

REDUCTION OF AGGRESSION AND SELF INJURY USING NONCONTINGENT REINFORCEMENT AND BEHAVIOR CONTRACT

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Introduction

This case study explored the effectiveness of reduction in aggression and self injury using non-contingent reinforcement and a behavior contract. The subject 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 2001.

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. 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

Justin is a 17-year-old-male, with a diagnoses of Prader-Willi Syndrome, Obsessive-Compulsive Disorder, Obesity, and Stereotypic Movement Disorder with Self-Injury. He began receiving educational and residential services at Children's Care in 2001. The level of service in the residential program is a 24-hour ABA-based program.

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

Instruments

A functional behavior assessment was conducted that utilized the Functional Assessment Interview Form (FAI), Functional Behavioral Assessment Screening Tool (FBAST), Functional Analysis Screening Tool (FAST), and an informal reinforcement check list.

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

- Aggression was defined as any occurrence of aggression to include grabbing, hitting, pinching, scratching, pulling hair and/or head butting.
- Self-Injury was defined as any occurrence of self-injury to include biting hands and/or arms, picking skin to include opening up old sores/wounds, head banging, and scratching.
- The functional behavioral assessment indicated that the behavior was multiply maintained by social reinforcement in the form of escape as well as social reinforcement in the form of attention (access to tangibles). Due to the intensity and severity of the defined behaviors current rates were used rather than baseline in both the educational and residential settings.
- It was determined if left untreated the behavior would be harmful to him and others in his environment, impede his learning, and restrict his access to the community.
- An alternate teaching plan was implemented to target communication skills. The teaching programs consisted of the following:
 - Requesting a break
 - Requesting attention from a preferred person
 - Requesting a tangible
 - Following a flexible schedule with choices
- A non-contingent reinforcement system and a behavior contract were implemented. Reinforcement periods were written into his schedule following each activity or work task. Justin was able to choose both an immediate reinforcer and earn points to trade in later. Justin also had the opportunity to earn bonus points at other times during the day for good work and interactions with others.
- Positive points were earned for completing his daily schedule without exhibiting the target behaviors. Negative points were earned for not completing his schedule or for demonstrating target behaviors.
- Justin had the opportunity to earn bonus points for being polite and helping others. These points could be banked to earn special items/activities.
- The frequency of aggression and self-injurious behaviors were recorded and graphed.
- The techniques of Crisis Prevention Institute (CPI) were used in order to keep him safe and others safe in the immediate environment.
- Self-injurious picking of the extremities has been an issue given that the function was determined to be social reinforcement in the form of attention. Once a medical determination was made that Justin would not permanently damage himself, the picking was put on extinction.

Discussion

The behavior plan was shown to be effective in decreasing Justin's aggression and self injury. With the reduction in the targeted behaviors, Justin was able to demonstrate appropriate learning skills for participation in his daily routine. Interim holds in both seated and floor positions were used. Posey Mitts were used to prevent Justin from self injurious picking but due to the shape of his hand, arm and wrists (as associated with Prader-Willi Syndrome), he could remove them with moderate manipulations. Although, the time it took to remove the mitts did seem to calm him slightly. This study illustrates that noncontingent reinforcement and a behavior contract were effective in decreasing aggression and self injury.

During the periods of time when self-injurious picking was on extinction, a nurse was present in order to assess tissue damage and monitor infection control issues.

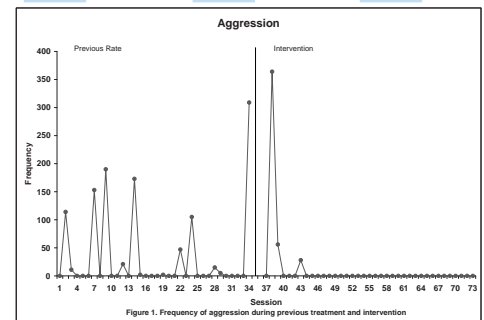


Figure 1. Frequency of aggression during previous treatment and intervention

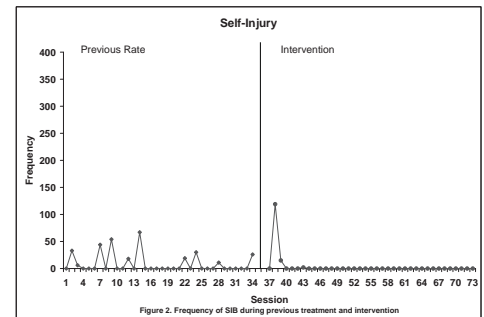


Figure 2. Frequency of SIB during previous treatment and intervention

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