

REDUCTION OF NONCOMMUNICATIVE VOCALIZATIONS USING RESPONSE-COST AND DELAYED RESPONSE

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Introduction

This case study explored the effectiveness of a response-cost token system when time alone was used as positive reinforcement to exhibit non-communicative verbalizations (NCV). The subject of the study was an adolescent male receiving educational and residential behavior services through Children's Care Hospital and School. He has received a combination of residential and/or educational services since 2004.

Methods and Settings

Children's Care Hospital and School is a private, non-profit facility serving children with disabilities from birth to 21. Children's Care is based in Sioux Falls, South Dakota, and the behavioral services program provides ABA-based services for individuals with significant cognitive and behavioral deficits, including autism and related disorders.

Each child's interdisciplinary team consists of a behavior analyst, school psychologist, special educator, speech/occupational/physical therapist, social worker, dietician, and nurse. Children receiving residential services at Children's Care are also seen by a pediatric psychiatrist who works in conjunction with a behavior analyst.

Children's Care is a year round facility licensed by the South Dakota Department of Education for educational programming and the Department of Health for residential programming. Teaching is delivered through a "child-initiated, adult-directed approach" in which child preferences in terms of activities and materials are used as a basis for teaching skills in a discrete trial format. Individual educational plans are developed in alignment with the South Dakota Content Standards.

Participant

Brandon is an 18-year-old male with diagnoses of autism, obsessive-compulsive disorder, and stereotypic movement disorder with self injury. He began receiving educational and residential services at Children's Care in 2004. Level of service in the residential program is a 24-hour ABA-based program.

Brandon's cognitive level is estimated to fall into the moderate category of intellectual functioning. It is noted that Brandon's expressive language abilities appear to be higher than his receptive, although much of his expressive language is rote and repetitive.

The ratio of student to teacher is 2:1 in both the educational and residential setting.

Instruments

ABC data through direct observation by the teacher and behavior analyst were collected over a 2-week assessment period. From the data, it appears that Brandon's non-communicative verbalizations were multiply maintained by social reinforcement in the form of escape and automatic reinforcement.

Data were maintained using a computerized recording system known as a Maladaptive Behavior Record (MBR). This system was specifically designed for Children's Care to address its unique population.

Procedure

- Non-communicative verbalizations were defined as talking to self and/or repeating the words or statements of others.
- Baseline data were collected in the educational setting from May 15, 2007 to May 27, 2007, with an average daily frequency of 348.
- It was determined if left untreated the behavior would impede Brandon's learning and restrict his access to the community.

When Brandon exhibited non-communicative verbalizations, the following strategies were utilized, in order:

1. Staff gave Brandon a verbal warning ("Brandon, you need to have a quiet voice;")
2. Brandon earned negative points on his systematic reinforcement point system;
3. Brandon earned a behavior card as part of the MBR data system.

These steps were utilized, in order, per each activity and did not last longer than a 30-minute time period.

Upon task completion, Brandon was given a choice of various positive reinforcers, one of which was time alone. During the time alone period Brandon was able to exhibit non-communicative verbalizations without consequence. Brandon was allowed to earn up to 30-minutes of time alone each school day. The time was broken into smaller increments. The frequency of non-communicative verbalizations was recorded and graphed.

Discussion

The intervention was effective in decreasing Brandon's non-communicative verbalizations. After 2 weeks, the average daily frequency was 101 (47 with the removal of NCVs during one 30-minute behavioral episode). With the reduction in non-communicative verbalizations, Brandon was able to demonstrate appropriate learning skills for participation in his daily school routine. This study illustrates that a response cost system can increase appropriate learning skills and decrease non-communicative verbalizations when those NCVs are used as reinforcement.

The current study should be expanded to include work tasks in the residential setting and once success is documented, expand to include periods other than work tasks. Also generalize to the community setting.

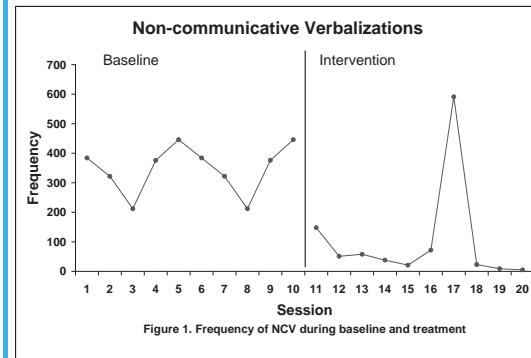


Figure 1. Frequency of NCV during baseline and treatment

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