An Analysis of the Relationship between Self-Injury and Self-Restraint

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Introduction

The co-occurrence of self-injury and self-restraint is a frequently investigated topic, but is still not well understood. Smith et. al (1996) offered three hypothesized relationships between the two behaviors. (1) Self-restraint is maintained by escape from or avoidance of aversive aspects of SIB, (2) self-restraint and SIB are members of the same functional class or (3) Self-restraint and SIB are functionally independent. The purpose of this study was to provide additional investigation into the assessment of the co-occurrence of self-restraint and self-injurious behavior.

PARTICIPANT AND BACKGROUND

Participants

The participant was a 9-year-old boy diagnosed with autism, who resided at a campus-based residential facility and attended the adjacent special education school. The participant had a history of frequent and intense self-injurious behavior (SIB) to the head; as a result, his behavior intervention plan included a protective device (helmet) worn during all waking hours. This component of the behavior plan was successfully faded and discontinued, and self-injury remained at low rates and intensity for approximately two months. At that point, rates and intensity increased, which required medical treatment and the re-introduction of the protective device. Also, anecdotal reports at this time suggested the emergence of concomitant self-restraint behavior, which included hands down pants, linking arms behind back, and self-initiation of helmet wearing.

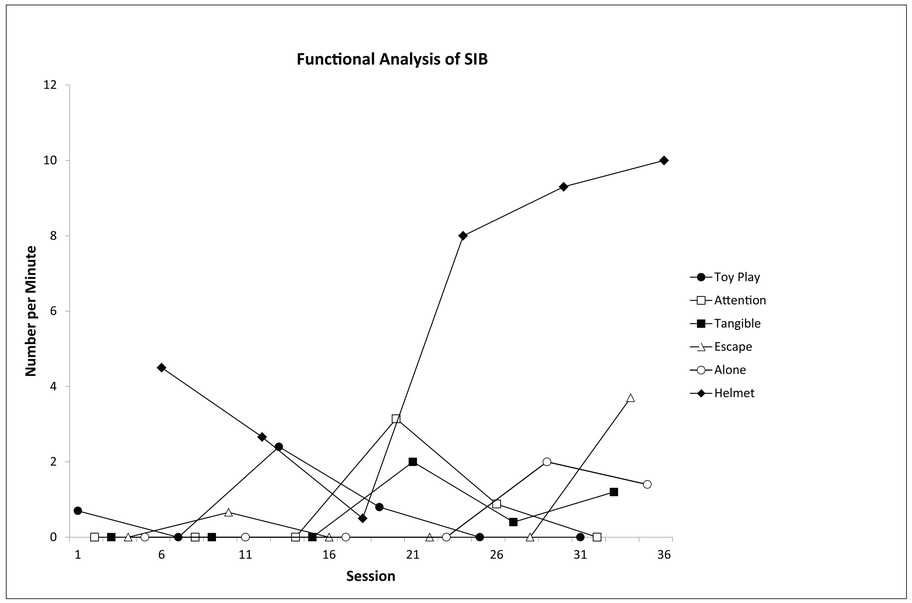
FUNCTIONAL ANALYSIS

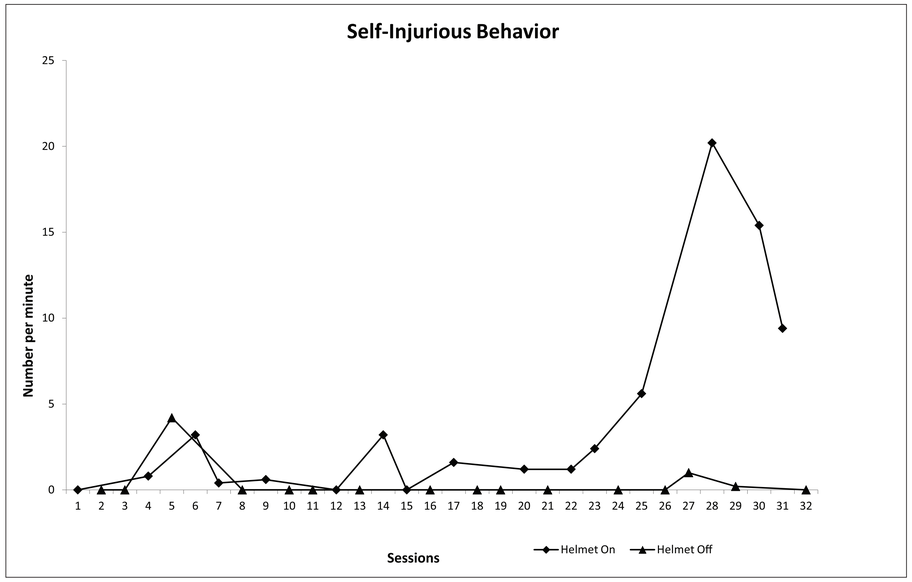
All sessions were conducted in a treatment room with a two-mirror mirror for observation. Conditions were presented based on procedures outlined in Iwata, et al. (1982), with the addition of contingent access to helmet condition. In this condition the participant and the therapist were in a barren room with the therapist providing neutral attention every 30 seconds. The participant's helmet was removed at the start of the session, and any instance of SIB resulted in the helmet being placed on him for 30 seconds. The participant wore the helmet noncontingently throughout the other conditions (alone, toy play, attention, escape).

Rates of SIB in the typical analogue conditions were undifferentiated, however, the rates of SIB in the contingent access to helmet condition were consistently higher than all other conditions. One interpretation of these results could be that access to the helmet as a preferred tangible was the function of SIB. Another interpretation could be that self-injury was maintained by automatic reinforcement and the helmet was acting as an abolishing operation for self-injury. The effect on self-restraint and how it related to SIB remained unclear as it occurred in 100% intervals of all conditions. Also, before treatment could be initiated, staff reports indicated a shift in the helmet's effect on behavior. Attempts to remove the helmet and an increase in SIB when it was on were noted.

HELMET ASSESSMENT

A counter-balanced multi-element design was used to evaluate the effect of the helmet on the rate of SIB, which was implemented in the participant's residence. Sessions were 5 minutes in duration, and consisted in no change to the participant's natural environment with the exception of the presence or absence of the helmet. In the helmet on conditions, all of the participant's attempts to remove the helmet were blocked, and SIB was blocked only if redness or bruising occurred. In the helmet off conditions, all SIB was blocked. Data were collected on SIB as frequency and partial interval data were collected on self-restraint, negative vocalizations and engagement. The final two behaviors were added due to anecdotal staff reports of agitation when the helmet was on. Data collected during this assessment clearly indicate that a higher rate of SIB was correlated with the helmet on condition. In addition, self-restraint, negative vocalizations and low engagement, were correlated with the helmet on condition.





DISCUSSION

A counter-balanced multi-element design was used to evaluate the effect of the helmet It appears that there are times when the helmet acts as an abolishing operation for SIB, but is neutral in regards to self-restraint. There are also times when the helmet acts as an establishing operation for SIB, and at those times, it is also an EO for self-restraint.

It is possible that in the past, the value of the reinforcer produced by SIB fluctuated for a reason not yet understood. At some point, SIB and self-restraint were paired, perhaps due to providing modes of self-restraint for safety. his supports the hypothesis that SIB and self-restraint are members of the same functional class. Further analysis, however, is needed to determine why this fluctuation in motivating operations occurs as well as why two behaviors that appear to be in the same functional class would not respond to motivating operations in the same manner.