

# THE USE OF FUNCTIONAL COMMUNICATION TRAINING AND DIFFERENTIAL REINFORCEMENT TO REDUCE ATTENTION-MAINTAINED AGGRESSION

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## Introduction

This case study explored the effectiveness of functional communication training and momentary differential reinforcement of other behavior on aggression. The subject of the study was an adolescent receiving educational and residential behavior services through Children's Care Hospital and School. She has received a combination of residential and/or educational services since 2002.

## 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 care 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 educators, speech/occupational/physical therapist, social worker, dietician, 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 South Dakota Department of Education for educational programming and 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

Kim is a 13 year old female with diagnoses of autism and Angelman Syndrome. She began receiving educational services at Children's Care in 2002 and most recently began receiving educational and residential services in 2007. Initial level of service in 2002 was a 6 hour school day and in May 2007 Kim entered the residential program which is a 24-hour ABA-based program.

Kim is nonverbal and communicates primarily through the use of sign language and Mayer-Johnson picture symbols. Measures of cognitive functioning indicate that Kim falls in the lower extreme range of intellectual functioning when compared to other individuals her age.

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), informal preference checklist as well as a paired stimulus preference assessment.

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 pinching, hitting, kicking, pulling hair, grabbing, and/or pushing others.
- The functional behavioral assessment indicated that the behavior was primarily maintained by social reinforcement in the form of attention.
- Baseline data were collected in both educational and residential settings from May 29, 2007 to June 13, 2007, with a mean frequency of 152.
- It was determined if left untreated the behavior would be harmful to others, impede her access to the community and highly restrict her learning.
- Any occurrence of the target behavior was treated with redirection to an appropriate alternative.
- An alternate teaching plan was implemented to target communication skills. The teaching programs consisted of the following: gaining attention and communicating wants/needs.
- A momentary Differential Reinforcement of Other Behaviors (mDRO) was implemented using the following criteria:
  - The interval was set for every 5 minutes. The staff wore a vibrating timer to indicate the end of an interval. At the moment the timer indicated, if Kim was not engaging in the target behavior at that moment, reinforcement was delivered in the form of enthusiastic verbal praise and a preferred tangible item. The frequency of aggression was recorded and graphed.

## Discussion

The behavior plan was effective in decreasing Kim's aggression. After two months of plan implementation, the mean frequency of aggression was 39 over a two week period, resulting in a 75 percent reduction in aggression. A significant increase in aggression was noted during sessions 37 and 40 due to Kim participating in her first two home visits since admission to the residential program. With the reduction in aggression, Kim also developed appropriate alternate skills such as communicating wants/needs and gaining attention. This was accomplished through the use of consistent reinforcement of both independent and prompted communication. This study illustrates that functional communication training paired with differential reinforcement can increase appropriate alternate skills and decrease aggression.

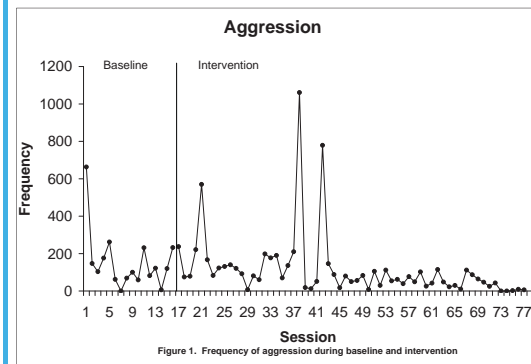


Figure 1. Frequency of aggression during baseline and intervention

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