

This Week's Citation Classic

CC/NUMBER 19
MAY 10, 1982

Meichenbaum D H & Goodman J. Training impulsive children to talk to themselves: a means of developing self-control.

J. Abnormal Psychol. 77:115-26, 1971.

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The efficacy of a self-instructional (SI) training program was examined in two studies. The training program taught the impulsive child to talk to himself, initially overtly and then covertly. Relative to placebo and assessment control groups, the SI training group demonstrated improvement across tasks and over time. [The *Social Sciences Citation Index*[®] (SSCI)[®] indicates that this paper has been cited over 270 times since 1971.]

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March 1, 1982

"Several lines of investigation gave impetus to the design of this study. On the one hand a number of studies suggested that children who had problems with self-control were evidencing a 'mediational' deficit or an inability to use their own language to guide and control their nonverbal behavior. The impulsive and hyperactive child was described as someone who did not 'stop, look, and listen.'¹ Although a number of treatment approaches ranging from behavior modification to pharmacological intervention were being employed with children who had self-control problems, there was increasing concern about the limitation of these approaches in terms of generalization and durability of treatment effectiveness.

"It was within this context that a cognitive-behavioral self-instructional (SI) training program was developed. A training program designed to teach impulsive children a set of problem-solving skills or 'how to think' when confronted by academic and

social situations was developed with Joseph Goodman, a graduate student at the University of Waterloo.

"The format of the training was influenced by the developmental theory and research of the Soviet psychologists L. Vygotsky² and his student, A.R. Luria.³ They suggested that children become socialized by first responding to the instructions of an adult or older sibling and then internalizing those instructions in an abbreviated fashion as a form of inner speech. With age and task proficiency those self-verbalizations drop out of the child's repertoire.

"An analogy could be drawn to the following adult example. Consider for a moment how you learn a motor skill such as driving a stick-shift car or skiing. At the outset you likely talk to yourself in an intentional manner, but with proficiency these verbalizations drop out of your repertoire until your plan or the automaticity of your act is interrupted. At that point you likely talk to yourself once again. The SI training program was designed along these lines. Impulsive children were encouraged to talk to themselves, initially aloud and then covertly. They were then assessed on a variety of measures of self-control.

"Although the results of this initial study were at best encouraging, the study provided a powerful paradigm for interventions. In the last ten years we have learned a great deal about how to teach impulsive children, as well as a variety of other populations, how to talk to themselves.⁴ These procedures have now been applied to a host of populations ranging from adult psychotic patients to athletes, from retarded children to uncreative college students. We have learned how an SI training program can supplement other forms of interventions and what are the limitations of the procedures.⁵ Our study has been cited so often because it pointed the direction for future cognitive-behavioral interventions. The study contributed to a shifting zeitgeist whereby psychological interventions were becoming more cognitive. Behavior modification was going cognitive as was psychology in general. This study fit the new mold."

1. Douglas V. Stop, look and listen: the problem of sustained attention and impulse control in hyperactive and normal children. *Can. J. Behav. Sci.* 4:259-76, 1972.
2. Vygotsky L. *Thought and language*. Cambridge: MIT Press, 1962. 168 p.
3. Luria A R. *The role of speech in the regulation of normal and abnormal behavior*. New York: Liveright, 1961. 148 p.
4. Meichenbaum D. *Cognitive-behavior modification: an integrative approach*. New York: Plenum Press, 1977. 305 p.
5. Meichenbaum D & Asarnow J. *Cognitive-behavioral modification and metacognitive development: implications for the classroom*. (Kendall P & Hollon S, eds.) *Cognitive-behavioral interventions: theory, research and procedures*. New York: Academic Press, 1979. p. 11-36.