

ELIMINATING HABITUAL VOMITING IN A RETARDED ADULT BY POSITIVE PRACTICE AND SELF-CORRECTION*

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Summary—A profoundly retarded woman had been vomiting on herself and her bed about twice a day for many years, but for no discernible medical reason. Time-out by seclusion for 30 min. after each episode did not appreciably reduce the vomiting; nor did a period of required relaxation. A combined self-correction and positive practice procedure entirely eliminated the vomiting. Whenever she vomited, she was required to correct the situation by cleaning up the vomit and to practice the correct manner of handling an urge to vomit. After 1 week these procedures had eliminated the uninhibited vomiting entirely, with no relapse after 1 yr. She occasionally did vomit but in the correct hygienic manner she had been taught by the positive practice.

VOMITING results from many medical conditions, but occasionally vomiting by retarded persons appears to be psychogenic and without apparent physical cause. Reinforcement principles have recently been used to eliminate such vomiting by contingent electric shock (Bright and Whaley, 1968; Lang and Melamed, 1969; Luckey, Watson and Musick, 1968; Kohlenberg, 1970) and by removal of attention (Alford, Blanchard, and Buckley, 1972; Wolf *et al.*, 1965).

The present study explored the use of a procedure designated as positive practice together with self-correction to control psychogenic vomiting. When a misbehavior occurs, the positive practice procedure requires the individual to engage in a period of practice in the correct mode of responding. In previous applications of this positive practice principle to toilet training, the retarded adults (Foxy and Azrin, 1973a), or normal children (Azrin and Foxy, 1974) who wet their pants were required to practice running to the toilet. Similarly, in teaching retarded students to eat correctly (Azrin and Armstrong, 1973), the student was

required to practice the correct form of eating response whenever he made an incorrect eating response. For the problem of self-stimulation (Foxy and Azrin, 1973b; Azrin, Kaplan and Foxy, 1973) and self injury (Azrin *et al.*, in press) several practice trials in the correct use of the hand, head, and body were required whenever a self-stimulatory or self-injurious response was made. For the problem of student disturbances in a special classroom, the teacher required the child, upon a disturbance, to practice the correct mode of conduct, namely, to request permission from the teacher before speaking or moving about (Azrin and Powers, in press). For vomiting, the proper reaction to an urge to vomit is to hasten to a sink or toilet where one can vomit in a non-disruptive fashion. The positive practice principle suggests that whenever the individual vomits in an improper manner, she be required to practice this correct mode. In this same spirit of reacting to an improper vomiting in a re-educative manner, the instructor also used the self-correction procedure, whereby he required the vomitor to clean up any untidiness that may

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have resulted from the vomiting episode. The positive practice and self-correction approach was compared with two other procedures frequently used as negative reinforcers, one of which was time-out by seclusion and the other required relaxation in bed (Webster and Azrin, 1973).

CASE HISTORY

The subject, a 36-yr-old profoundly retarded woman who had been institutionalized since the age of 1.5 yr, was non-verbal, had a Vineland Social Quotient of 2.6 yr and was reported as untestable for IQ evaluation. Her general behavior pattern was considered the most disruptive of all residents on her ward for the severely retarded, primarily because of her screaming, hyperactivity, and vomiting. She vomited many times each week on her bed, her clothing, or on the floor—always on or near her bed. The vomiting episode usually precipitated other disruptive activities: when she vomited on her clothing, she usually removed all clothing and ran about nude and screaming; when she vomited on her bed, she tore the sheets from the bed and threw them about; when she vomited on the floor, she smeared the vomit on the walls and furniture.

METHOD

Baseline

For a period of 6 weeks, the vomiting was recorded by employees who inspected all beds and bed areas three times each day, at 10 a.m., 1 p.m. and 6.30 p.m. The staff gave no special reaction to the vomiting other than express their brief disapproval, clean up the vomit themselves, and attempt to quiet her when she was being disruptive to other residents.

Required relaxation

For the next seven days she was required to remain in her bed for 2 hr after each vomiting episode, and instructed by staff members to carry out the required relaxation

procedure previously described by Webster and Azrin (1974)—to lie down in her own room without total isolation and with the door open.

Time-out

For the next 21 days, she was taken to a special room without a bed or other furniture after each vomiting episode, and required to remain there for 30 min. The door was closed, and no staff members were present.

Positive practice and self-correction

For the next 6 weeks, she was given positive practice and self-correction. Whenever she vomited, she was required to clean it up and change her clothes or bed sheets if they had been soiled. After this self-correction, she was required to engage in 15 practice trials in the correct manner of vomiting (positive practice). The designation "positive practice" is applied to desired positive actions in contrast to the negative action (vomiting) one wishes to eliminate. On each trial she was taken to the toilet where she bent over the bowl for several seconds with her mouth open and was required to flush the toilet. She was then returned again to the location of the vomiting to initiate the next trial. About 45–60 min were required to complete the cleaning and the 15 practice trials. As a further preventive measure, she was given a reminder every hour during the day that she should vomit only in the toilet and would have to clean up and practice if she vomited elsewhere.

RESULTS

Figure 1 shows the frequency of inappropriate vomiting. During the baseline condition, the subject averaged about two vomiting episodes per day. The required relaxation procedure did not change the frequency of vomiting. The time-out procedure also had no effect on vomiting for the first 2 weeks and only a slight reduction to one vomiting episode a day in the third week. The positive practice and self-correction procedure was not appreciably effective during the first week; but, after that period,

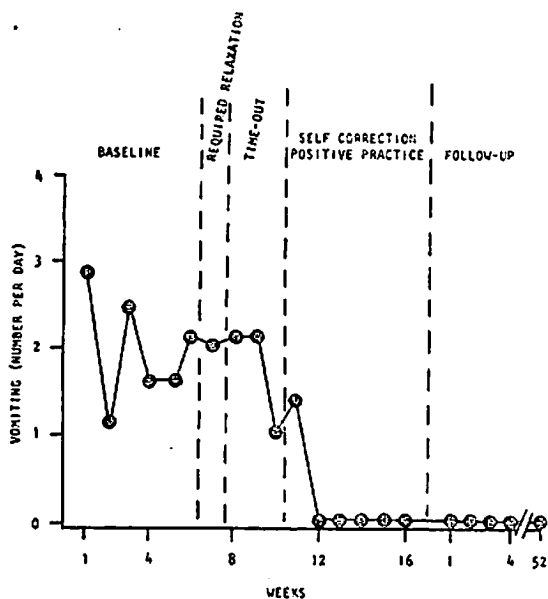


FIG. 1. Number of vomitings per day by a profoundly retarded woman. Proper vomitings into the ward toilet are not included. Each data point is the average number of vomitings per day over a week-long period. During baseline, no special attention was given to the vomiting. During required relaxation, she was required to lie down on her bed in her room for 2 hr after each vomit. During time-out she remained in a special room for 30 min with a closed door. During the self-correction and positive practice period, she was required to clean up the vomit and to practice the proper method of vomiting in the ward toilet.

improper vomiting was virtually absent for the next 5 weeks and during the follow-up 1 yr later.

The required relaxation procedure made her resistive and incontinent. She continued to resist the efforts to keep her in bed despite reassurances from staff members that the required relaxation was intended only to calm her, and this procedure was discontinued after 7 days. The time-out procedure produced similar resistance; and she often defecated and smeared her feces while in the time-out room. Her disruptive conduct necessitated termination of both these procedures. The positive practice with self-correction procedure did not result in such extreme emotional outbursts. The trainer manually guided her through the required actions during the first few days; after which she usually

responded to the verbal instructions. On most of the positive practice trials, she induced small amounts of vomit into the toilet bowl while practicing the proper position of bending over it. This self-induced vomiting ceased after two or three days. After the first week, when improper vomiting had ceased, she was observed on several occasions to vomit in the toilet without guidance or assistance by a staff member and to flush the toilet. Similar instances of "proper" vomiting were noted several months later. No systematic records of "proper" vomiting were obtained, but informal observation indicated a very low frequency of approximately one per month.

DISCUSSION

Positive practice with self-correction eliminated improper vomiting, whereas the time-out and required relaxation procedures were ineffective. One major advantage of the positive practice procedure was that it taught the resident the correct mode of reacting to an urge to vomit. The time-out procedure, on the other hand, attached a penalty to the incorrect mode of reacting. The required relaxation procedure was not ineffective in its earlier use (Webster and Azrin, 1973) where all nine subjects were benefited. Since that time, however, several instances have occurred in which a retarded resident has resisted greatly when required to go to bed after a disruptive episode. The required relaxation procedure seems best suited to individuals for whom it is undertaken willingly; otherwise, the intended function of calming seems to be thwarted.

The self-correction procedure seemed easier to carry out than the previously reported over-correction procedure (Foxy and Azrin, 1973; Azrin, Kaplan and Foxy, 1973; Azrin and Wesolowski, 1974), where the subject would have had to over-correct to a far greater extent than simply cleaning up the vomit from her clothes, bed or the floor; these activities are all too easily interpreted by the trainee and the trainer as punitive rather than re-educative. By

limiting the procedure to self-correction, the subject learns to take responsibility for her actions without the punitive connotations. Positive practice with self-correction appears to be a viable alternative to contingent shock both in efficiently eliminating vomiting and in long term effects. Of course, the experimental design did not permit separate evaluation of positive practice and self-correction, but only of the combination.

Positive practice procedure taught the correct manner of reacting to the vomiting impulse. Evidence of this educative function was the subject's normal vomiting after training. Furthermore, no assumption need be made that the vomiting is psychogenically, rather than medically, caused; for even if the vomiting had been totally medical in origin, the patient would have been taught how to clean up the vomit and where to vomit.

The possibility was considered that the resident was vomiting primarily to obtain attention, but several facts negated it. First, she often vomited in remote areas where no observer was present. Second, during baseline, the staff refrained from "fussing" over the vomiting except briefly to tell her not to do it. Finally, the time-out procedure, which explicitly reduced attention, did not eliminate the vomiting.

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