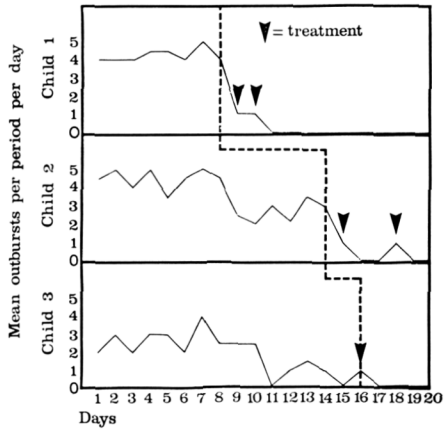
It is important to note that although the final solution was probably not adequate from the teacher's point of view, it was quite satisfactory to the high status student. In every case, the issue was immediately dropped when the high status student was satisfied. On occasion, the high status student would suggest a further improvement in handling the situation. In that event, the improvement would be performed and evaluated as above, until a satisfactory performance was obtained.

Some occasions occurred when the aggressive student was unable to think of a better way, but appeared to be sincerely trying. When that happened, a more appropriate response was solicited from the class (usually a high status student), modeled, and evaluated by a high status peer, as discussed above.

The More Complex Cases

Most commonly the "Can you think of a better way?" question was ignored or responded to with further hostility or beligerance. When that occurred, the procedure was still carried out as in the simple case, except that the high status student of the same sex was asked to substitute for the disruptive student. That is, the high status student copied the aggressive performance, and then replayed the situation with his notion of an appropriate solution. After each modeled performance, feedback was solicited from the second highest status student in the class. At the conclusion of this modeling component, the originally disruptive student was invited to try out the new, more appropriate solution to his problem and was free either to accept or to decline. In practice, approximately as many students accepted as declined. Class would then resume where it had been interrupted.

Figure 1



Mean number of aggressive outbursts per period per day for 3 students in one room.

The length of each treatment varied depending upon the initial willingness of the disruptive student to participate, the complexity of the problem, and the time it took to find an appropriate solution. The shortest treatment took less than two minutes; the longest about 12 minutes; with a mean of approximately five minutes.

In every treatment an effort was made to maintain a sincere, caring, and supportive atmosphere where "we are all going to work together to help John or Mary learn how to prevent this kind of problem". Even though some class management problems were anticipated during the treatments, they did not occur. The high status students appeared to enjoy being the centres of attention. The remainder of the classes appeared to be alert and interested in the process.

RESULTS AND DISCUSSION

Figure 1 presents the mean number of aggressive outbursts per period across school days for three children in one room. Child 1 and Child 2 exhibited the most frequent aggressive outbursts of all subjects in the sample. During the eight baseline days, Child 1 averaged 4.25 outbursts per period. On each of the next two days he required one treatment. He did not exhibit aggressive disruptive outbursts during the remaining 12 days of the experiment.

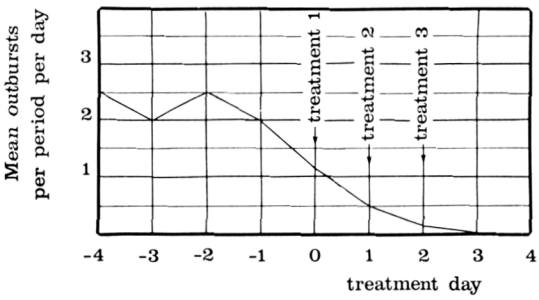
Both Child 2 and Child 3 exhibited a marked decrease in disruptive behavior following the first treatment for Child 1. The decrease is interpreted as evidence of vicarious learning, although the interest of the class in the treatment procedures and the quieter atmosphere caused by the absence of Child 1's disruptions no doubt were contributing factors. A similar effect (i.e., the reduction of outbursts in non-treated subjects following the first one or two treatments in the room) was noted in all four treatment classes.

Child 2 required two treatments to eliminate his outbursts from a baseline mean of 3.7 per period (Figure 1). Child 3 averaged 1.9 outbursts per period during baseline and required only one treatment.

Figure 2 presents the mean number of outbursts by treatement day for all eight subjects. Overall, the subjects displayed a lower initial level of aggressive outbursts than the subjects presented in Figure 1. The general effect of the peer selected modeling technique, however, was identical. All instances of aggressive outbursts had been eliminated after three treatments or less.

In the three month follow up period, no reversals occurred. This persistance of non-aggressive responding can not, however, be attributed to the "peer selected modeling" treatment. The classroom structure, which was very

Figure 2



composite of mean number of outbursts per period per day for eight subjects by treatment day.

similar to that of Becker, Engleman, and Thomas (1971) i.e., specify, praise, and ignore model, was highly supportive of on-task and co-operative behavior and may have prevented later recurrences. It is apparent, however, that the treatment was responsible for the initial rapid elimination of disruptive-aggressive behavior.

Some anecdotal evidence was gathered which suggests that the results of the peer selected modeling procedure generalized to other classrooms and to the homes. Other teachers reported "generally improved" behavior on the part of the treated students. Two mothers reported improved home behavior in terms of reduced aggression as well as the child's new attempts to "think about what he is doing" instead of just "flying off the handle."

In summary, this study reported the successful use of compulsory "peer selected modeling" for the treatment of hostile and aggressive behavior within a special education program. The treatment procedure was a brief, situation-specific variant of peer and participant modeling, which was designed for routine use by classroom teachers. Use of the treatment resulted in the rapid and complete elimination of peer aggression in the eight participants completing the study. These findings suggest that the procedure can be effective in the rapid treatment of disruptive, aggressive behavior in junior high level special class situations.

References

Ashem, B., & Poser, E. *Adaptive learning: Behavior modification with children.* New York: Pergamon Press, 1973.

Bandura, A. Psychotherapy based on modeling principles. In A.E. Bergin & S.L. Garfield (Eds.), *Handbook of psychotherapy and behavior change.* New York: Wiley, 1971.

Bandura, A., & Mischel, W. The influence of models in modifying delay of gratification patterns. *Journals of Personality and Social Psychology,* 1965, *2,* 698-705.

Bandura, A., & Walters, A. *Social learning and personality development.* New York: Holt, Rinehart and Winston, 1963.

Becker, W., Englemann, S., & Thomas, D. *Teaching: A course in applied psychology.* Chicago: Science Research Associates, 1971.

Becker, W., Madsen, C., Arnold, C., & Thomas, D. The contingent use of teacher attention and praise in reducing classroom behavior problems. *Journal of Special Education,* 1967, *1,* 287-307.

Bucher, B., & Lovaas, O. Use of aversive stimulation in behavior modification. In M.R. Jones (Ed.), *Miami symposium on the prediction of behavior, 1967: Aversive stimulation.* Carol Gables, Florida: University of Miami Press, 1968.

Ferster, C., & Skinner, B. *Schedules of reinforcement.* New York: Appleton-Century-Crofts, 1957.

Festinger, L. Behavioral support for opinion change. *Public Opinion Quarterly,* 1964, *28,* 401-417.

Foxx, R., & Azrin, N. Restitution: A method of eliminating aggressive-disruptive behaviors of retardates and brain damaged patients. *Behavior Research and Therapy,* 1972, *10,* 15-27.

Foxx, R., & Azrin, N. The elimination of autistic self-stimulatory behavior by overcorrection. *Journal of Applied Behavior Analysis,* 1973, *6,* 1-14.

Hall, R., Foxx, R., Willard, D., Goldsmith, L., Emerson, M., Owen, M., Davis, F., & Parcia, E. The teacher as observer and experimenter in the modification of disruptive and talking out behaviors. *Journal of Applied Behavior Analysis,* 1971, *4,* 141-149.

Kanfer, F., & Marston, A. Human reinforcement: Vicarious and direct. *Journal of Experimental Psychology,* 1963, *65,* 292-296.

LaFleur, N., & Johnson, R. Separate effects of social modeling and reinforcement in counselling adolescents. *Journal of Counseling Psychology,* 1972, *19,* 292-295.

Madsen, C., Becker, W., & Thomas, D.R. Rules, praise and ignoring: Elements of elementary classroom control. *Journal of Applied Behavior Analysis,* 1968, *1,* 139-150.

O'Connor, R. Modification of social withdrawal through symbolic modeling. *Journal of Applied Behavior Analysis,* 1969, *7,* 15-22.

O'Leary, D., & Wilson, T. *Behavior Therapy: Application and outcome.* New Jersey: Prentice-Hall, 1975.

Repp, A., & Deitz, S. Reducing aggressive and self-injurious behavior or institutionalized retarded children through reinforcement of other behaviors. *Journal of Applied Behavior Analysis.* 1974, *7,* 313-325.

Rimm, D., & Masters, J. *Behavior therapy: Techniques and emperical findings.* New York: Academic Press, 1974.

Ritter, B. The group treatment of children's snake phobias using vicarious and contact-desensitization procedures. *Behavior Research and Therapy,* 1968, *6,* 1-6.

Thoresen, C.E. An experimental comparison of counselling techniques for producing information seeking behavior. In W. Cormier & L. Cormier, *Behavioral counselling: Initial procedures, individual and group strategies.* Boston: Houghton Miffilin, 1975.

Thoresen, C.E. & Krumboltz, J. Similarity of social models and clients in behavioral counselling: Two experimental studies. *Journal of Counseling Psychology,* 1968, *15,* 393-401.

Webster, D., & Azrin, N., Required relaxation: A method of inhibiting agitative-disruptive behavior of retardates. *Behavior Research and Therapy,* 1973, *11,* 67-78.

Zeilburger, J., Sampen, S., & Sloane, H. Modification of a child's problem behaviors in the home with the mother as therapist. *Journal of Applied Behavior Analysis,* 1968, *1,* 47-53.