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A BEHAVIORAL APPROACH FOR THE CONTROL OF
INAPPROPRIATE BEHAVIORS IN A SPECIAL EDUCATION
DAY CARE SETTING


BY

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APPROVED BY



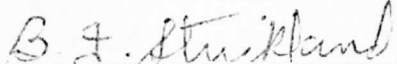
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Abstract

The combined effect of ignoring inappropriate behavior while reinforcing alternative appropriate behavior was assessed using a multiple baseline design over four behaviors in a special education day care center. The behavior of a three year old mildly retarded child was observed over thirty-eight experimental sessions. The rate of three of the four inappropriate behaviors decreased following contingent application of reinforcement. A decrement in rate of a fourth behavior was noted throughout the project without application of contingencies.

Considerable contingency management research has demonstrated the successful application of reinforcement and extinction to decrease the strength of inappropriate behavior. Stark, Meisel and Wright (1969), for example, used positive reinforcement in a speech therapy setting to increase appropriate verbal behavior in a nonverbal child. Wasik, Seen, Welch and Cooper (1969), successfully increased desirable classroom behavior in two second grade behavior problem girls by means of positive reinforcement presented, withheld, or withdrawn (time out) contingent upon the behavior of the two girls.

More recently Whitmen, Zakaras, and Chardos (1971) successfully applied reinforcement contingencies to increase the instruction following behavior of two severely retarded children. In this study, positive reinforcement, physical guidance, and fading procedures were used to teach motor responses such as picking up and handing the instructor a ball in response to "Hand me the ball."

The present study represents an attempt to reduce the rate of four inappropriate behaviors, (getting out of bed at nap, refusing to take off coat upon entering center, eating with fingers at lunch, and nonaffiliation with other children) of a three year old emotionally disturbed boy in a special education day care center by focusing positive reinforcement

on alternative appropriate behavior. A multiple baseline design with a baseline followup period was used in which identical contingencies were applied to each of the four behaviors successively over time.

Method

Subjects

Patrick was a three year old emotionally disturbed child attending a day care center for exceptional children. Upon admission to the center (a few weeks prior to his participation in this study) an intake interviewer described him as "shy, withdrawn, socially inept, and deficient in skills such as toileting, following instructions, feeding himself properly, and dressing himself." He would not participate in either play or class sessions and would cry readily when approached by peers or instructors. Patrick would not give up his coat upon entering the center nor would he stay in bed during nap. He refused to use a spoon at lunch, but would eat using his fingers. It was found, however, that Patrick would respond to positive reinforcement such as soda pop or candy.

Identification and measurement of response

The four behaviors dealt with in this study were measured in all cases by the experimenter and one of three assistant observers. Reliability between observers was at 100% in the first three behaviors (getting out of bed at nap,

taking off coat, and eating with fingers) and consistently above 80% in the fourth behavior (nonaffiliation) measured.

Getting out of bed during nap. Using an interval recording technique, an instance of getting out of bed was recorded if no part of the subject's body was touching his bed in any portion of each 30 second interval during the 30 minute daily observation period. The percentage of intervals in which the undesirable behavior occurred was calculated daily.

Coat removal. The total time required for the subject to have both arms removed from his sleeves was recorded from the time he was asked to remove his coat each day.

Eating with fingers. Using an interval recording technique, each instance of the subject moving food with his fingers (with the exception of roll) was recorded if it occurred in any portion of each 10 second interval during lunch. Behavior was observed from the time the subject ate his first bite until three minutes passed without his eating. Only the intervals in which food was moved either by fingers or spoon were used in the daily calculation of the percentage of intervals of inappropriate behavior.

Nonaffiliation with other children. Using an interval recording technique, an instance of nonaffiliation was recorded if the observer could not determine an audible verbal behavior judged to be directed at another child, or a physical gesture judged to be directed at another child, or a nonviolent physical contact with another child in any portion of each 30 second interval during the 30 minute daily recording session.

The percentages of intervals in which nonaffiliation occurred was recorded daily.

Contingencies and research design

Five days of baseline data collection was followed by initiation of Contingency Period 1 during which "in-bed" behavior was rewarded for each 30 second interval in which the subject remained in bed. All four behaviors were measured throughout the study as during baseline. On Day 15, Contingency Period 2 was initiated and lasted 9 days. In addition to the reinforcement of "in-bed" behavior, the subject received reinforcement immediately upon removal of his coat. Contingency Period 3 began on Day 24. In addition to "in-bed" behavior and "coat-removal", the subject received reinforcement contingent upon utilization of his spoon for each bite of food during lunch. Reinforcement was never presented contingent upon affiliation behavior. A six day baseline followup period was initiated on Day 32. During that time all reinforcement contingencies were removed.

In order to assess temporal generalization, all contingencies were withdrawn on each third day throughout the study.

A squirt of soda pop through a straw from a pint plastic container was paired with praise and served as reinforcement throughout the study. Cues such as "Stay in bed, Patrick", "Take off your coat, Patrick", and "Use your spoon, Patrick", were presented once at the start of each session. From the outset, all inappropriate behaviors were ignored.

Results

The rates of the inappropriate behaviors dealt with in this project decreased sharply during contingency management periods and remained low throughout the duration of the study.

The five panels of Fig.1 represent rates of all four behaviors during 1) baseline, 2) the application of reinforcement contingencies to "out of bed" behavior, 3) the application of reinforcement to coat-removal, 4) the application of reinforcement contingencies to "finger eating" and 5) return to baseline, respectively.

Baseline rates for all behaviors were high at the start of the project. As can be seen from the second panel of Fig.1 the application of contingent reinforcement to "in-bed" behavior was effective in reducing "out-of-bed" behavior from 80% to less than 10% of the observation intervals. During this time, two of the three remaining behaviors maintained a high baseline level. Nonaffiliation, however, declined from approximately 100% to nearly 60% by the end of Contingency Period 1.

During Contingency Period 2 (third panel), when "coat removal" was reinforced, the length of time for the subject to remove his coat decreased from 30 minutes (when baseline measurement ended) to less than 3 minutes. "Out-of-bed" behavior remained low, "eating-with-fingers" remained at the high baseline level, and nonaffiliation varied but declined to 40%.

Finally, when "eating with a spoon" was reinforced

during Contingency Period 3 (panel 4), that behavior also declined from a 100% base rate to less than 5%. The rates of all other behaviors remained low and nonaffiliation decreased to about 20%. Behavior remained stable during the 6 day baseline followup period (panel 5). Throughout the training, no rate differences were noted on each third day when no reinforcement contingencies were applied with the exception of the first third day after baseline ended for each behavior. The differences noted on those days were a continuation of the decline in inappropriate behavior from the first two days of contingent reinforcement.

Discussion

The results of this study indicated that the reduction of inappropriate behavior in a special educational day care center with contingent reinforcement of appropriate and extinction of inappropriate behavior was very successful. The fact that rate decrement did not occur until a reinforcement contingency was applied to a specific behavior, supports the notion that extinction alone was ineffective for altering the rate of the inappropriate behavior. All inappropriate behavior was ignored from the onset of baseline data collection. Extinction of nonaffiliative behavior by the therapist, however, along with peer social reinforcement of affiliation may have accounted for what appeared to be noncontingent decrement in nonaffiliative behavior.

As the majority of the training at the center is carried out on an individual or small group basis, this method of single subject treatment does not interfere with the normal operation schedules, and seems to be an efficient method for dealing with specific and individual behavior problems.

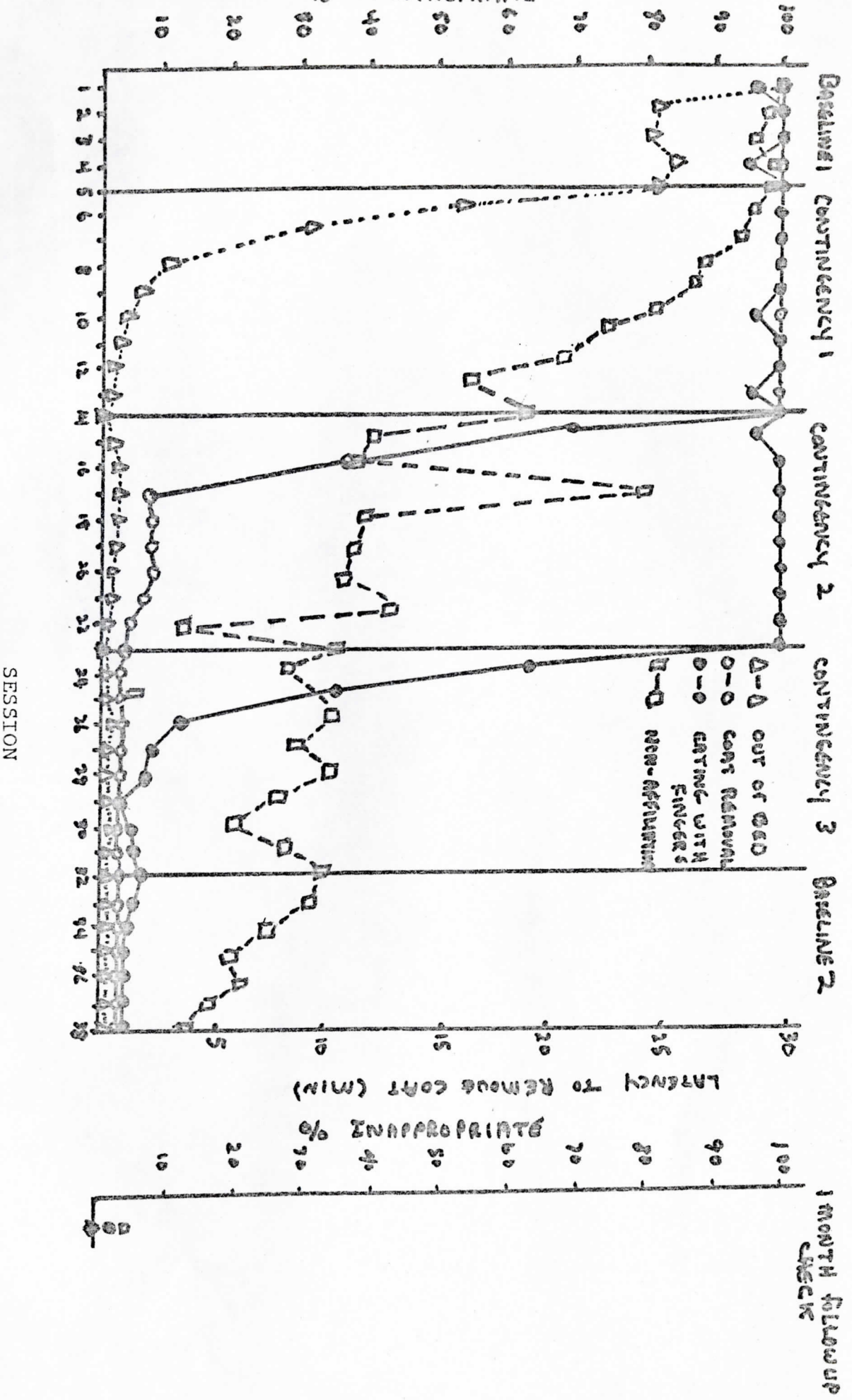


Fig. 1. Rate of inappropriate behavior for a 3-year-old retarded boy in a day care center

Following baseline measurement, contingent reinforcement of alternative appropriate behavior was applied successively to "out of bed" behavior (Contingency Period 1), time to remove coat (Contingency Period 2 and recorded on right hand abscissa), and percent of finger eating behavior (Contingency Period 3). No contingencies were applied to rate of nonaffiliation.

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