Increasing Self-Control when Reinforcement is Delayed

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Introduction

There are many situations where a person must wait for items that they have requested. Learning to demonstrate self-control when access to the item is delayed is also vitally important. The current study examined the use of delayed reinforcement in conjunction with visual and auditory cues to teach self-control. Throughout the teaching procedure, the delay was gradually increased and the participant was given pictures to view as a distracting activity while he waited for the item he selected.

METHOD

Participants and Setting

The participant was an 18-year-old male diagnosed with Autism. He engaged in high rates of self-injurious, aggressive, and disruptive behaviors primarily to gain access to tangible items. He was able to independently request items, but delaying access to them often lead to the occurrence of the target behaviors. Sessions were conducted in a treatment room and generalization probes were initiated on his living unit.

Materials

A therapist conducted initial sessions with the participant in a treatment room with one table and two chairs. Pictures of available reinforcers were laminated and placed on the table. Reinforcers were kept in a bag held by the therapist. A yellow wait card and digital timer were used and as the time was increased, the participant was given picture cards to view while he waited.

Dependent Measures

Frequency data were collected on successful wait intervals. Waiting was operationally defined as the absence of aggression, self-injurious behavior, and loud vocalizations after making a request for an item. Frequency data were also collected on each target behavior (aggression, self-injurious behavior, and loud vocalizations).

Interobserver agreement

A second observer was present for 50% of all sessions. Interobserver agreement was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100%. Agreement was 70% for all sessions.

PROCEDURE

During baseline, preferred items were available on the table in plain view. The participant requested an item, typically by touching or grabbing it. After making a selection, he was prompted to wait 10 seconds for the item.

During the self-control training, the participant was asked to choose from a picture menu of available items. After selecting an item from the menu, the participant was prompted to wait "quietly" and "calmly" for the item he chose. A wait card was placed in view and a timer was set for the delay duration. A changing criterion design was used to increase the delay to reinforcement. The criterion was set at five consecutive, successful, wait trials before the delay duration was increased. Once the participant met criterion to begin waiting for 35 seconds, he was given pictures to view as a distraction while he waited for the reinforcement.

RESULTS AND DISCUSSION

During baseline, the participant waited for an item from 0 to 2 times per session. Target behaviors were noted in 40% of baseline sessions.

A reinforcer menu was used during treatment due to the participant attempting to ingest, crush, or rip the available reinforcers during baseline. Edible and non-edible items were placed the reinforcer menu and were selected based upon preference assessment results.

During treatment, the participant waited for the item from 0 to 5 times per session and target behaviors were noted in 29% of treatment sessions. Throughout the training procedure, the amount of time that reinforcement was delayed was increased from 5 s to 60 s. As reinforcement was delayed for increasing amounts of time, target behaviors decreased and were maintained at zero rates for seven consecutive sessions.

The results suggest that self-control was increased as the participant was able to gradually delay access to reinforcement for increasing amounts of time. Additional research should include generalization probes on his living unit with more naturally occurring reinforcers.