TREATMENT OF SELF-INJURIOUS BEHAVIOUR WITH OVERCORRECTION*

J. L. MATSON, R. M. STEPHENS and C. SMITH

Central Louisiana State Hospital, Pineville, Louisiana 71360, U.S.A.

INTRODUCTION

Self-injurious behaviours are frequently observed in facilities for psychiatric and mentally retarded patients. Baumeister and Rollings (in press), in a review of treatment procedures for self-injurious behaviour, concluded that contingent aversive stimulation, such as electric shock, is the most effective means of suppressing these behaviours, but because of recent court decisions and negative press it is seldom used. Nevertheless, such distressing and destructive behaviour cannot ethically be ignored. A procedure which has shown promise for this problem is overcorrection, a mild punishment procedure which is desirable because, not only does it result in reduction of target responses, but it teaches appropriate alternative behaviour through required practice (Foxx and Azrin, 1973). The present study investigated two new variations of overcorrection in the treatment of self-injurious behaviours of a single subject.

METHOD

Subject

Dawn was a long-term resident of the lowest functioning women's unit in a large psychiatric hospital (i.e. these residents generally lacked self-help skills such as dressing and toileting). She was fifty-seven years old, had been diagnosed as profoundly retarded, and had resided in the hospital for thirty-eight years. Dawn was able to communicate by pointing and by using limited vocabulary (approximately twenty words). However, she rarely took opportunities to interact with other residents and/or staff and would frequently ignore others if spoken to. On occasion Dawn was hostile and combative, generally when asked to comply with requests by staff (i.e. do not pull out your hair). These behaviours had been treated without success by chemotherapy and shock therapy several years before.

Typically Dawn paced the halls and dayroom of the ward or sat in a corner by herself. She would engage in self-injurious behaviour during a large percentage of this time.

TARGET BEHAVIOURS AND MEASUREMENT

Dawn had been observed eating non-nutritive substances (pica) for many years. This was generally limited to cigarette butts which she obtained from the floor or by pulling lit cigarette butts from the mouths of patients or staff. Not only did this create a serious health hazard for Dawn, but other patients often became combative when their cigarettes were stolen and eaten. Her pica had proved resistant

*Reprints may be obtained from Ronald Stephens, Research Department, Central Louisiana State Hospital, P.O. Box 31, Pineville, L.A. 71360.

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to a wide variety of treatment approaches including contingent time-out, physical
restraint, and reinforcement of incompatible types of behaviour.

Hair-pulling was also treated. Dawn would methodically pull one strand of
hair from her head at a time, placing it across a chair arm before removing another
strand. This behaviour often occurred for an hour or more at a time. On some
occasions, bald spots of one-inch diameter resulted from a single episode of this
behaviour. As with pica, verbal reprimands and positive approaches had been
unsuccessful in eliminating hair-pulling.

Two observers independently recorded frequency of each target behaviour
for an eight-hour period daily throughout the study. Interrater reliability was
assessed at 100 per cent for pica and ranged from 96 to 100 per cent for hair-pulling.

PROCEDURE

Following baseline measurement, treatment was applied in a multiple-baseline
fashion (Baer, Wolf and Risley, 1968) across the two target behaviours. For pica,
a procedure similar to that reported by Foxx and Martin (1975) was used (when
the subject put a cigarette butt in her mouth she was required to spit it out, then
brush her teeth and gums with a soft toothbrush using mouthwash). In pretreatment
sessions, Dawn drank the mouthwash and the procedure appeared to reinforce
pica, therefore, an attempt was made to identify an aversive non-harmful solution.
Concentrations up to 100 per cent lemon juice were tried, but Dawn would readily
drink them. However, a mild solution of water (90%) and hot sauce (10%) proved
aversive when dabbed on to the toothbrush one time for each administration of
overcorrection. Dawn's teeth were brushed for one minute with a sauce-solution
following each occurrence of cigarette eating. Her mouth was inspected daily and
her physical condition was closely monitored by the staff physician to assure that
no irritation or negative physical effects occurred. Following forty-four days of
treatment hot sauce was gradually faded out over two days by diluting it further
with water. Following completion of tooth-brushing, the subject was required to
sweep portions of the floor, empty trash cans, and pick up debris and cigarette butts.
Total treatment time per episode was ten minutes.

Contingent application of overcorrection for hair-pulling consisted of a verbal
reprimand then practice of an alternative behaviour consisting of appropriate hair-
brushing for ten minutes.

During the first few days of overcorrection for each type of behaviour, Dawn was
manually guided through the positive practice behaviours with physical prompts
until she carried out the prescribed activities with minimal physical guidance.

RESULTS AND DISCUSSION

Figure 1 shows the mean frequency of target behaviours in three-day blocks.
During six days of baseline, pica averaged 15.0 occurrences per day. For the first
five days of overcorrection, this behaviour decreased to a mean of 3.5 and for the
remainder of treatment averaged 1.5 per day, a 90 per cent decrease from baseline.
On several occasions during treatment, Dawn was observed picking up trash and
placering it in the waste-baskets on her own, a type of behaviour never observed before treatment.

Hair-pulling averaged two occurrences per day during the eighteen days of baseline. With overcorrection, this behaviour was rapidly reduced and occurred a total of four times during forty-two days of treatment.

During one daily post-check monthly, after overcorrection was discontinued, target behaviours generally remained consistent with scores reported during the latter days of treatment.

Experimental control of self-injurious behaviour with overcorrection was demonstrated since the target responses were reduced only when treatment sessions began. The rapidity and durability of treatment is of considerable importance, given the severity and long-standing nature of these self-injurious behaviours. A significant effect of treatment was the positive side-effects observed, i.e., picking up trash and depositing it in the garbage can.

The present study illustrates the effectiveness of an overcorrection package with severe behavioural disorders, but also raises important theoretical issues. Most overcorrection studies to date have included a variety of components in the treatment package. As Baumiester and Rollings (in press) have noted, experimental analysis of these various component (e.g., extinction, time-out, reinforcement of competing responses, prompting, and attention) is yet to be fully assessed. Overcorrection packages do not always include the same components, adding to the difficulty of experimental comparisons. For example, in the present study, a combination of a physically noxious substance and a period of required practice of an appropriate behaviour proved effective for cigarette-eating. For hair-pulling, however, the treatment package involved positive practice alone and was effective.
SUMMARY

A female diagnosed profoundly retarded had a long-standing history of pica and hair-pulling. The behaviours were treated using a multiple-baseline design with overcorrection. Treatment for pica required Dawn to brush her teeth with a noxious solution and pick up trash, while for hair-pulling she was required to brush her hair for ten minutes. Pica and hair-pulling were sharply decreased and self-stimulatory forms of behaviour were generally maintained at low rates.

REFERENCES


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