

*PUTATIVE BEHAVIORAL HISTORY EFFECTS
AND AGGRESSION MAINTAINED BY
ESCAPE FROM THERAPISTS*

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Differentially higher rates of aggression in treatment sessions occurred in the presence of two staff members who had previously worked with the participant at another facility. Adding an edible reinforcer for compliance and the absence of aggression in sessions conducted by these two staff members decreased aggression to rates similar to those obtained with less familiar therapists. Results suggest that embedding positive reinforcement within a demand context may reduce the aversiveness of therapists correlated with a history of demand situations.

DESCRIPTORS: behavioral history, escape-maintained aggression, positive reinforcement

Although behavior is a function of both phylogenetic and ontogenic (current environment and behavioral history) influences, most applied research has analyzed behavior exclusively as a function of the current environment. Lattal and Neef (1996) have offered at least one reason for the dearth of applied research on behavioral history, suggesting that history is paradoxically considered to be both critical to and irrelevant to the assessment and treatment of problem behaviors. In contrast, they cited numerous examples of behavioral history effects in the basic literature, in which previous experience continued to affect current performance for some time after the original conditions had changed.

In the present study, higher rates of aggression were directed toward therapists who

had worked with the participant at another facility compared to therapists with whom he was less familiar in the new facility. Ringdahl and Sellers (2000) noted similar results during functional analysis sessions with caregivers and staff. To reduce the aversiveness of a demand situation, Carr, Newsom, and Binkoff (1980) embedded positive reinforcers within the situation. We similarly attempted to attenuate escape from demands as a reinforcer by providing positive reinforcement for compliance combined with the absence of aggression in demand sessions conducted by two familiar therapists.

METHOD

Participant and Setting

Milty was a 14-year-old boy who had been diagnosed with autism, mild mental retardation, and impulse control disorder. He had previously been admitted to a specialized hospital program for the assessment and treatment of aggression. Results of a functional analysis conducted at the previous facility showed that aggression was maintained

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by escape from task situations. Milty was transferred to the present facility following the closure of the hospital program in which the functional analysis had been completed and the treatment initiated. The two familiar therapists also transferred at approximately the same time. Lithium was prescribed for bipolar disorder throughout the study. All sessions were conducted in Milty's room. The same tasks were used throughout the study, including making the bed, dusting, vacuuming, and straightening of objects in his room.

Data Collection

Aggression was operationally defined as grabbing and squeezing the therapist by the wrists or arms, attempts to head butt the therapist, shoving, pulling hair, and grabbing the therapist's neck with one or both hands. One or two trained observers recorded occurrences of aggression, verbal prompts, and delivery of edible reinforcers on a count within 10-s interval recording system. Occurrence, nonoccurrence, and total agreement were calculated for aggression, and procedural fidelity measures were calculated by a computerized program for 67% of the sessions. Mean occurrence, nonoccurrence, and total agreement values for aggression were 95.2%, 99.8%, and 99.8%, respectively. Mean occurrence, nonoccurrence, and total agreement values for procedural fidelity measures were 97.2%, 88.5%, and 96.3%, respectively.

Experimental Design and Procedure

Four male therapists conducted sessions in a quasirandom fashion. The familiar therapists had worked with Milty for 5 months at the hospital program, whereas the less familiar therapists had not worked with him prior to the study. A multiple baseline design across familiar therapists, with a nested reversal design for one therapist (Familiar Therapist 2), was used to assess the effects of two different treatments on escape-main-

tained aggression. The independent variable consisted of providing food contingent on compliance and the absence of aggression in sessions conducted by the familiar therapists. A minimum of four 10-min sessions were conducted per day.

Aggression produced similar consequences for all four therapists (i.e., a 10-min chair time-out for attempts to choke; extinction for other aggression) across all conditions. Although a time-out is typically contraindicated for escape-maintained behavior, it was used for safety reasons in this case. Milty would reliably stop choking the therapist and sit in a chair without further aggression when verbally prompted. Session length was corrected for periods of time-out. Other instances of aggression were always ignored, with verbal prompts continuing to be issued every 10 s. In addition, a differential-reinforcement-of-other-behavior (DRO) 10-min schedule was in effect for the absence of aggression. Successful completion of the DRO schedule produced a token, which could typically be exchanged for a preferred snack 10 to 30 min after a session. This initial treatment was identical to the treatment developed at the previous facility.

A conjunctive fixed-ratio (FR) 3 for compliance, variable-interval (VI) DRO 148-s schedule was added to the existing treatment for the two familiar therapists. In a conjunctive schedule, reinforcement is provided when both schedule requirements are completed. Edible reinforcers were delivered if three components of a task were completed in the absence of aggression. The occurrence of aggression prior to completing the FR 3 component reset the conjunctive schedule. The DRO values varied as a function of time to complete the FR 3 requirement and were similar across both therapists.

RESULTS AND DISCUSSION

Figure 1 shows rates of aggression and rates of reinforcement across all phases of the

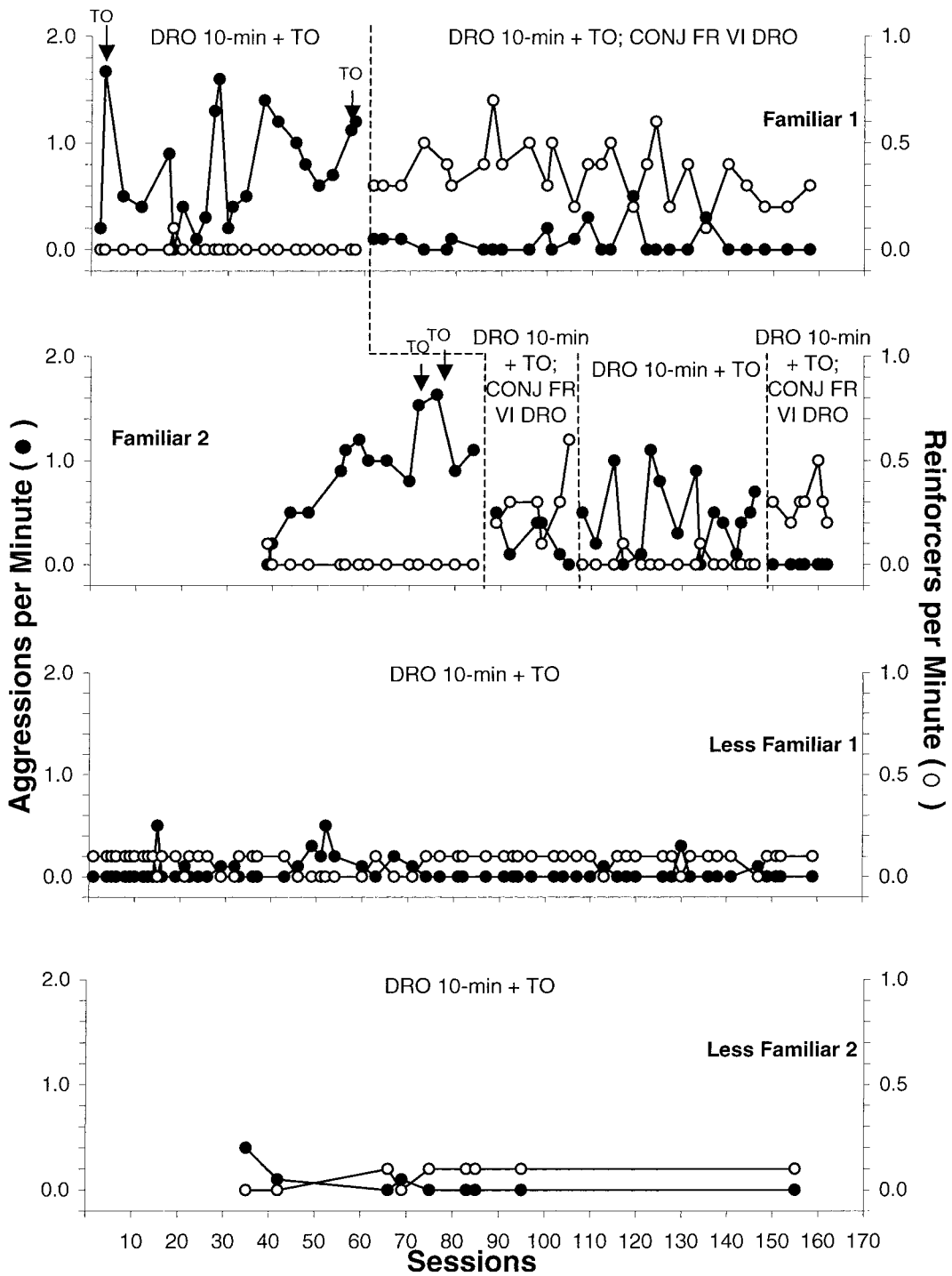


Figure 1. Number of aggressions per minute and reinforcers per minute across all conditions. Arrows indicate sessions in which choking and a time-out (TO) occurred. The maximum reinforcement rate under the DRO + TO schedule was 0.1 per minute.

intervention. In the initial phase, in which all therapists conducted identical treatments, rates of aggression were differentially higher for the two therapists who had previously worked with Milty at another facility. All four choking attempts were also directed at the familiar therapists. The rate of reinforcement delivered by both familiar therapists was at or near zero.

The conjunctive schedule was associated with a substantial reduction in the rate of aggression in sessions conducted by Familiar Therapist 1 ($M = 0.07$ per minute). The rate of aggression remained high ($M = 0.88$) and reinforcement rate was low ($M = 0.01$) in sessions conducted by Familiar Therapist 2 who continued to implement the initial treatment. When the conjunctive schedule was added to sessions conducted by Familiar Therapist 2, there was a decrease in the rates of aggression ($M = 0.25$) and an increase in the rate of reinforcement ($M = 0.30$). When this therapist again implemented the original treatment, rates of aggression increased ($M = 0.47$), although not to the levels previously obtained. Little or no aggression was directed at either of the familiar therapists by the end of treatment. Rates of aggression for the less familiar therapists were low throughout the study ($M = 0.05$), whereas rates of reinforcement were typically maximized ($M = 0.10$).

During Milty's admission to the first facility, eight psychoactive medications were either discontinued, or tried and discontinued, accompanied by concomitant increases in the severity and frequency of aggression. Medication as needed (e.g., lorazepam and haloperidol) accompanied by physical restraint or seclusion in his room, both of

which are potentially aversive, often followed aggression. Nearly 200 functional analysis and treatment sessions for escape-maintained behavior were also conducted. These results suggest that a previous, potentially aversive, history established with two of the therapists may continue to exert effects on current behavior. Adding a highly preferred edible item within the demand context contingent on compliance and the absence of aggression, similar to the procedure of Carr *et al.* (1980), reduced aggression towards these two therapists.

These results should be interpreted with some caution. We did not have the capability to systematically control history effects. In addition, tone of voice, facial expression, or other uncontrolled, subtle discriminative stimuli may have differed across therapists. However, size of the therapist relative to Milty was controlled for, and procedural fidelity data suggested that therapists conducted sessions in a highly similar fashion. The results suggest that a single treatment may not be optimal for all care providers. Differential treatment effects may be a function of unique behavioral histories.

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