

*THE USE OF AN ENHANCED SIMPLIFIED
HABIT-REVERSAL PROCEDURE TO REDUCE
DISRUPTIVE OUTBURSTS DURING
ATHLETIC PERFORMANCE*

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An enhanced simplified habit-reversal procedure was used with a 14-year-old boy who presented with a long history of disruptive, angry outbursts during tennis matches. Initial treatment involved simplified habit-reversal procedures delivered in a multiple baseline design across settings. Modest results led to additional supporting contingencies, including response cost. Results showed elimination of disruptive outbursts during both nontournament and tournament matches and highlight the importance of adding additional supporting contingencies to simplified habit reversal for some self-control problems.

DESCRIPTORS: habit reversal, athletic performance, self-control

Simplified habit reversal (SHR), used extensively in the treatment of various habits (Woods & Miltenberger, 1995), has been found to be effective when it combines three primary components: awareness training, teaching a competing response, and arranging supporting contingencies (Miltenberger, Fuqua, & McKinley, 1985; Woods, Miltenberger, & Lumley, 1996). Awareness training typically involves increasing the subject's ability to accurately identify discrete episodes of the habit. The competing response that is taught is typically an inconspicuous behavior that is incompatible with the habit. In the final component, contingencies are arranged that are likely to strengthen and maintain the use of the competing response. Together, these components appear to combine self-monitoring with differential reinforcement of incompatible behavior (DRI).

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As such, there is no reason to believe that the SHR procedure could not be effectively applied to any number of persistent self-control behavior problems. This study was designed to evaluate the application of an enhanced SHR procedure to reduce disruptive outbursts during athletic performance.

METHOD

Seth was a 14-year-old tennis player who was successfully competing in state and regional tennis competitions. Seth presented with a long history of anger control problems during tennis matches. The outbursts by Seth involved loud verbal self-deprecation, smacking his tennis racket on the court, slapping his hat against his legs, and waving his arms in the air in response to missed shots, lost points, or situations in which he may have won the point but felt he made a poor decision or used poor technique. Both Seth and his parents reported that the outbursts diminished athletic performance and at times were embarrassing. The parents had implemented a number of incentive programs to reduce the outbursts (e.g., allowance and some privileges dependent upon improved control), but these had

been ineffective. Seth and his parents were interested in developing Seth's anger control with the idea that it would ultimately improve tennis performance.

Baseline data were collected independently by Seth and his parents on numbers of outbursts to assess Seth's awareness and to assess rate. Baseline data were collected during four nontournament and six tournament matches. Independent recording continued throughout treatment, which involved three components: awareness training, competing response, and contingency management. These were implemented in two phases across six separate 60-min visits. Seth was eventually permitted to stop his independent recording, because his awareness improved and his recordings became consistent with his parents' recordings.

In Phase 1, an SHR procedure was implemented. Awareness training was initiated in which Seth described in detail the outburst behaviors, practiced identifying earliest signs of the outbursts, and described the situations in which the outbursts occurred. Seth's parents also used a hand-operated audible clicker to increase Seth's detection of outbursts during matches. Whenever they saw the early signs of the outbursts, they activated the clicker. Early signs included visibly or audibly detectable self-talk and briefly waving the racket. Seth was also taught a competing response: a diaphragmatic breathing response to use whenever he detected early signs of an outburst or heard the clicker. Contingent upon detecting early signs of an outburst, Seth stood still, took three to four deep diaphragmatic breaths, and then continued the tennis match. Finally, Seth and his parents developed a motivation program in which he received praise and points for observable use of the competing response during matches. The points could be cashed in for new stereo compact discs.

Phase 2 was deemed necessary to enhance the supporting contingencies. Poor technical

performance during matches typically led to intense and sometimes unpleasant reviews by a parent. These reviews were viewed as creating contingencies that competed directly with the habit-reversal motivation program. That is, the habit-reversal contingencies targeted controlling outbursts while the post-match reviews targeted athletic performance. Therefore, in Phase 2, all contingencies focused on controlling outbursts rather than on reviewing athletic performance. A moratorium was placed on review of athletic performance immediately after matches. Reviews were to focus on whether Seth had made appropriate use of the competing response. In addition, a response-cost procedure was added in which outbursts that were not immediately terminated with the use of the competing response resulted in Seth's removal from the current practice or tournament and forfeiture of the next practice or tournament. Treatment was implemented in a multiple baseline across nontournament (practice) and tournament matches. Interobserver agreement data on occurrence of outbursts reported by the parents were collected by the investigator during 20% of the matches via direct observation. Occurrence agreement, determined by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100%, was 88%.

RESULTS AND DISCUSSION

Figure 1 shows that outbursts prior to treatment were occurring six to seven times per nontournament match and about 10 times per tournament match. Seth identified only about half of those outbursts reported by his parents. After treatment was implemented, Seth's reports of outbursts were more consistent with those of his parents, suggesting the awareness training had been effective. His rate of outbursts showed a small reduction. Because reductions were

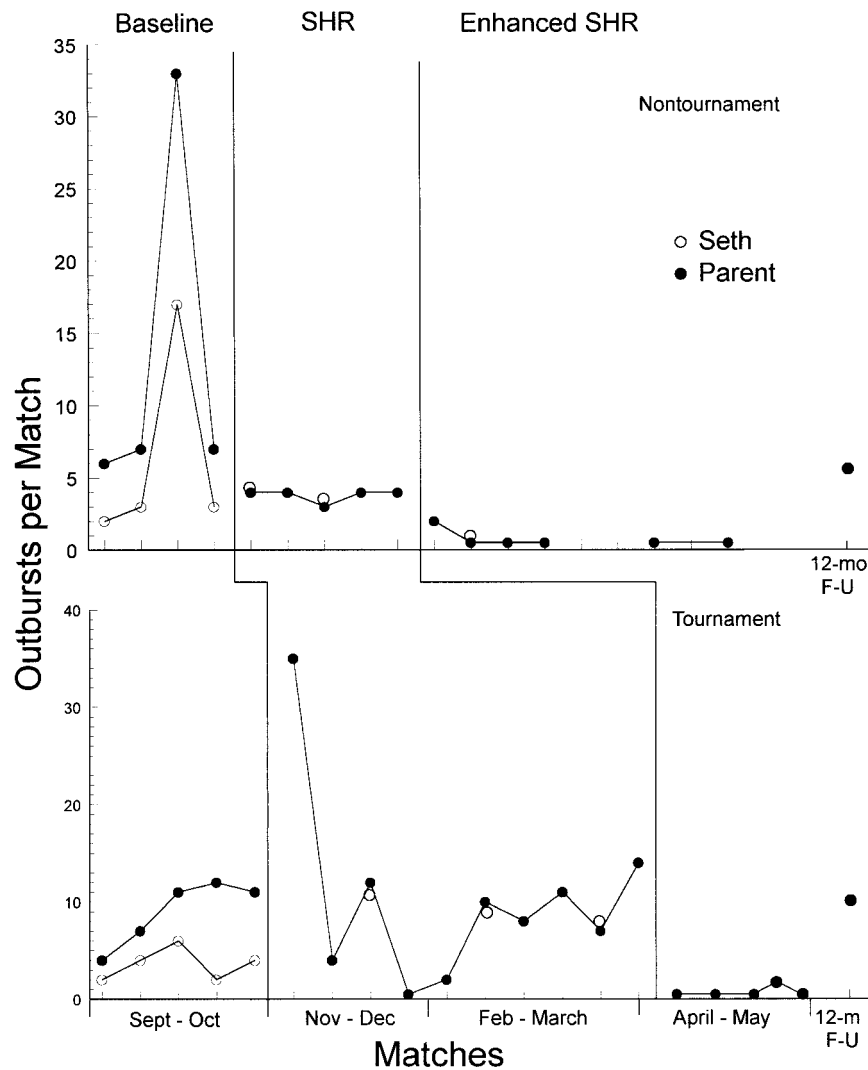


Figure 1. Outbursts per match reported by Seth and his parents across nontournament and tournament matches, during baseline and both the SHR and the enhanced SHR procedures.

modest and were not sustained during tournament matches, Phase 2 was initiated. Implementation during nontournament matches showed the elimination of outbursts. Subsequent implementation during tournament matches resulted in marked reductions in tournament outbursts to near-zero levels. Although there was no direct assessment of tennis performance, Seth and his parents reported that the treatment improved his tennis performance. At follow-up, the parents reported that their support of the enhanced

SHR program had been reduced (i.e., reminders to work on habit reversal and response cost were eliminated) in an effort to make Seth more individually responsible for controlling his outbursts. Although outbursts had returned to baseline levels at follow-up, anecdotal reports from the parents indicated that the intensity of the outbursts had remained sufficiently subtle that “others might not notice them,” and that Seth recently won his first statewide age-group tournament.

Typical self-control treatment programs for adolescents with impulsive angry outbursts involve complex, lengthy procedures that include self-monitoring, problem solving, relaxation techniques, self-instruction, assertion training, contingency management, and social skills training (Feindler, 1987). Although the SHR procedure required enhancement through additional contingency management procedures, the treatment was still greatly simplified over these traditional treatments. In addition, the use of the audible clicker with enhanced SHR also permitted training in the natural setting, which enhanced generalization of the skills outside of the clinic. Generalization of skills has been a problem with traditional anger-control treatments. The successful application here suggests that an enhanced SHR procedure may be useful in the treatment of other self-control problem behaviors.

Although enhanced SHR was effective, as with any SHR procedure it is unclear which component or combination of components was responsible for the observed changes. Certainly, the addition of the response cost and the elimination of the postmatch reviews appeared to strengthen the SHR procedure. Unfortunately, only anecdotal evidence (parent and subject report) exists to

confirm that the competing response and supporting contingencies were actually implemented. However, further support regarding implementation is provided by the increase in outbursts following the parents' termination of their participation in the SHR program. Overall, the data support the importance of assessing competing contingencies as well as the notion that, for some children, a motivational component with response-cost contingencies may be required.

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