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ASSESSING A SELF-REGULATION TRAINING SYSTEM AND ITS TRANSFER TO OUT-OF-SCHOOL CONTEXTS FOR STUDENTS WITH EMOTIONAL AND BEHAVIORAL DIFFICULTIES

By

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A dissertation submitted to the Graduate Faculty in Educational Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy

The City University of New York

2005

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Abstract

ASSESSING A SELF-REGULATION TRAINING SYSTEM AND ITS TRANSFER TO OUT-OF-SCHOOL CONTEXTS FOR STUDENTS WITH EMOTIONAL AND BEHAVIORAL DIFFICULTIES

By

Suzanne E. Tobin

Advisor: Professor Barry J. Zimmerman

This correlational study examined the effectiveness of a pre-existing self-regulatory intervention program with 35 adolescents being treated for emotional and behavioral difficulties in a self-contained special education school. Based on their current functioning, students were assigned to one of five training levels ranging in degree of external control provided and self-regulatory skill required. The relationship between training level and various outcome measures reflecting students' behavior both in school and outside of school were studied.

Results indicated that self-regulation training level was positively correlated with student self-reported self-regulated behavior in school, self-efficacy in and out of school, blinded observer ratings of classroom on-task behavior, teacher ratings of student self-regulated behavior, and grades. There was also a moderate correlation between training level and self-reported self-regulated behavior outside of school that approached statistical significance. In addition, there was a significant negative correlation between training level and number of absences, in-school disciplinary actions, suspensions, and arrests. Although training level did not correlate directly with parent reports of student

self-regulated behavior outside of school, results of a path analysis suggests that there is an indirect relationship between training level and parent ratings through student self-regulated behavior outside of school and self-efficacy beliefs for regulating their behavior outside of school.

Results are discussed with regard to a social-cognitive conceptualization of self-regulation and address the issue of generalization of self-regulatory skill for emotionally and behaviorally troubled youth.

Acknowledgments

I am very grateful to Dr. Barry Zimmerman for his guidance and support throughout this study. His knowledge, experience, and dedication to research and education have been extremely inspiring for me. Without his prompt and insightful feedback throughout the entire process of my dissertation work, it would not have been possible for me to achieve this goal.

I am also grateful to my dissertation committee members, Dr. Marian Fish and Dr. Georgiana Tryon, for their support during the completion of my dissertation study. Thank you to all of the faculty members of the Educational Psychology Department and of the Queens College School Psychology Program who have contributed to my academic and professional development. Your support over the years has been greatly appreciated.

Next I would like to thank all of the administrators, clinicians, teachers, students, and parents from Cooperative Educational Services who were instrumental in completing this study. It simply could not have happened without you! In particular, I would like to thank Tony Maida and Dr. Daniel French for their assistance and support. Dr. French has been a wonderful mentor to me over the years and I have learned so much from him!

Finally, I would like to express the love and gratitude that I feel for my family who has been there for me from the beginning. Thank you to my parents, who have instilled in me the value of education and who have encouraged me to achieve my goals. They have continued to support me in any way they could. My sister Meredith has always been a role model to me with her caring and supportive nature, as well as with her hard work and value of education. I am also thankful to my husband's family, who

always show their overwhelming support of me in all that I do. Most of all, I could never have accomplished all that I have without the love and support of my wonderful husband Bill and my son Ryan. Throughout all of the ups and downs, joys and frustrations, thank you for always being by my side!

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Chapter One

Introduction

Overview

This chapter will describe childhood and adolescent antisocial behavior in terms of developmental course, characteristics, and associated outcomes. In addition, existing treatments for antisocial behavior are reviewed, with a brief summary of the research related to these treatments. A new framework for conceptualizing antisocial youth as lacking in self-regulatory skill is presented, as well as a social-cognitive model of self-regulation. One particular intervention program, designed along self-regulatory lines, is described within this framework. Finally, goals of the current research are presented.

Statement of Problem

Broadly defined, antisocial behavior is any behavior that violates social rules or reflects acts against others, including aggression, theft, vandalism, fire setting, lying, truancy, and running away (Kazdin, 1987). Antisocial behavior not only disrupts the development and functioning of children and adolescents, but also predicts later adult criminality (Loeber, 1982; 1991; Weiss & Hechtman, 1979). Furthermore, it has proven stable over time and difficult to treat (Loeber, 1991; Kazdin, 1997). The range of adverse developmental outcomes associated with childhood conduct problems includes internalizing disorders such as anxiety and depression (Offord et al., 1992), teenage pregnancy (Zoccolillo & Rogers 1991), substance use (Van Kammen, Loeber, & Stouthammer-Loeber, 1991), increased use of mental health social services (Offord et al., 1992) and chronically impaired social and school functioning (Kazdin, 1987; Offord et al., 1992; Walker, Shinn, O'Neill, & Ramsey, 1987; Zoccolillo & Rogers, 1991).

Because of their hostile and aggressive style of interacting with others and approaching conflict, antisocial youth often have difficulty conforming to social norms and getting along with authority figures. Not surprisingly, their school records are marked by chronic detentions and suspensions. Furthermore, their pervasive difficulties extend into the community and leave them prone to a criminal record. Such youth frequently find themselves in and out of school placements and treatment programs that are characterized by varying degrees of restrictiveness. They tend to be socially isolated with few or no friends, or they develop an association with a deviant peer group that supports their antisocial behavior. A shortage of adequate treatment programs exacerbates this problematic situation in many communities.

Developmentally, the path to chronic antisocial behavior unfolds in a series of predictable steps (Patterson, DeBaryshe, & Ramsey, 1989). In an action-reaction sequence, a child's behavior early in life leads to predictable reactions from that child's social environment, which in turn leads to a cycle of further reactions between the child and the social environment (Patterson et al., 1989). From a social interactional perspective, parents and other family members directly train the child to engage in antisocial behavior (Forehand, King, Peed, & Yoder, 1975; Patterson et al., 1989; Patterson, 1982; Snyder, 1977; Wahler & Dumas, 1984). Noncontingent discipline practices allow and reinforce dozens of daily coercive family interactions, and coercive behavior becomes functional for the child to survive in a highly aversive social system (Patterson et al., 1989). In such families, the intensity of these coercive interactions often escalates to highly aggressive and antisocial behaviors. In addition to antisocial behavior, children are often characterized by deficits in prosocial skills (Patterson et al., 1989).

In the developmental sequence leading to chronic antisocial behavior, coercive child behavior learned in early childhood leads to rejection by normal peers and academic failure during the middle childhood years (Patterson et al., 1989). Finally, the combination of lax parental supervision, antisocial behavior, and normal peer group rejection predispose youth to identification with a deviant peer group by the time they reach adolescence (Patterson et al., 1989). In addition to providing the opportunity to engage in specific delinquent acts, deviant peer group membership also provides the adolescent with the attitudes, motivation, and rationalizations to maintain antisocial behavior (Patterson et al., 1989). The end result for about half of all antisocial children is delinquency in adolescence, with half to three quarters of delinquent adolescents becoming adult criminal offenders (Farrington, 1987; Robins & Ratcliff, 1979).

Existing Treatments

Various school and community-based prevention programs have focused on strengthening the ability of the community to promote prosocial behavior and deter antisocial behavior (Offord & Bennett, 1994). Other prevention programs focus on teaching children decision-making and interpersonal problem solving skills (Webster-Stratton & Dahl, 1995). An advantage of preventative approaches is that they can be made available to all children, providing antisocial children and those at risk for antisocial behavior with the opportunity to interact with normal, non-risk peers (Offord & Bennett, 1994). Another advantage is that primary prevention programs are more likely to reach every child who could benefit while at the same time avoiding the negative stigma associated with later identification as a "problem" child (Offord & Bennett, 1994). Although there are a number of promising prevention approaches at the school and

community level, unfortunately there remains little documented evidence of effectiveness (Offord & Bennett, 1994). Continued efforts to increase the scientific base for prevention programs would likely yield great payoffs in terms of reducing antisocial behavior in childhood, adolescence, and adulthood.

Among the hundreds of intervention programs used to treat antisocial youth, few are supported by empirically validated outcome evidence. Clinically, the most commonly used techniques can be classified as "traditional" approaches, such as psychodynamic, relationship, play, and family therapy (Kazdin, 1997). Little evidence exists that these approaches achieve therapeutic change in youth with behavioral problems (Kazdin, 1997). Although there is an extensive body of literature supporting the use of various behavioral techniques to remediate specific antisocial behaviors, including aggression, improvements are typically limited to isolated behaviors rather than clusters of behaviors that reflect improved overall adjustment (Kazdin, 1997). Furthermore, the long-term effects of such techniques have rarely been demonstrated (Kazdin, 1997).

Family-based interventions such as parent management training (PMT) focus on social interactional processes between the parent and child that are thought to inadvertently develop and sustain antisocial behavior (Offord & Bennett, 1994). Such interventions hold promise, given the array of evidence reflecting their short-term effectiveness. A major limitation of [redacted] relates to the variety of parent and family factors (e.g. parent compliance) that moderate intervention effectiveness (Offord & Bennett, 1994). Furthermore, studies are needed to demonstrate effectiveness in

nonclinic settings, as well as the long-term effectiveness of PMT (Offord & Bennett, 1994).

Another class of intervention focuses on the role of schools and peer relations on antisocial behavior, which appear to be critical factors during middle childhood (Offord & Bennett, 1994). These peer and school-based interventions aim to reduce aggressive and antisocial behavior through prosocial skills training which is thought to improve peer relations (Offord & Bennett, 1994) and prevent further adjustment problems (Webster-Stratton & Dahl, 1995). There is limited research evaluating the effectiveness of such programs, and the studies that do exist provide little evidence for intervention effectiveness on a population basis (Offord & Bennett, 1994). Furthermore, such studies do not address long-term treatment outcomes in antisocial youth (Offord & Bennett, 1994).

A variety of social-cognitive interventions have been developed to treat antisocial youth by improving their problem-solving skills, anger control and coping skills, and social skills (Offord & Bennett, 1994). Although there is mixed evidence on the effectiveness of this class of intervention, treatments such as Problem-Solving Skills Training (PSST) appear to be very promising (Kazdin, 1997). This approach involves developing interpersonal cognitive problem-solving skills to remediate deficits and distortions in cognitive processes that have been linked to unfavorable teacher ratings, peer evaluations, and direct observation of disruptive behavior (Lochman & Dodge, 1994; Rubin, Bream, & Rose-Krasnor, 1991).

Aspects of PSST make it a promising approach, particularly the fact that cognitively based treatments have been shown to effect therapeutic change in several

controlled outcome studies (Baer & Nietzel, 1991; Kazdin, 1997). However, a major limitation of PSST is evidence that antisocial youth with difficulties in multiple domains (e.g. psychiatric comorbidity), with academic delays, and with high levels of family dysfunction (including adverse child-rearing practices), respond less well to this intervention than antisocial youth with less dysfunction in these areas (Kazdin, 1997; Kazdin & Crowley, 1997). Thus, the very characteristics that underly chronic antisocial behavior negatively impact treatment outcome.

Perhaps the most central feature of children and adolescents with serious behavioral problems is the pervasiveness of their symptoms (Kazdin, 1997). Therefore, a key issue in treatment is transfer of skill from the setting in which treatment occurs to other environments outside of the treatment setting. A limitation of most child-focused interventions relates to generalization of skill from the structured intervention environment to other settings outside of the treatment program. Unfortunately, many of the techniques used in a structured setting such as role-playing and other guided practice often cannot even approximate many of the situations that antisocial children and adolescents face outside of the treatment program. There is a limitation to the range of "real-life" situations that can be enacted within a structured intervention program.

Furthermore, most of the approaches employed to treat children or adolescents who exhibit antisocial behavior focus on remediating clusters of behavior that are involved in one aspect of functioning -- academic failure. Because academic failure is a well-documented milestone on the developmental path to chronic antisocial behavior, efforts have been made to identify and remediate deficits in academic survival skills such as attending, remaining in seat, and completing homework (Cobb & Hops, 1973; Dishion,

Loeber, Stouthammer-Loeber, & Patterson, 1984; Hops & Cobb, 1974). Although useful in improving academic dysfunctions associated with antisocial youth, this approach does not address issues related to social and interpersonal functioning. Likewise, although deficits in social-cognitive skills such as peer group entry, ability to perceive peer group norms, and responding adaptively to provocation are shown to contribute to peer rejection (Asarnow & Calan, 1985; Dodge, 1986; Putallaz, 1983), remediation of these specific skills does not necessarily lead to improved overall adjustment. Overlooked are key motivational and affective factors related to students' progress toward achieving long-term personal, academic, and behavioral goals.

Self-Regulation Theory

A new way to conceptualize and treat antisocial youth is that they are lacking in the self-regulatory skill needed to control their behavior and work productively, both in and out of school. From a social cognitive perspective, *self-regulation* refers to the process of generating self-related thoughts, feelings, and actions that are planned, monitored, and adapted to achieve personal goals (Zimmerman, 1989). Key to this definition of self-regulation is the underlying sense of personal agency that enables one to act on metacognitive knowledge states (Zimmerman, 1999). Without this sense of personal agency, antisocial youth may not be motivated to apply metacognitive strategies such as self-instruction or strategic planning. From a social cognitive perspective, self-regulation is more than just metacognition; it also depends on self-beliefs and affective reactions regarding one's ability to perform in specific contexts (Zimmerman, 1999). Furthermore, unlike views of self-regulation that emphasize a single trait or stage of competence, a process definition focuses on both overt actions and covert processes that

depend on motivation and self-beliefs that are contextually bound (Zimmerman, 1999). A process view of self-regulation explains why antisocial youth are often unable to transfer skill from one environment to another.

Because this definition is also a cyclical model of self-regulation, it emphasizes the use of feedback from previous experiences to proactively adjust one's efforts during current and future endeavors (Zimmerman, 1999). The three general phases involved in such a self-regulatory feedback loop (see Figure 1) include *forethought processes* which precede one's actions, *performance control processes* which occur in the act of self-control and self-observation, and *self-reflection processes* which occur afterward and influence the forethought phase for subsequent efforts (Zimmerman, 1999).

The forethought phase involves *task analysis* processes such as goal setting and strategic planning, and various underlying *self-motivational beliefs* (Zimmerman, 1999). Goal setting, as defined by Locke & Latham (1990), refers to deciding on specific outcomes of learning or performance. For adolescents with behavioral problems, a goal might be to avoid earning detention during a particular class period. Specific, short-term, and moderately difficult goals tend to increase efforts to act more than general, long-term, and easy goals (Locke & Latham, 1990). The second task analysis process involved in forethought is strategic planning, or selecting a strategy to optimize one's efforts during the performance phase (Zimmerman, 1999). Effective strategies are specific not only to the individual employing the strategy, but also to the situation in which the strategy is applied. When appropriately selected and applied, strategies improve individual performance by aiding cognition, controlling affect, and directing motoric execution (Pressley, Woloshyn, & Associates, 1995).

Because forethought processes set the stage for action, they play a key role in motivation. Self-motivational beliefs underlying forethought include self-efficacy, outcome expectations, intrinsic interest, and goal orientation (Zimmerman, 1999). Evidence suggests that a self-regulatory process goal orientation, compared to an outcome goal orientation, more adequately sustains motivation and improves skill acquisition and performance (Pintrich & Schunk, 2002). Attaining process goals also provides a sense of intrinsic interest or value that can meet or exceed extrinsic outcomes (Deci, 1975).

Central to an individual's motivation to self-regulate is the contextually related self-process of perceived efficacy (Zimmerman, 1999). Self-efficacy refers to core beliefs about one's ability to organize and implement the actions necessary to achieve specific behavioral or academic goals (Bandura, 1997). Self-efficacy beliefs differ from outcome expectations, which are beliefs about the ultimate ends of performance (Bandura, 1997). For example, self-efficacy is reflected in a teenager's belief that he or she can arrive home in time for curfew, while an outcome expectation might relate to whether or not arriving home for curfew will contribute to gaining a parents' trust. Feelings of efficacy also impact one's motivation to persevere in the face of failure and increase one's efforts to meet personal goals (Bandura & Cervone, 1986). Thus, without self-efficacy and related sub-processes involved in forethought, the self-regulatory feedback loop would be unable to maintain a cyclical quality.

The next phase of the model, performance control, involves the two major processes of *self-control* and *self-observation* (Zimmerman, 1999). Self-control processes help guide performance through self-instruction, imagery, attention focusing,

and task strategies. Self-observation involves systematically monitoring specific aspects of one's own performance (Zimmerman, 1989), and is an important means of obtaining feedback about progress toward personal goals. Metacognitive monitoring involves mental tracking of one's performance. Self-recording is a behavioral self-observation technique that often enhances the impact of feedback simply by writing it down (Zimmerman & Kitsantas, 1996).

The third phase of a self-regulatory feedback loop is the self-reflection phase that involves *self-judgment* and *self-reaction* (Zimmerman, 1999). Self-judgment refers to evaluating one's own performance and attributing causal significance to the outcome (Bandura, 1986). Evaluations are based on comparisons to specific mastery criteria, to one's previous performances, or to the performance of others (Zimmerman, 1999). Causal attributions regarding the outcome of performance are critical elements of the self-reflection phase because failure attributions to a fixed, internal source (e.g. low ability) can have devastating effects on self-efficacy and motivation to improve subsequent performances (Weiner, 1979). To sustain motivation and perceived control over one's performance potential, strategic attributions appear to be the most adaptive (Zimmerman, & Kitsantas, 1996; Cleary & Zimmerman, 2001).

Finally, the self-reflection phase involves two forms of self-reaction that are closely linked to self-judgments: Self-satisfaction and adaptive inferences. Self-satisfaction refers to an individual's feelings of satisfaction or dissatisfaction and other associated affect related to a performance (Zimmerman, 1999). The degree to which one feels self-satisfied with a performance influences their adaptive inferences, which are conclusions about how one must adapt self-regulatory efforts to improve performance in

the future (Zimmerman, 1999). In maintaining the cycle of self-regulation, these self-reflection processes impact forethought processes for subsequent efforts and enable the self-regulated individual to persevere, even in the face of difficulty.

Therapeutic Day Program

The Therapeutic Day Program (TDP) at Cooperative Educational Services is a comprehensive educational and treatment program that utilizes a self-regulatory training approach to help students with a variety of emotional, behavioral, and academic difficulties. This program, which pre-exists the present study, has been in place to serve students throughout Fairfield County, CT based on referrals from local school districts. Students attend the program during regular school hours Monday through Friday from 8:30 a.m. to 2:30 p.m. and daily transportation to the school is provided by local districts. The program offers a treatment approach that includes educational, psychological, psychiatric, and family-community outreach services aimed at improving students' overall functioning and returning them to a school placement within their local school district.

The population served by TDP includes students in grades K-12 who exhibit both internalizing symptoms such as anxiety and withdrawal, and externalizing symptoms including oppositional/defiant behaviors, verbal and physical aggression, and hyperactivity. Common psychiatric diagnoses for students enrolled in the program include Bipolar, OCD, Oppositional Defiant and Conduct Disorder, ADD, and Aspbergers. Because of the geographic diversity of referring school districts, students come from a wide variety of socioeconomic backgrounds and ethnic diversities. Approximately 60% of the students are male and 40% are female.

In order to meet the complex and diversified needs of this heterogeneous population, a flexible treatment approach is employed that incorporates numerous strategies. Key to the program's self-regulatory approach is the high degree of structure and external monitoring that is gradually diminished as students increase their level of self-regulatory functioning (see Figure 2). Within a point-based behavior management system, students are provided with the ongoing opportunity to make behavioral choices. As students demonstrate increased self-control, they progress to the next self-regulatory training level where additional privileges and freedom are made available to them. Progressing through this self-regulatory level system enables students to demonstrate their increasing ability to function autonomously by relying on internal controls, rather than the external controls associated with behavior management contingencies. The emphasis on choice helps to empower students and foster the assumption of responsibility for their own behavior.

Students begin on a supervised level when they enroll in the Therapeutic Day Program. Every thirty minutes throughout the day teachers assign points to all students, based on their behavior in four domains: On-task, following directions, verbal control, and an individual target skill that each student works on. Individual target skills are determined each week by the teacher and student, and they range from academic-related behaviors such as "remain in my seat during academic periods" to interpersonal behavioral goals such as "ignore negative comments and gestures from other students". Overall daily point percentages are used to calculate a weekly point average, which determines each students' level for the subsequent week. Students who earn less than a weekly average of 80% of their points drop to a restricted level. Those who maintain a

weekly average of 80% or higher for four consecutive weeks move to a supervised II level. The criteria for progressing through the level system becomes increasingly higher as students are required to demonstrate increasing self-regulatory skill. Grades are based solely on academic performance and are calculated independently from this behaviorally-based point system.

Within this general treatment approach, many specific elements of the program also reflect the principles of self-regulation theory. Students begin their daily routine with a morning meeting where many of the forethought processes involved in a self-regulatory feedback loop are addressed. They review individual goals that they will be working on during the day, and they discuss strategic plans for how to attain those goals. Whenever possible, long-term goals are broken down into short-term, process goals that are connected to clear outcome expectations and frequent, tangible feedback. For example, a student may wish to return successfully to his or her district school of origin. After establishing the criteria for this long-term goal, students help develop a series of proximal, process goals that will lead to the accomplishment of the long-term goal. Clearly stated, weekly individual goals reflect specific strategies for attaining these proximal goals, which are reviewed at the beginning of each school day. Individual goals may be as specific as asking to take space when feeling upset, rather than leave the room without permission.

In addition to these critical forethought processes of goal setting and strategic planning, the TDP approach also involves several relevant performance control processes, including both self-control and self-observation sub-processes. Self-instruction, attention focusing, and specific task strategies are modeled and students are

provided with ongoing opportunity for guided practice of these skills. Specific behavioral expectations, or "how to" instructions, are clearly posted in the classroom and reviewed for every activity that students engage in throughout the day. In addition, pro-social behaviors are taught and practiced in weekly social skills training and anger management groups. Students practice applying these skills on a day-to- day basis as various relevant situations arise.

Essential to a successful self-regulatory feedback loop is the performance control process of self-observation. Students receive feedback regarding their individual goal and other essential school-related behaviors (e.g. being on-task, following directions from staff, speaking in an appropriate, respectful tone of voice) in the form of points every 30 minutes throughout the day. Points are recorded by teachers, as well as by students on a point sheet kept on top of their desks. At mid-day and at the end of the day, students calculate their point averages, which determine privileges that are earned on both an individual and a group basis. This system of self-recording enables students to constantly monitor their performance and their progress toward various goals.

Finally, and closely linked to the process of self-observation, is the self-reflection phase of the self-regulatory feedback cycle. At the end of each day in TDP classrooms an evaluation meeting is held where students reflect on their day and evaluate progress toward individual goals. High levels of praise and reinforcement for even the smallest of accomplishments are aimed at boosting students' feelings of self-efficacy, with the hope that this will contribute to increased motivation to persevere toward personal goals. In addition to self-judgments, students make attributions for their performance and consider strategies to adapt their behavior in the future. Individual goals are adapted on a weekly

basis as needed to maximize each student's potential for success. Thus, the cycle of self-regulatory efforts continues into the forethought phase.

Central to the definition of self-regulation is the ability to *self-generate* and manage thoughts, feelings, and actions that are focused on attaining personal goals. Students must therefore have the opportunity to engage in these processes without the program's external structure in order to be truly self-regulated. As students achieve the highest level of self-regulatory functioning (the "Independent" level), they are removed from the point system and required to regulate their own behavior without the external contingencies associated with the behavior management system. It is at this point that students are able to truly demonstrate their acquired skills as a self-regulated individual, exhibiting the behavioral and academic self-control necessary to reach their long-term goals.

The present research seeks to investigate this self-regulatory approach, which trains antisocial youth in the cognitive, affective, and behavioral processes that enable students to regulate their behavior and work productively in school. Although it is assumed that the program leads to the development of specific self-regulatory skills, no effort has been made to document that assumption to date. Furthermore, this study contributes to ongoing research by investigating specific cognitive processes in the transfer of self-regulatory skill from the treatment setting to other environments outside the treatment setting. In particular, the role of motivational and affective factors are examined as they relate to students' progress toward achieving long-term personal, academic, and behavioral goals. It is expected that this training program will have a

positive influence on various social and outcome measures developed to assess self-regulation skills and their transfer to outside of school contexts.

Figure 1

Self-regulatory Feedback Loop

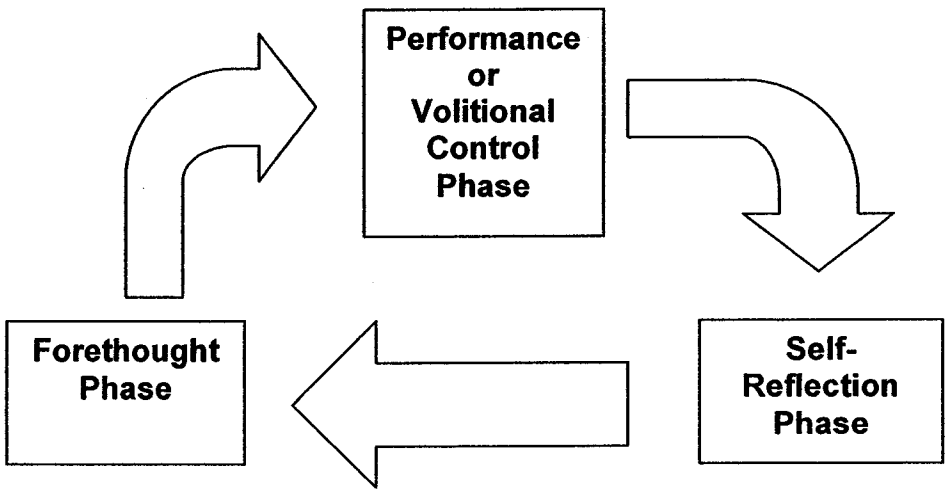
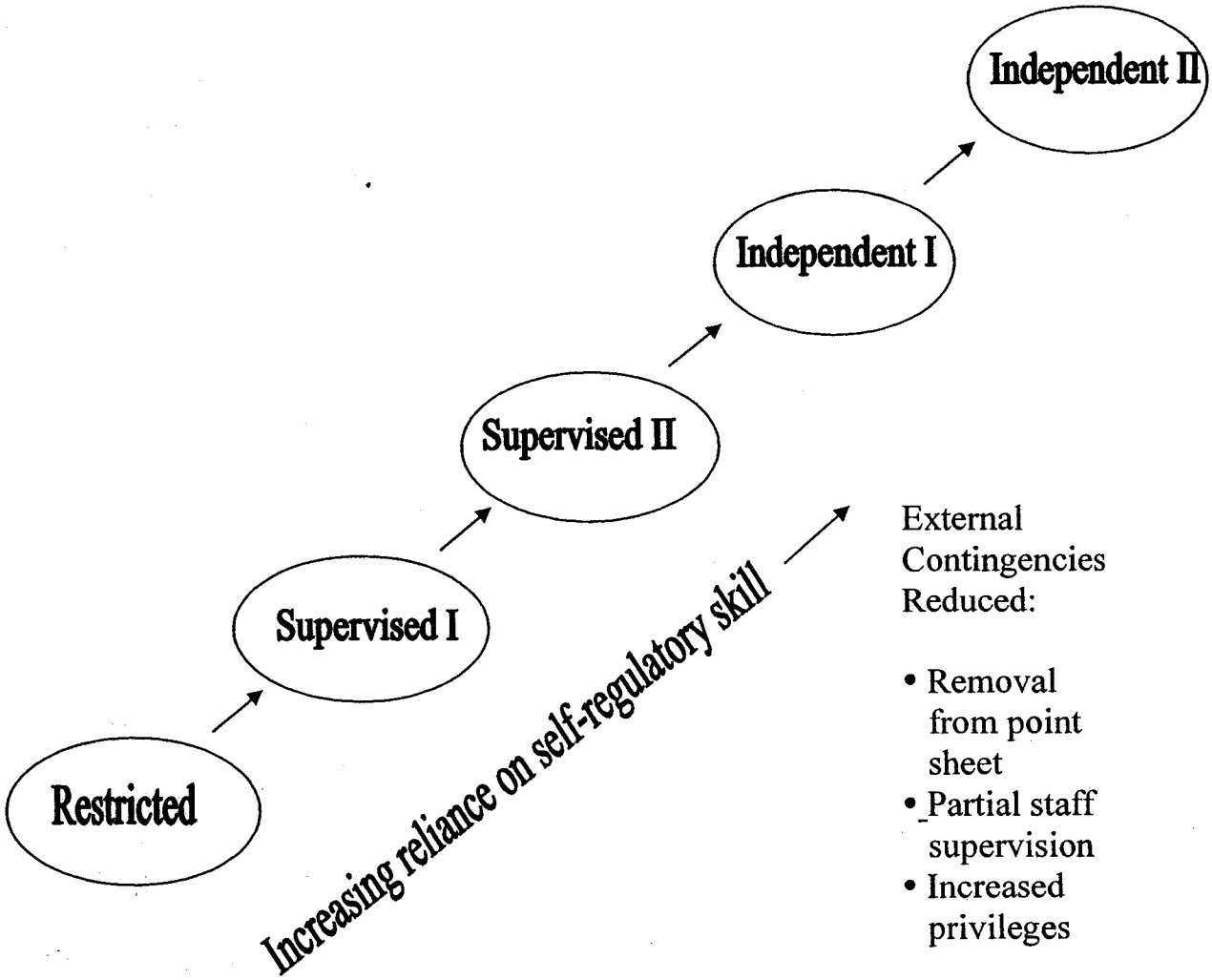


Figure 2

Therapeutic Day Program Level System



Chapter Two

Literature Review

Overview

This chapter will describe previous conceptualizations of self-regulation that have governed interventions with antisocial youth, and will compare them with a social-cognitive view of self-regulation. The role of specific self-regulatory processes in remediating the problems associated with emotionally and behaviorally disordered adolescents are also discussed. Finally, goals of the present research in extending the existing literature base on self-regulation and interventions with antisocial youth are presented.

Existing "Self-Regulatory" Training Approaches

Historically, self-regulation interventions with antisocial youth have been based on metacognitive, self-control, and self-management approaches. Each of these approaches will be described and discussed below.

Metacognitive Approaches

Metacognitive theorists have operationalized self-regulation in terms of selecting appropriate strategies, testing one's comprehension and state of knowledge, remediating deficiencies, and recognizing the utility of various strategies (Brown, 1984, Paris, Cross, & Lipson, 1984; Weinstein & Mayer, 1986). Although such metacognitive training strategies appear to increase academic behaviors such as reading awareness and comprehension, students do not use the learning strategies consistently, nor do they transfer the metacognitive skills to other types of tasks (Tharp & Gallimore, 1985). Several studies investigated the use of metacognitive training with behaviorally

disordered children and adolescents to increase interpersonal problem-solving skills (Larson, 1989; Michelson, 1983; & Thacker, 1989). Although these interventions were successful in demonstrating cognitive gains, these gains were not evident in changed behavior or generalized to other social contexts (Coleman, Wheeler, & Webber, 1993). Bandura et al. (1996) notes a limitation of metacognitive approaches: In addition to the skills involved in regulation of cognition, adaptive academic and behavioral functioning, students need to regulate motivational, affective, and social processes. Although metacognition plays an important role in self-regulation, context related self-beliefs and affective reactions are also central to the self-regulatory process (Zimmerman, 1999).

Self-Control and Self-Management Interventions

During the late 1970's and early 1980's there was a surge of social skills interventions based on a molecular model of social competence deficits (Gumpel & Shlomit, 2000). According to such molecular approaches, prosocial behaviors are viewed as overt responses to social discriminative stimuli that may be taught by breaking down global skills into small behavioral units such as voice tone, body posture, and eye contact (Gumpel & Shlomit, 2000). Despite the wide application of this approach with behaviorally disordered youth, little success was achieved in generalizing and maintaining treatment gains (DuPaul & Eckert, 1994). Generalization problems led to an extension of the molecular model to include both overt and covert steps necessary to develop prosocial skills (Gumpel & Shlomit, 2000). Rather than teach specific behavioral responses that are linked to discriminative stimuli, these process approaches focus on teaching individuals global social problem-solving skills, which are less context-bound.

The ancillary set of skills described by process approaches, which may be required to support generalization of prosocial skills, have typically been referred to as "self-control" or "self-management" skills. The term "self-control" was defined by some researchers as the ability to control the variables that alter one's own behavior; including both environmental factors and individual responses to those factors (Hartig & Kanfer, 1972; Meichenbaum & Goodman, 1969; 1971). Others conceptualized "behavioral self-control" as comprising of self-assessment, self-recording, self-determination of reinforcement, and self-administration of reinforcement (Bandura & Perloff, 1967; Glynn & Thomas, 1974; Glynn, Thomas, & Shee, 1973). Still others used the term "self-management" to describe similar procedures, including self-monitoring, self-evaluation, self-reinforcement and self-instruction (Hughes, Ruhl, & Misra, 1989; Kanfer, 1975; Kanfer & Karoly, 1972).

Unlike metacognitive approaches, self-control and self-management approaches have focused on a limited number of these behavioral processes. Self-monitoring requires individuals to assess and record the occurrence of a target behavior. Self-evaluation involves comparing one's performance to an established criteria and making a judgment regarding the quality of the performance. Self-reinforcement refers to the selection and self-administration of a reinforcer when the established performance criteria are met. Finally, self-instruction focuses on teaching individuals to covertly engage in a series of steps involved in social or academic problem-solving (Hughes, Ruhl, & Misra, 1989). These behavioral interventions often involve a device, recorded tone, or other cues to remind students to self-monitor, and are usually combined in a comprehensive

treatment package involving skills training and behaviorally-contingent reinforcement. Much of the research in this area consists of single case or small group designs.

Although at times the terms "self-control" and "self-management" have been used interchangeably, Kanfer and Gaelick-Buys (1991) make a conceptual distinction between the two. These researchers define self-management techniques as prescriptive methods that rely heavily on the client's involvement in the change process and that prepare the client to handle social and personal interactions more effectively. Self-management techniques identified by Kanfer and Gaelick-Buys (1991) include self-observation, contingent self-rewards, problem solving, and contracts. The term self-control, on the other hand, is used to describe an individual's behavior in a specific situation. According to this model, the exercise of self-control involves choosing and engaging in a less enticing behavior over another, more tempting response. In such a situation, self-management methods are applied in order to help the individual exercise self-control (Kanfer & Gaelick-Buys, 1991). The following review includes studies of interventions that may be considered self-management techniques by the above definition.

Glynn and Thomas (1974) observed small and unstable increases in the on-task behavior of regular education elementary-aged students trained in self-management procedures including self-assessment, self-recording, and self-reinforcement. The introduction of a cueing procedure, combined with the self-management strategies, produced a high and stable increase in on-task behavior. Discontinuation of cueing and reinforcement procedures, however, resulted in the lack of generalization of treatment effects at a two-week follow-up.

Self-evaluation procedures were also used in two studies involving behaviorally disordered elementary-aged students to increase on-task and other appropriate classroom behavior (Clark & McKenzie, 1989; Rhode, Morgan, & Young, 1983). In both studies, self-evaluation procedures were embedded in training packages that included systematic and contingent external reinforcement. When generalization did not extend from the resource room to students' regular classrooms, Rhode, Morgan, and Young (1983) implemented a "less intense" form of self-evaluation to enable them to claim generalization across settings. Clark and McKenzie (1989) also introduced self-evaluation procedures, as well as the continuation of back-up reinforcers, to students in their regular classrooms to facilitate generalization of behavioral gains from the resource room training setting.

Lonnecker, Brady, McPherson, and Hawkins (1994) used video self-assessment and self-modeling procedures to foster cooperative classroom behaviors in two second-grade children with learning and behavior problems. Students first viewed videotapes of themselves and identified both cooperative and uncooperative behavior. Next they were asked to role-play (self-model) and rehearse cooperative behavior in various situations from video-taped language arts sessions. Cooperative behavior increased in both the training setting (language arts) and two non-training settings (science or mathematics and speech).

Based on Bandura's (1977) distinction between the acquisition and performance of a behavior, Gumpel and David (2000) attributed the social skill deficits of antisocial youth to a performance deficit rather than a skill deficit. Using a treatment approach based on an activation model, these researchers used self-monitoring procedures

combined with cueing and performance feedback to promote prosocial behavior in three elementary-aged boys. The activation training involved in this study did not differ significantly from the self-monitoring procedures employed in various other "self-control" and "self-management" training packages. Claims of "stable and generalized" treatment effects were supported by six to ten week follow-up data in the same context (playground) without the self-monitoring device.

In addition to their demonstrated effectiveness with children, self-management procedures have been used with similar results for behaviorally disordered adolescents. In one study, self-evaluation procedures reduced the off-task and disruptive behavior of adolescents in a resource room, however, little or no generalization of treatment gains were observed in students' regular education classrooms (Smith, Young, West, Morgan, & Rhode, 1988). The self-evaluation procedure involved having students rate their own behavior on a 0-5 point scale and compare their evaluations with teacher ratings. Self-evaluations that matched teacher ratings within one point earned the student tokens that could be exchanged for various reinforcers. A fading procedure decreased the intervals at which self and teacher ratings were conducted. Following a return to baseline phase during which disruptive behavior increased to near baseline levels, students rated their behavior and matched self-evaluations to teacher ratings every 30 minutes. When generalization of behavioral gains did not occur spontaneously to regular education classrooms, the self-evaluation with teacher matching procedure was introduced. Even with the introduction of treatment to regular education classroom settings, no significant improvements in behavior occurred.

Hogan and Prater (1993) used a self-monitoring technique with a behaviorally disordered peer tutor. The student was a male adolescent who tutored a learning disabled peer. Although self-monitoring alone produced only slight improvements in disruptive behavior, the addition of a self-instructional component was successful in eliminating disruptive behavior both in the resource room where training occurred, and in a general education mathematics classroom where self-monitoring procedures were continued. The self-instructional component was a strategy involving a step-by-step checklist used by the student prior to a disruptive outburst. The checklist, which visually cued the student to stop, count, and think before acting, was faded as the student learned to verbalize the steps, first orally and then silently.

In another study, three seriously emotionally disturbed adolescents demonstrated improved on-task and socially appropriate behavior following a treatment package that included self-assessment, self-recording, and self-reinforcement combined with social skills training and external reinforcement (Ninness, Fuerst, Rutherford, & Glenn, 1991). These behavioral gains occurred in the context of a self-contained special education classroom in the absence of teacher supervision. Transfer of skill did not occur in the hallway between classes until students were given explicit instruction to employ self-management procedures in that setting.

Another self-management training package including self-assessment, self-instruction, and self-recording also led to behavioral improvements in four adolescent males in the absence of supervision (Ninness, Ellis, Miller, Baker, & Rutherford, 1995). Although programmed generalization strategies fostered transfer of skill to an unsupervised setting (outside of the school cafeteria prior to lunch), behavioral

improvements were lost during the reversal phase when self-assessment contingent reinforcement was removed. Likewise, Gregory, Kehle, and McLoughlin (1997) increased the on-task behavior of three adolescents using self-recording, self-evaluation, and self-reinforcement. Although these gains generalized from a self-contained classroom to a regular education setting, during the reversal phase in which treatment was withdrawn, all subjects returned to high levels of off-task behavior.

Finally, Peterson and Lloyd (1999) fostered the generalization of behavioral gains in 29 at-risk middle-school students identified by their teachers. This was a prevention program that utilized social skills training with teacher-matched self-monitoring that led to improved behavior in up to six different class settings. Once again, transfer of skill involved some level of programmed generalization strategy to transfer settings that remained within an educational context.

To summarize, research on self-control and self-management training has demonstrated the efficacy of these behavioral approaches, especially in the context of a comprehensive treatment package. However, the issue of generalization has continued to plague researchers and practitioners working with antisocial youth. Efforts to improve self-control and foster the transfer of self-management skills have occurred within various school environments, such as from a resource room or self-contained classroom to a regular education classroom, or from a supervised school setting to an unsupervised one. Research along these lines consistently indicates that treatment effects fail to generalize unless systematically programmed generalization strategies are incorporated (Nelson, Smith, Young, & Dodd, 1991). To date, there has been a dearth of research investigating the generalization of self-management skills to out-of-school contexts.

From their comprehensive descriptive review of the self-control or self-management research, Webber, Scheuermann, McCall, and Coleman (1993) concluded that programmed transfer procedures are effective in promoting positive behavioral change with special education students in various school settings. They question, however, the exact causes of reactivity effects of self-monitoring, and whether the underlying variables involved "true" self-regulation. Because of the limited evidence regarding successful generalization of behavioral gains with antisocial youth, it remains unclear whether such limitations are a function of external contingencies (e.g. classroom variables) or whether self-monitoring failed to be internalized. Gardner and Cole (1988) list possible variables that affect the reactivity of self-monitoring, including specific performance goals and motivation for behavior change. Webber et al. (1993) note that none of the twenty-seven intervention studies included in their review reported the differential effects of goal setting or feedback. Furthermore, none of these studies reported information regarding students' motivation for behavioral change. Such motivational beliefs may be important in fostering maintenance and generalization of behavioral improvements beyond the school setting.

Role of Self-Efficacy Beliefs

Self-regulatory skills are of little use unless students are motivated to use them, and perceived efficacy has been shown to play a critical role in motivation to self-regulate (Bandura, 1997; Zimmerman & Martinez-Pons, 1990). Specifically, self-efficacy beliefs determine which tasks an individual chooses to take on and the amount of effort, persistence, and perseverance demonstrated in relation to those tasks (Bandura, 1982; Schunk, 1984, 1985; Zimmerman, Bandura, & Martinez-Pons, 1992). Through

their impact on these cognitive, motivational, affective, and choice processes, self-efficacy beliefs have been linked to a variety of academic and behavioral outcomes specific to children and adolescents (Bandura, 1997).

Self-efficacy and goal orientation (planning and setting of goals in everyday life) predict behavioral, emotional, and cognitive indices of adolescent school engagement (Caraway, Tucker, Reinke, & Hall, 2003). There is also considerable evidence that children's efficacy beliefs about regulating their own learning contribute to academic success by increasing motivation and fostering strategic thinking (Bandura, 1993; Schunk, 1989; Zimmerman, 1995). Bandura et al. (1996) illustrated the broad set of psychosocial processes involved in children's perceived academic efficacy, which is mediated through academic aspirations, prosocial peer relations, lowered vulnerability to depression, and adherence to moral self-sanctions. Perceived efficacy to resist peer pressure to engage in delinquent activities also impacted academic achievement, both directly and indirectly by curtailing delinquent behavior and supporting adherence to self-sanctions for antisocial conduct (Bandura, et al., 1996).

Other studies found that adolescents' self-efficacy to resist peer pressure for delinquent activities counteracts antisocial behavior directly, as well as indirectly through open family communication (Caprara, Ragalia, & Bandura, 2002; Caprara, Scabini, Barbaranelli, Pastorelli, Regalia, & Bandura, 1998). Bandura, et al. (2001) found that high perceived academic and self-regulatory self-efficacy also deterred children's transgressive behavior, both directly and indirectly by fostering prosocial behavior.

In another study, a lack of perceived social and academic efficacy contributed to childhood depression, both directly and through the impact on academic achievement,

prosocialness, and antisocial behavior (Bandura, Pastorelli, Barbaranelli, & Caprara, 1999). Finally, Bandura et al. (2003) found that adolescent prosocial behavior, delinquent behavior, and depression are also impacted directly by self-efficacy to manage academic development, to resist social pressures for antisocial activities, and to engage oneself empathically with the emotional experiences of others. Self-efficacy to regulate one's positive and negative emotions impacted adolescent behavior indirectly through these behavioral forms of self-efficacy.

The motivational role of self-efficacy in the process of self-regulation has been well documented. Furthermore, there is strong research evidence in recent years that self-efficacy is involved, both directly and indirectly through various other psychosocial variables, in adolescent prosocial and delinquent behavior. One question that remains is whether self-regulatory training programs impact the efficacy perceptions of antisocial youth. A second issue relates to the role of self-efficacy beliefs in the generalization of self-regulatory skill to contexts outside of the training environment, particularly those outside of the school setting.

Conclusion

Regulation of behavior, affect, cognition, and interpersonal relationships is essential to adaptive functioning in life. Much of the impulsive and aggressive behavior typified by antisocial youth may be classified as an inability to self-regulate. Such dysfunction in personal self-regulation often stems from counterproductive self-beliefs and behaviors that have become entrenched over time and are therefore very difficult to alter (Prochaska & DiClemente, 1992; Zimmerman, 1999). Efforts to improve aspects of self-regulatory skill in antisocial youth have shown promise by effecting behavioral

change in treatment settings and, in some cases, other educational environments. However, adolescents spend a significant amount of time in unsupervised, unstructured environments outside of the school setting. There appears to be a missing link in fostering the transfer of behavioral control skills to those out-of-school contexts. Perhaps interventions that are based on a more comprehensive conceptualization of self-regulation will foster the adaptive self-beliefs and behavior that are needed to improve functioning across the various settings that life occurs.

The present research seeks to extend the existing literature on self-regulatory processes and antisocial youth in the following ways: 1.) By examining the effects of a training program designed in accordance with a more comprehensive, social-cognitive conceptualization of self-regulation. 2.) By studying the impact of this self-regulation training program on both overt self-regulated behavior and covert self-processes involved in self-regulation, including self-efficacy. 3.) By investigating the covert self-processes involved in generalization of self-regulatory skill to out-of-school contexts. Specific hypotheses to accomplish these outcomes will be presented in chapter three.

Chapter Three

Methodology

Overview

This chapter will discuss the methodology for the present research, including a description of the sample, measures, procedures, and methods of analysis. In addition, study hypotheses are presented.

Sample

Subjects were recruited from the Therapeutic Day Program (TDP) at Cooperative Educational Services (CES), a regional special education school placement for children and adolescents in grades K-12 with a variety of emotional and behavioral difficulties. Students in the Fairfield County, CT area are eligible for placement in the program after being referred by their local school districts. The program, which preexists the present research, offers a comprehensive treatment approach with the goal of returning students to a school placement within their local school districts.

Sixty-one students participate in the middle and high school components of the Therapeutic Day Program in classrooms that consist of 4-8 students. The research project was introduced to these students in their classroom during the morning meeting. The principal investigator verbally explained the purpose of the study and the procedures involved. Letters of introduction, parental consent and student assent forms were mailed to all parents (see Appendixes A, B, and C). Parents and students who wished to participate were required to sign and return the consent and assent forms in a pre-addressed, stamped envelope.

Out of the initial pool of 61 potential subjects, 38 families responded and 36 students participated in the study (two students left the program due to hospitalization). Students ranged in age from 12 to 19 years old with an average age of 15 and an average IQ of 99. Table 1 (page 43) summarizes the demographic constitution of the sample. The proportion of female participants (19%) was consistent with the overall proportion of female students enrolled in the Therapeutic Day Program. Likewise, the ethnic diversity of the sample was comparable to that of students enrolled in the program (67% White, 22% Black, 8% Hispanic, and 3% Asian or Pacific Islander). The majority of study participants (78%) were educationally classified as SED (Serious Emotional Disturbance), while 11% were classified as SED/OHI (Other Health Impairment – e.g. ADHD), 8% SED/SL (Speech/Language Impairment), and 3% Multiply Disabled. Students receiving pharmacological treatment came to the program with a medication plan already in effect. Regression analyses revealed that self-regulatory training level was not predicted by gender, ethnicity, IQ, educational classification, age, or school grade, indicating that group membership does not appear to be determined by these variables.

The data of one student whose score was an outlier was excluded from the analyses. This female student, who was functioning at the highest of the training levels at the time of data collection, had previously expressed to the principle investigator her unhappiness with the program. Prior to group administration of the self-report measures, this student indicated that she viewed a high score on these measures as a statement of support for the program. Her data for the self-regulation and self-efficacy measures were

uncharacteristic for the Independent 2 level she had achieved in the program. Thus, the total number of study participants included for data analysis was 35.

Measures

The independent variable, self-regulation training, was measured according to five self-regulatory training levels upon which the therapeutic day program is based (see Table 2 on page 44). Training levels range from restricted (n = 11), which is associated with very high external control, to supervised 1 (n = 4) and supervised 2 (n = 9) levels, which are associated with slightly decreased external control as self-regulatory skill increases, and finally to independent 1 (n = 3) and independent 2 (n = 8) levels, which are associated with little external control as students rely primarily on their own ability to self-regulate.

Upon entering the program, students begin on a supervised 1 level. Behaviorally contingent points are assigned by teachers following every 30 minute period, and at the end of the day students calculate their point percentage. Movement within the level system is based on weekly point averages. Students are required to maintain a minimum weekly point average in order to remain on their current level. Progression to a higher level requires students to increase their weekly point average for a delineated period of time specific to each level. Weekly averages that dip below specified criteria result in movement to a lower level within the system. Information regarding students' classroom levels was collected from teachers with the "Student Information Form" (Appendix J).

Table 3 on page 45 lists all of the dependent measures included in the present study. Dependent variables include students' self-regulated behavior, both in school and outside of school; self-efficacy beliefs for their ability to control their behavior in school

and outside of school; academic achievement; attendance; school-related disciplinary actions; and arrests. Measures of self-regulated behavior include blinded observer ratings of on-task behavior in the classroom, two student self-report measures (Appendixes D and E), a teacher rating scale for in-school behavior (Appendix F), and a parent rating scale for out-of-school behavior (Appendix G).

The present research involves the development of a number of scales to assess students' self-regulated behavior and their self-efficacy for behavioral control. Based on a social-cognitive model of self-regulation, specific subprocesses associated with the three phases of self-regulation were identified in terms of their impact on the academic and social functioning of students with severe emotional and behavioral difficulties (see Table 4 on page 46). In addition to self-efficacy, the identified sub-processes include goal setting, strategic planning, self-instruction, attention focusing, task strategies, self-recording, self-evaluation, and adaptation. Student, teacher, and parent measures were then developed to assess student behavior that reflects these self-regulation subprocesses. Whenever possible, parallel items were created for students, teachers, and parents.

Because student self-reports are the best (and in some cases only) way of collecting information regarding certain covert processes, the student self-report scales are the most comprehensive in terms of addressing all of the identified subprocesses. Consequently, the student self-report measures for self-regulated behavior in-school and out-of-school contain twenty-two and twenty-one items, respectively, while the teacher rating scale contains only ten items and the parent rating eleven items. Subprocesses involved in the forethought phase of self-regulation (self-efficacy, goal setting and

strategic planning) are assessed solely with the student self-report measures. The majority of other items in the student self-report measures (72%) assess subprocesses related to the performance control phase, which is roughly comparable to the percentage of items in the teacher (80%) and parent (91%) ratings that asses performance control subprocesses. Finally, 16% of the items on the self-report measures assess self-reflection subprocess, while 20% of items on the teacher rating and 9% of the items on the parent rating assess parallel subprocesses.

The student self-report measures of self-regulated behavior target various sub-processes. In the forethought phase, task analysis sub-processes of goal setting and strategic planning are assessed. For example, the in-school measure asks students "When you come to school in the beginning of the week, how often do you set a weekly goal for yourself?" while the out-of-school measure asks "When you do homework or study for a test outside of school, how often do you set goals for yourself?". Self-motivational efficacy beliefs associated with the forethought phase are assessed in the student self-efficacy measures.

Also assessed in the student self-regulation measures are self-control and self-observation sub-processes of the performance control phase of self-regulation. Self-instruction is assessed with questions such as "When working toward your daily goal, how often do you talk yourself through the steps involved in achieving that goal?". Other items target attention focusing sub-processes: "When you do homework or study for a test outside of school, how often can you stay focused and finish what you need to do?". Task strategies, for example "If there is a disruption in your day, how often can you find

a way to refocus and stay on task during the rest of the day?", and self-recording, "How often do you record your points each day?" are also evaluated.

Finally, self-judgment and self-reaction sub-processes that are involved in the self-reflection phase are assessed in the student self-report measures with questions such as "How often do you compare your performance with that of your classmates?" (self-evaluation) and "When you have difficulty doing your homework outside of school, how often do you try to figure out a different strategy to help get it done?" (adaptation). All items on the student self-reported self-regulation measures are assessed with a four-point Likert-type scale ranging from "Never" to "Almost always".

Teacher and parent rating scales (Appendixes F and G) were also developed to measure students' self-regulated behavior in school and outside of school with a four-point Likert-type scale. Items on these rating scales primarily assess self-control sub-processes of the performance control phase involved in self-regulation. Attention focusing is evaluated with items such as "How often does the student remain on-task and focused on the activity rather than sleep, stare into space, talk to another student, etc.?" (teacher rating) and "My child is able to remain focused on his/her homework outside of school." (parent rating). Evaluation of students' use of task strategies is reflected in items on the teacher rating scale such as "How often does the student take space appropriately or use some other anger management strategy (e.g. breathe deeply or count to ten) rather than throw, kick, hit, destroy, or knock over something?" and items on the parent rating scale including "If my child has difficulty with his/her homework, he/she uses a strategy to figure it out (e.g. asks for help or reads the directions again)." Finally, the self-reflection sub-process of adaptation is assessed with items on the teacher rating scale

such as "How often does the student change from using one strategy to another in order to deal effectively with a problem?"

Measures of self-efficacy include two self-report measures completed by the student (Appendixes H and I). One measure evaluates students' efficacy for behavioral control in school with items such as "How well can you refrain from swearing or raising your voice in school?" The other self-efficacy measure will assess students' efficacy for regulating their behavior outside of school, for example "How well can you resolve problems with other kids outside of school without fighting or making threats?" Items on both self-efficacy measures are assessed with a four-point Likert-type scale ranging from "Not very well at all" to "Very well".

Finally, the Student Information Form (Appendix J) was completed by classroom teachers in order to gain information regarding attendance, on-task behavior, academic achievement (grades), and school-related disciplinary actions such as temporary removal from the classroom or school suspension.

Validity of Measures

Existing literature provides empirical support for the general validity and reliability of self-report measures and teacher or parent rating scales. Reviews of the literature indicate that children and adolescents' self-reported appraisals of competence and efficacy are in fact valid measures of performance in academic domains (Assor & Connell,1992; Byrne, 1984). Assor and Connell (1992) conclude that beginning in the third or fourth grade, children are cognitively capable of reporting their own competence and efficacy with moderate levels of inter-individual stability over periods of months and even years. In order to optimize the validity of children's self-reports, Assor and Connell

(1992) recommend ensuring clarity with respect to the wording of instructions and individual items, using subject codes on questionnaires, limiting Likert-type scales to four points, and administering questionnaires in a group format for older children and adolescents. These recommendations were considered during the development of scales for the present research in order to maximize their validity.

In addition to favorable evidence for self-assessment of efficacy and academic-related behaviors, there is empirical support for the validity of adolescent self-reports of antisocial behavior. Smith, Pelham, Gnagy, Molina, and Evans (2000) found that although adolescents were unreliable sources of information regarding ADHD symptoms, those adolescents receiving treatment for ADHD were able to provide valid self-reports about negative social behavior. Another study examined the validity of self-reported delinquency among court-probated juveniles and found moderately strong correlations with probation records of police contacts and adjudications (Cashel, 2003). Adolescents have also been shown to provide valid self-reports of smoking (Stacy, Flay, Sussman, Brown, Santi, & Best, 1990), as well as alcohol and drug use (Williams, Toomey, McGovern, Wagenaar, & Perry, 1995; Winters, Stinchfield, Henly, & Schwartz, 1990). Based on a review of available methods of validating adolescent self-report surveys, Swadi (1990) concludes that with careful planning and execution, self-report measures can yield reasonably and often even highly valid results. The degree of validity may rely on measures taken to ensure confidentiality, proper sampling, careful design, and testing of the self-report survey.

Parents and teachers have also been shown to provide valid information regarding the behavior of children and adolescents. Bird, et. al (1996) reported good construct,

discriminant, and concurrent validity for two parent ratings and one adolescent self-report scale. Similarly, McConaughy (1993) found medium to large long-term stability of parent ratings as well as significant predictive correlations between parent, teacher, and self-ratings of child problem behaviors. McConaughy and Mattison (1994) also report medium to large parent-teacher agreement for ratings of child problem behavior, and correlations were highest for externalizing symptoms such as aggressive behavior, attention problems, and delinquent behavior. Finally, comparisons by Bailey, Bender, and Montgomery (1983) indicated that self and teacher ratings of social and behavioral problems were each of approximately equal validity when compared with direct observations of time spent on task in the classroom.

Student, teacher, and parent report measures were developed specifically for this study and have not previously been used with any other group. The internal consistency of these scales was estimated with Cronbach's alpha coefficient. To assess the reliability of blinded observations of on-task behavior, the researcher simultaneously conducted 25% of the classroom observations with the blinded observer so that an inter-rater reliability coefficient could be calculated. The criterion-related validity of the student self-report self-regulation measures was evaluated by calculating the degree to which these measures predict blinded observer ratings of on-task behavior, grades, teacher ratings of self-regulated behavior, attendance, number of disciplinary actions, and arrests. Finally, correlations among all of the self-regulation measures were calculated to gather evidence for the construct validity of these measures. The results of these reliability and validity analyses are reported and discussed in chapters 4 and 5, respectively.

Procedures

After signed parental consent and student assent forms were returned, the principal investigator asked participating students to complete the four self-report measures. The principal investigator explained that the purpose of the questionnaires is to learn about different strategies that students might use in order to do well in school and control their behavior in and out of school. Completion of the self-report measures occurred on two consecutive mornings in a group format during 30-minute non-academic periods. Items were read aloud by the principal investigator as students completed each measure.

Following the completion of student self-report measures, a blinded observer rated the behavior of participating students in their classrooms for one hour in the morning from 8:30 to 9:30 a.m. The blinded observer was an undergraduate psychology student from Quinnipiac University in Hamden, CT. A fixed interval, one-minute time-sampling observation procedure was used to assess the on-task behavior of study participants. At one-minute intervals the observer recorded whether the student being observed was on-task or off-task. The observer was situated as discreetly as possible in the back of the classroom. She observed in classrooms for two days prior to data collection in order to minimize potential observer effects on students' behavior. Furthermore, the observer minimized contact with students by avoiding eye contact and other interaction.

Teachers were then asked to complete the teacher rating scale for each student participating in the study (Appendix F) to assess the self-regulated behavior of students in school. In addition, teachers completed the student information form (Appendix J) in order to obtain information regarding students' attendance, grades, classroom level,

points earned, and disciplinary actions. Finally, a parent rating measure (Appendix G) was mailed home to the parent of each study participant to assess the self-regulated behavior of students outside of school. A pre-addressed, stamped envelope was provided for parents to mail back the completed rating scales. Follow-up notes in the daily communication log and/or telephone calls home were conducted to ensure completion of the parent rating scales. One parent rating scale was mailed to a community social worker who works with the parent on an ongoing basis as a parent aid. Due to the parent's difficulty reading and completing the questionnaire, the social worker sat down with the parent and went through the questionnaire verbally, circling that parent's response to each item.

Research Design

A cross-sectional, correlational research design involving five groups was employed (see Figure 3). The groups consisted of students who are functioning at the five self-regulatory levels ranging from restricted to independent. The self-regulatory training level that students were functioning at during the week that self-report measures were completed was used as the independent variable. No attempt was made to measure changes in individual performance, but rather, differences in functioning at each level were documented. Thus, student self-reports, teacher ratings, and parent ratings were measured once within that one-week time frame. Blinded observer ratings of on-task behavior occurred once per student within a four-week period of the other measures. Records from the third quarter, which began in January and ended one week prior to completion of the student self-report measures, of attendance, disciplinary actions,

suspensions, and grades were used as additional outcome measures. One final outcome measure was number of arrests that occurred during that same time frame.

It was hypothesized that students would demonstrate increased self-regulatory skill and self-efficacy for behavioral control as they progress through the program's level system. Specifically, it was expected that the level system would positively correlate with the students' in-school self-regulation and self-efficacy measures, the teacher ratings, the blinded observer ratings of on-task behavior, grades, and attendance. Furthermore, it was anticipated that self-regulatory level would be negatively correlated with number of disciplinary actions and suspensions. A second key issue is whether this self-regulatory training generalizes outside the structured school environment for the students. Although this is a primary goal of the program, generalization of skill has not yet been demonstrated. The present research sought to test the hypotheses that progression through the level system would also be positively correlated with the student self-regulation and self-efficacy measures for behavior outside of school and with parent ratings of students' behavior outside of school, and negatively correlated with arrest records.

Descriptive statistics were computed and correlational analyses were conducted to explore relationships among all of the dependent variables. Self-regulatory training level was also analyzed as a dependent measure to test for differences among groups related to IQ, gender, age, and ethnicity.

Table 1
Demographic Constitution of Sample

Variable	***n***
Gender	
Male	28
Female	7
Ethnicity	
African American	8
Asian or Pacific Islander	1
Hispanic	3
White	23
Educational Classification	
Serious Emotional Disturbance	27
Other Health Impairment	4
Speech/Language Impairment	3
Multiply Disabled	1

Table 2
Therapeutic Day Program Level System

Level	Criteria for Earning Levels	Privileges and Restrictions of Levels
Independent II	While on Independent I, point percentage of 90% or above for four weeks, no major rule violations, bus incidents, or staff-initiated time-outs, 90% of homework assignments completed, and 87% or higher attendance	• Same as Independent I plus: • May go unsupervised to the cafeteria or other assigned areas with teacher's permission • Letter to parents and school district describing achievement • Possibility of being removed from point sheet after 4 weeks on Independent II • Possibility of driving to school
Independent I	While on Supervised II, point percentage of 90% or above for four consecutive weeks, during which time 90% of homework assignments completed, no major rule violations or bus incidents, and 87% or higher attendance	• Can go unsupervised to the bathroom, other classrooms, and the office with permission • May bring in personal items which are pre-approved by the teacher. • Can request to visit other classrooms • Eligible for after school activities • One free-time pass per week for morning work • Weekly (rather than daily) communication log • Eligible for all breaks
Supervised II	While on Supervised I level, point percentage is 85% or above for three consecutive weeks	• Continuous staff escort • No personal items • Can request permission to visit other classrooms • Eligible for after school activity contracts • Eligible for morning and afternoon breaks • School store privilege
Supervised I	While on restricted level, point percentage of 80% or above for one week	• Continuous staff escort • No personal items • No visiting other classrooms • Not eligible for after school activity contracts • Eligible for morning and afternoon breaks • School store privileges
Restricted	Point percentage for one week is lower than 70%	• Continuous staff escort • No personal items • No visiting other classrooms • Not eligible for morning or afternoon breaks • Not permitted to participate in recreation room or group earned activity time

Table 3

Dependent Measures

In School

- Student self-report self-regulation Measure (Appendix D)
- Student self-report self-efficacy measure (Appendix H)
- Blinded observer ratings of on-task behavior
- Teacher rating scale (Appendix F)
- School related disciplinary actions
- Suspensions
- Attendance
- Grades

Outside of School

- Student self-report self-regulation measure (Appendix E)
- Student self-report self-efficacy measure (Appendix I)
- Parent rating scale (Appendix G)
- Arrests

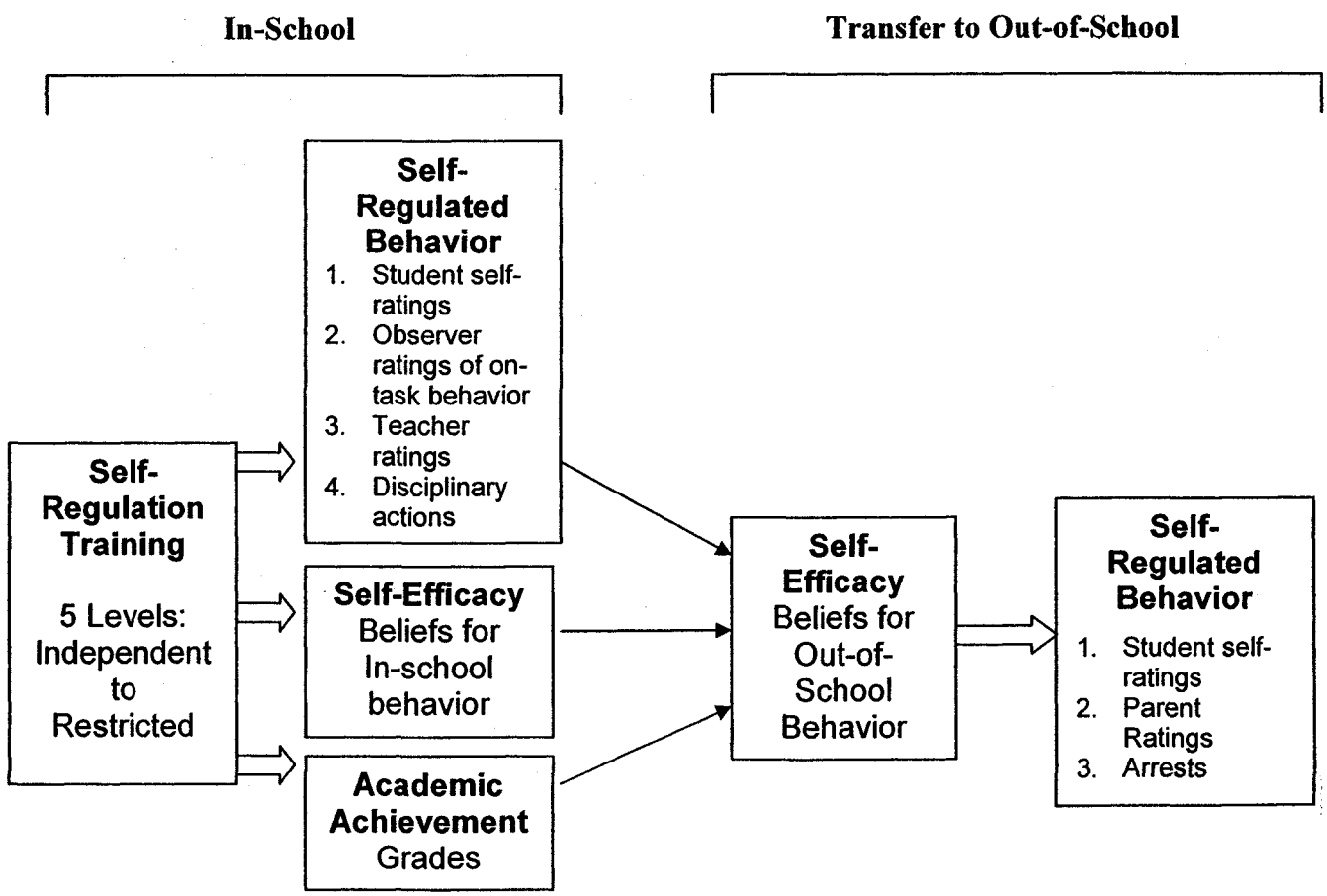
Table 4

Self-Regulatory Sub-Processes Assessed

Forethought Phase	**Performance Control Phase**	**Self-Reflection Phase**
Task Analysis	**Self-Control**	**Self-Judgment**
• Goal Setting	• Self-instruction	• Self-evaluation
• Strategic Planning	• Attention focusing	
	• Task strategies	
Self-Motivational Beliefs	**Self-Observation**	**Self-Reaction**
• Self-Efficacy	• Self-recording	• Adaptation

Figure 3

Conceptual Model of the Impact of Self-Regulatory Training



Chapter Four

Results

Overview

This chapter presents the results of the current study in four sections. First, the internal reliability of the newly developed measures and the inter-observer agreement for blinded on-task ratings are presented. Second, means and standard deviations of the five groups are presented. Third, correlational relationships relating to the main study hypotheses regarding the impact of training level are presented, along with the results of an exploratory path analysis. Finally, additional correlations among outcome variables are presented.

Reliability of Measures

Cronbach's alphas for the student self-regulation measures were .88 (in school) and .90 (out of school), while Cronbach's alphas for the student self-efficacy measures were .83 (in school) and .76 (out of school). For the teacher rating measure, Cronbach's alpha coefficient was .84, and for the parent rating measure Cronbach's alpha was .85. Thus, the internal consistency of these measures was satisfactory. In order to determine obtain an inter-observer reliability coefficient for the on-task ratings, the researcher jointly observed simultaneously conducted the students in 25% of the classroom observations with the blinded observer. Based on these observations, an interobserver agreement correlation coefficient of 96% was obtained.

Group Means and Standard Deviations for the Developed Measures

Of the 35 study participants, there were 11 students in group one (Restricted level), 4 students in group two (Supervised I level), 9 students in group three (Supervised

II level), 3 students in group four (Independent I level), and 8 students in group five (Independent II level). Table 5 on page 55 presents the means and standard deviations for each group on the student, teacher, and parent measures that were developed for the present study. On average, group one scored the lowest on all six of these measures. Students functioning at either the Independent I or Independent II level (groups four and five) obtained the highest average score on all of the developed measures. Means and standard deviations for additional study variables are presented in Table 6 on page 56.

Results of Correlational Analyses

Major hypotheses of the present study focus on whether or not students increase their level of self-regulatory skill, both in and outside of school, as they progress through the training program. Specifically, students' training level was expected to be positively correlated with their self-reported self-regulatory skill and self-efficacy, teacher and parent ratings of students' self-regulated behavior, blinded observer ratings of on-task behavior, and grades. Training level was hypothesized to be negatively correlated with absences, school related disciplinary actions, suspensions, and arrests.

Table 7 on page 57 presents the correlation matrix for all variables in the study. Consistent with anticipated outcomes, level of training is positively and significantly correlated with degree of self-regulation ($r = .47, p < .01$) and self-efficacy beliefs ($r = .39, p < .05$) in school, as reported by students. There is also a significant positive correlation ($r = .49, p < .01$) between training level and student self-efficacy beliefs regarding for their ability to self-regulate outside of school, and the correlation between level and self-regulatory skill outside of school approaches statistical significance ($r = .31, p < .06$). Furthermore, teacher perceptions of self-regulated behavior ($r = .68, p <$

.001) and grades ($r = .57, p < .001$) are positively correlated with training level, as are blinded observer ratings of classroom on-task behavior ($r = .45, p < .01$). Finally, as hypothesized, level of training is negatively correlated with number of absences ($r = -.52, p < .01$), in-school disciplinary actions ($r = -.51, p < .01$), suspensions ($r = -.40, p < .05$), and arrests ($r = -.38, p < .05$). Collectively, these results provide support for study hypotheses that the training program at CES increases students' self-regulatory skill in school and encourages generalization of such skill to environments outside of school.

Contrary to study hypotheses, parent ratings of student self-regulated behavior outside of school were not significantly correlated with level of training in school. Although there was no direct impact on parents' perceptions of student behavior, training level did influence a number of other indices of students' behavior outside of school, including arrests, students' self-efficacy for regulating their behavior outside of school, and to a slightly lesser extent, their self-reported self-regulated behavior itself. These variables, in turn, are correlated with parent ratings of behavior outside of school. Self-efficacy beliefs outside of school, in addition to being correlated with training level and parent ratings, are also correlated with number of absences and suspensions. Finally, self-regulatory training level is highly correlated with self-regulation and self-efficacy in school, which are highly correlated with self-regulatory skill and self-efficacy outside of school, which are in turn highly correlated with parent ratings of behavior. Thus, it appears that there may be an indirect relationship between self-regulatory training level and parent ratings of self-regulated behavior. Perhaps training level must first impact

students' feelings of efficacy and perceptions of self-regulatory skill outside of school before parents notice any behavioral differences in their children.

The hypothesized influences on parent ratings of students' behavior were explored further using path analysis to examine the flow of causality from level through student self-efficacy beliefs and self-reported self-regulated behavior outside of school to parent perceptions of behavior. Although path analysis cannot prove a theory to be correct, it can be used to reject causal models that represent a poor fit with the data (Kerlinger & Pedhazur, 1973). Figure 4 shows the path model that was the most parsimonious in reproducing the data, where the difference between the sample covariance matrix and the fitted covariance matrix was zero. Although neither training level nor student perceptions of self-regulated behavior outside of school exerted a significant direct effect on the parent measure, the effects of training and improved self-regulatory skill operated indirectly through students' self-efficacy.

This path model suggests that as students progress through the training program and become more capable of regulating their own behavior, both in and outside of school, they also become more efficacious about their ability to do so. As students' confidence increases, their parents notice behavioral improvements at home and in other contexts outside of school. A change in their child's attitude may be easier for parents to notice than a decrease in major rule violations or other antisocial behaviors that typically occur sporadically or on an infrequent basis.

Correlations Among Other Study Variables

Of additional interest are the relationships among self-regulation measures, including the student questionnaires, teacher and parent reports, grades, and other

objective indices of self-regulation such as attendance, arrests, disciplinary actions, and suspensions.

As expected, the student self-regulation measure for behavior in-school was positively and significantly correlated with self-efficacy in-school ($r = .53, p < .001$), blinded observer ratings of on-task behavior ($r = .46, p < .01$), and teacher ratings of students' behavior ($r = .41, p < .05$). In addition, students' self-efficacy regarding their behavior in-school was positively correlated with the behavioral ratings of teachers ($r = .37, p < .05$) and negatively correlated with absences ($r = -.38, p < .05$). Similarly, student self-reports of self-regulated behavior outside of school were positively correlated with self-efficacy out-of-school ($r = .77, p < .001$) and parent ratings of self-regulated behavior outside of school ($r = .36, p < .05$), as well as a number of indices reflecting self-regulation of behavior in school. Students' self-efficacy for controlling their behavior outside of school was positively correlated with parent ratings ($r = .59, p < .001$) and negatively correlated with arrests ($r = -.46, p < .01$), absences ($r = -.37, p < .05$), disciplinary actions ($r = -.35, p < .05$), and suspensions ($r = -.37, p < .05$).

These relationships among student self-report measures and other indices that are assumed to involve self-regulatory skill contribute to the validity of the newly developed measures. Furthermore, teacher, parent and blinded observer ratings that concur with the student measures add to the credibility of information provided by the students regarding their own behavior. Collectively, such correlations contribute to the overall confidence with which conclusions may be drawn.

Another important finding was the relationship between self-regulated behavior and self-efficacy in school and self-regulation and self-efficacy outside of school. These

correlations indicate that as students' skill and confidence for regulating their behavior in school increase, they are able to transfer such gains to other environments outside of school. Such results, without specific programmed generalization strategies or behavioral contingencies, are a unique contribution of the present study and provide further support for the generalization effects of the training program.

Bandura (1997) notes that critical to the transfer of self-control skills for behaviorally disordered youth is their self-efficacy for transferring such skill. Thus, perhaps self-efficacy for behavioral self-regulation in contexts other than school plays a key role in attaining generalization of self-regulatory skill to those environments. Interestingly, of all the variables investigated in the current study, self-efficacy was the only one that correlated significantly with every other variable measured. Thus, self-efficacy outside of school appears to be a major link between school-related and non-school related variables, supporting the theory that it is central to generalization of self-regulatory skill. Additional support for this theory comes from the critical role of self-efficacy outside of school in the previously described path model depicting the flow of causality from training level to parent ratings of students' self-regulated behavior.

Also of interest are the observed correlations of self-efficacy in school with self-regulation in school, and self-efficacy out of school with self-regulation out of school. These findings are consistent with existing literature, which identifies self-efficacy as a key motivational factor involved in the process of self-regulation (Bandura, 1997; Zimmerman & Martinez-Pons, 1990). One would expect, therefore, that as self-efficacy for behavioral self-regulation in school increases, so does self-regulated behavior itself. Likewise, there would be an expected relationship between efficacy for self-regulation

outside of school and self-regulated behavior outside of school. Because of the cyclical nature of the self-regulation feedback loop, as self-regulatory skill improves and impacts behavior, self-efficacy, in turn, increases further (Zimmerman, 1999).

Finally, there were several noteworthy correlations observed among other study variables related to students' self-regulated behavior. In addition to their relationship with the self-report measures, teacher reports of student self-regulated behavior in school were positively correlated with grades ($r = .51, p < .01$) and negatively correlated with disciplinary actions ($r = -.63, p < .001$), suspensions ($r = -.46, p < .01$), and absences ($r = -.41, p < .05$). Furthermore, these teacher ratings were validated by a positive correlation with blinded observer ratings of students' on-task behavior ($r = .55, p < .001$). Although grades were not significantly correlated with student self-reports of self-regulation, they were correlated with a number of other variables reflecting self-regulatory skill in school, including on-task behavior ($r = .38, p < .05$), teacher ratings ($r = .51, p < .01$), absences ($r = -.42, p < .05$), and disciplinary actions ($r = -.37, p < .05$). As discussed previously, parent ratings of students' behavior outside of school were validated by their significant negative correlation with number of arrests ($r = -.49, p < .01$), as well as by their relationship with students' self-reports of self-regulated behavior ($r = .36, p < .05$) and self-efficacy ($r = .59, p < .001$) outside of school.

Table 5

Means and Standard Deviations for each group on Student, Parent, and Teacher Rating Measures

	Group 1 Restricted Level *n*=11		**Group 2** Supervised 1 Level *n*=4		**Group 3** Supervised 2 Level *n*=9		**Group 4** Independent 1 Level *n*=3		**Group 5** Independent 2 Level *n*=8	
Measure	M	SD	M	SD	M	SD	M	SD	M	SD
Student Self Regulation In School	54.4	6.1	66.3	8.2	62.8	9.2	66.0	5.3	71.0	9.5
Student Self Regulation Out of School	57.5	9.0	66.3	11.4	61.8	11.6	77.7	8.3	68.3	11.9
Student Self Efficacy In School	37.4	5.4	41.0	3.7	37.8	5.4	39.7	7.6	44.6	4.3
Student Self Efficacy Out of School	34.5	5.4	40.8	3.4	39.3	4.4	41.7	1.5	42.5	5.9
Teacher Rating	10.2	2.8	12.3	1.7	16.7	3.2	18.3	4.9	16.9	2.9
Parent Rating	31.5	7.3	36.5	2.1	36.9	4.4	37.0	2.6	34.1	5.6

Table 6
Means and Standard Deviations for Additional Outcome Measures

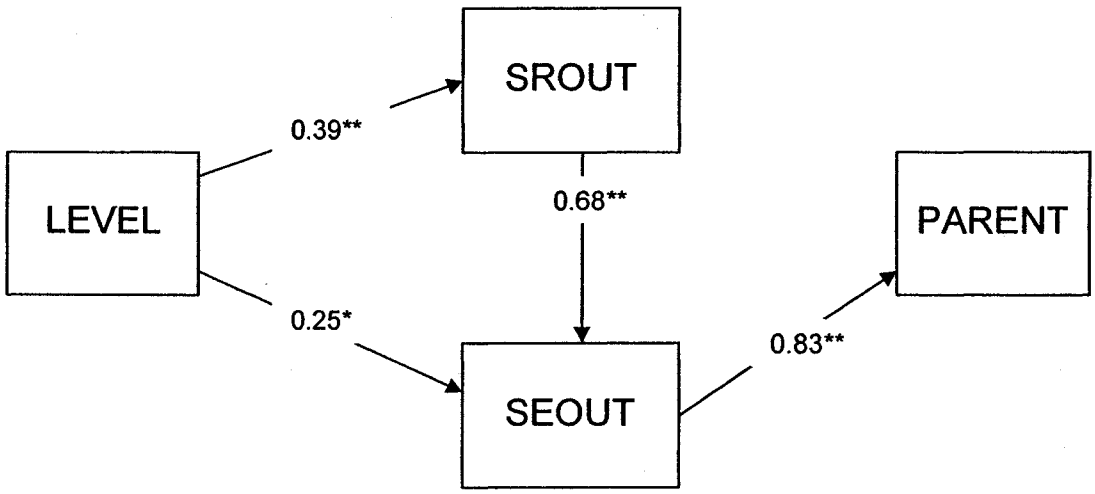
	Group 1 Restricted Level n=11		**Group 2** Supervised 1 Level n=4		**Group 3** Supervised 2 Level n=9		**Group 4** Independent 1 Level n=3		**Group 5** Independent 2 Level n=8	
Measure	M	SD	M	SD	M	SD	M	SD	M	SD
On-Task	57.4	32.8	86.0	15.3	92.4	7.1	94.3	3.8	90.4	11.8
Grades	78.2	7.0	80.0	6.4	86.6	3.8	86.6	0.4	86.7	5.1
Total Disciplinary Actions	12.6	13.8	2.0	2.8	1.0	2.0	1.0	1.7	0.0	0.0
Absences	7.5	4.0	5.8	3.4	3.0	3.0	5.0	7.0	2.1	1.6
Arrests	0.4	0.5	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0

Table 7
Correlation Matrix for Outcome Measures *$p < .05$ **$p < .01$ ***$p < .001$

Variable		Level	2	3	4	5	6	7	8	9	10	11	12
1.	Self Regulation In School	.47**	.65***	.53***	.53***	.46**	.41*	.18	.15	-.15	-.18	-.15	-.12
2.	Self Regulation Out of School	.31	----	.50**	.77***	.34*	.40*	.36*	.22	-.15	-.17	-.26	-.29
3.	Self Efficacy In School	.39*		----	.62***	.32	.37*	.28	.27	-.38*	-.19	-.26	-.09
4.	Self Efficacy Out of School	.49**			----	.54***	.54***	.59***	.46**	-.37*	-.35*	-.37*	-.46**
5.	On Task	.45**				----	.55**	.38*	.38*	-.30	-.54**	-.31	-.45**
6.	Teacher	.68***					----	.31	.51**	-.41*	-.63***	-.46**	-.21
7.	Parent	.22						----	.29	-.29	-.18	-.23	-.49**
8.	Grades	.57***							----	-.42*	-.37*	-.25	-.34*
9.	Absences	-.52**								----	.22	.27	.35*
10.	Disciplinary Actions	-.51**									----	.46**	.04
11.	Suspensions	-.40*										----	.29
12.	Arrests	-.38*											----

Figure 4

Path of Influence from Training Level to Parent Ratings



LEVEL = Self-Regulatory Training Level (Restricted through Independent)
SROUT = Self-Regulation Outside of School (Student Self-Report)
SEOUT = Self-efficacy Outside of School (Student Self-Report)
PARENT = Parent Ratings of Students' Behavior Outside of School

*$p < .05$. **$p < .01$.

Chapter Five

Discussion

Overview

This chapter provides a discussion of the key findings obtained in the present study, as well as educational implications of the findings, limitations of this study, and directions for future research.

Key Findings

This study's main purpose was to evaluate an existing educational and therapeutic day program that is designed to increase students' self-regulatory skill, and to assess whether such skill transfers to environments outside of the school setting. Indeed, there is evidence from both the present study and past research (Gregory, Kehle, & McLoughlin, 1997; Ninness, Ellis, Miller, Baker, & Rutherford, 1995; Ninness, Fuerst, Rutherford, & Glenn, 1991; Smith, Young, West, Morgan, & Rhode, 1988) to support the efficacy of various self-regulation and self-management training programs for adolescents with emotional and behavioral difficulties. However, the present study clearly indicates that a more comprehensive, social-cognitive approach to self-regulation training not only leads to behavioral improvements but also is associated with generalization of self-regulatory skill and self-efficacy to other contexts without the use of programmed generalization strategies.

Collectively, the current results provide evidence for the reliability and validity of the newly developed measures, including the student, teacher, and parent ratings. Correlations among study variables suggest that there is a common, underlying construct related to self-regulation that was measured by these instruments. Establishing such

validity increases the confidence with which inferences and conclusions may be drawn from the results of this study.

The current results also support major hypotheses delineated in this study. Progression through the level system in this self-regulatory training program was directly associated with increased self-regulatory skill and transfer of such skill, as reflected by student self-reports, teacher ratings, blinded observer ratings of on-task behavior, and various other objective indices including grades, absences, disciplinary actions and arrests. The relationship of this intervention program with students' self-regulatory skill outside of school, as reflected by parent ratings, is theorized to flow indirectly from training level through students' perceived self-regulatory skill and self-efficacy beliefs outside of school. These findings provide support for the intervention program investigated in this study, which utilizes a social-cognitive approach to self-regulation training for students with emotional and behavioral issues. As students progress through the program's level system, they increase their ability to regulate their own school-related behavior, and they also transfer newly acquired self-regulatory skills to situations encountered outside of the school setting.

The present findings extend the literature in several ways. First, the intervention approach evaluated in this study utilizes a more comprehensive, social-cognitive approach to self-regulation training that focuses on a variety of forethought, performance, and self-reflection sub-processes. Previously studied interventions have been designed in accordance with a more narrow definition of self-regulation and typically focus on only a limited array of self-regulatory processes. Second, while previous studies have documented the efficacy of self-regulatory interventions based on indices of overt

behavioral improvements, the current study extends these results by also obtaining student self-appraisals of self-regulatory skill and of covert sub-processes involved in self-regulation, such as self-efficacy. Teacher and blinded observer ratings of overt behavior, which correlated with students' progression through the training program, validated the student self-reports. Finally, this study extends the literature by involving a larger sample of emotionally and behaviorally impaired adolescents than the typical single case or small group design previously used to evaluate self-regulation interventions.

It is important to note that students' training level is determined by a combination of factors including behaviorally based, teacher-assigned points, as well as disciplinary actions and attendance. Thus, it would be misleading to draw conclusions about the impact of this level system based solely on outcome measures that are critical in determining students' placement within the level system. It was for this reason that blinded observer ratings were used to provide an objective measure of students' on-task behavior in the classroom, which may be considered one index of self-regulatory skill. In addition, grades were considered to be an objective outcome measure because they are determined solely by academic performance, and therefore remain independent of students' self-regulatory training level and uninvolved in determination of such levels.

Although teacher evaluations of student behavior, disciplinary actions, and attendance may be confounded with students' status within the level system, information from these sources is useful in validating student self-reports regarding their own self-regulated behavior. Furthermore, viewed collectively with the findings of student self-reports, blinded observer ratings, and grades, these teacher evaluations contribute to an

overall picture of the degree to which students are self-regulated in their school-related behavior.

Although parent ratings of students' behavior outside of school were not directly related to students' training level in school, there appears to be an indirect path of causality from training level to the parent ratings through students' self-regulation and self-efficacy ratings for their behavior outside of school. Thus, parents only appear to notice significant increases in their children's self-regulated behavior if students themselves report increased skill and confidence regarding their own behavior outside of school. This path model provides additional support for the generalization effects of the training program and further validates student self-report measures for out of school behavior. Without the assessment of covert, self-regulatory subprocesses through the student self-report measures, this path of influence may not have been detected, and it could have been assumed that no generalization effects occurred based on the parent ratings.

Previous studies have failed to document any significant transfer of self-regulatory skill to contexts outside the training environment without the use of programmed generalization strategies. The current results suggest that interventions based on a broader conceptualization of self-regulation may hold promise with this population for tackling the ongoing problem of skill transfer.

Educational implications

Educationally, the results of the present study have several implications. First, interventions that seek to increase the self-regulatory skill of adolescents with emotional and behavioral difficulties should utilize a more comprehensive, social-cognitive

conceptualization of self-regulation, and treatment programs should be designed in accordance with this perspective. Such an approach adds to existing treatments by more fully addressing the behavioral, emotional, and cognitive processes that are involved in self-regulation, and also by fostering generalization of self-regulatory skill to environments beyond the intervention setting. To date, no other intervention program has achieved the transfer of self-regulatory skill to non-training contexts without the use of programmed generalization strategies, nor has generalization of skill been demonstrated from a school to a non-school setting.

A second implication of this study relates to the direct impact of self-regulatory training on the self-efficacy of adolescents with emotional and behavioral difficulties. These results also document the role of self-efficacy beliefs in the transfer of self-regulatory skill to contexts outside of school. These findings, combined with existing evidence that self-efficacy is a key motivational factor in the process of self-regulation, provide support for the use of interventions that include a component specifically focused on enhancing this affective self-regulatory sub-process. Because self-regulation skills are of little use unless students are motivated to use them in their everyday lives, it is essential to couple self-regulatory skill acquisition with the efficacy that motivates effective application of such skills.

One final implication of the present research is methodological. This study demonstrates the viability and the utility of assessing covert self-regulatory processes through the use of student self-report measures. By definition, *self*-regulation is a process that occurs largely through covert sub-processes related to an individual's affect and cognition. The importance of these sub-processes is reflected in the current research by

the fact that self-efficacy for regulating behavior outside of school was the one variable that correlated with every single measure involved in the study. Overt, behavioral indices that reflect other important components of self-regulatory skill, while more objective, simply do not assess affective and cognitive factors related to an individual's engagement in the self-regulatory process. Obtaining a more complete picture of students' self-regulatory functioning may involve asking them directly, then validating their responses with objective data from other sources. Conclusions regarding the effective treatment of antisocial youth should rely on a convergence of evidence from a variety of measures, encompassing both objective and subjective data from different sources.

Limitations

Results from the present research should be interpreted and conclusions drawn with several limitations in mind. Most importantly, because the program existed prior to the current study and students were already functioning at the various self-regulatory training levels, there was no random assignment of study participants to the five groups. Therefore, it is possible that some other underlying factor, responsible for students' placement within the level system, impacted the various outcome measures and was thereby responsible for the results obtained in this study. Analyses were conducted to rule out cognitive ability and demographic variables such as race, gender, and age as determinants of group membership. One possibility, however, is that students' progression through the level system is determined by their pre-existing degree of self-regulatory skill. Thus, self-regulatory skill might be the determinant, not the outcome, of the level that students end up on within the program.

Regardless, the present study documents the role of specific cognitive and affective factors in the overt regulation of students' behavior. The fact remains that all students enrolled in the program were referred for serious emotional and behavioral issues that prevented them from functioning adaptively in their district schools. Furthermore, all students begin the program on the same level. Therefore, whether the program helps students *acquire* skills that they were previously lacking, or *elicits* self-regulatory skills that were already in a student's repertoire but apparently not being utilized, the behavioral outcome is the same and students are able to function more adaptively in academic and interpersonal realms, both in and outside of school. Finally, it is important to note that the very nature of this training program, where it is up to students to regulate their own behavior in order to progress through the level system, does not lend to arbitrary assignment to the various training levels. Students only progress to a higher level when they evidence increased self-regulatory skill, whether that skill has been elicited or acquired through participation in the program.

Another limitation of the current research is the lack of a more objective measure of students' self-regulated behavior outside of school. Just as teachers are often the most familiar with students' behavior in school, parents have a unique perspective regarding students' behavior outside of school. While teacher and parent ratings are both useful in comparing against students' own self-evaluations and contributing to an overall picture of students' self-regulatory skill, neither may be considered to be an unbiased index of a child's behavior. Preconceived or personal biases, first impressions, previous experiences, as well as a variety of other personality or situational factors, can color the opinions of both teachers and parents.

Because teachers play a key role in both implementing the intervention program and assigning the behaviorally based points that determine students' progression through the level system, it was essential to obtain the ratings of blinded observers as an objective measure that would not be confounded with the independent variable, self-regulation training. Although parent ratings are clearly not confounded with a student's training level, it still would have been useful to obtain blinded observer ratings of students' self-regulated behavior outside of school. This is particularly true in light of the theorized indirect relationship between students' progression through the level system and the parent ratings. Unfortunately, utilization of blinded observers in families' homes was beyond the resources and scope of the present study.

Future Research

Additional research is needed before firm conclusions may be drawn regarding the efficacy and generalization effects of a social-cognitive self-regulation training approach with antisocial youth. Although the current study demonstrates a linkage between this self-regulation training program and increased self-regulatory skill, future research should explore which self-regulatory sub-processes are most strongly impacted by training, and which specific processes are most involved in the generalization of self-regulatory skill to contexts outside of school. Based on the current results, self-efficacy appears to be central to the transfer of such skill, however, additional evidence is needed to support this assumption. In addition, future studies should focus on discovering where, when, and how students are most likely to apply their newly developed self-regulatory skills to situations outside of school.

Finally, it will be important to investigate the relationship between self-regulatory training and parent ratings of their children's self-regulated behavior outside of the training environment. Perhaps the use of blinded observations in various settings outside of school would help verify the generalization effects of this type of intervention, as well as shed light on this relationship.

APPENDIX A
COVER LETTER

My name is Suzanne Tobin and I am a doctoral student in the Educational Psychology Ph.D. Program at the Graduate Center of the City University of New York (CUNY). I am also Principal Investigator of a project entitled "Assessing a self-regulation training system and its transfer to out-of-school contexts for students with emotional and behavioral difficulties."

This is a research study of the skills that students develop in the Therapeutic Day Program at CES that help them regulate and control their behavior, both in school and outside of school. The study is expected to show that as students progress through the program at CES they demonstrate increased self-regulatory skill and their grades improve.

I would like permission for:

- Your child to fill out four questionnaires about his or her behavior.
- Your child to be observed in his or her classroom.
- You to fill out a brief questionnaire about your child's behavior outside of school. The questionnaire will be mailed to you with a stamped, self-addressed envelope to return it in.
- Your child's teacher to complete a brief questionnaire about your child's behavior in school.
- Me to obtain information about your child's classroom level, points earned, attendance, grades, and number of removals from the classroom between January 2004 and June 2004.

The questionnaires for your child will be filled out in a group with other students and will take about two 30 minute periods to fill out. The questionnaire for you to fill out will take about 15 minutes. Your child will be observed for one hour in his or her classroom to see how much time he or she spends on-task.

All information gathered will be kept strictly confidential, and will be stored in a locked file cabinet located in Middletown, CT. Only I will have access to the file cabinet containing the questionnaires and other study material. After five years all questionnaires and other material will be destroyed. At any time you or your child can refuse to answer any questions or end participation in the study. There will be about 60 students participating in this study.

The only risk involved in this study is that your child may feel a little uncomfortable while completing the written questionnaires. They include some difficult questions about his or her behavior, for example getting along with others and avoiding the use of alcohol or drugs. Participants can refuse to answer any questions without penalty. The benefit of participation in the study is that it may increase your child's self-awareness and suggest strategies to help control his or her behavior. An additional benefit is that the information gained from this study will be useful in future planning of intervention programs for students.

If the possibility of any potentially troubling condition is revealed during the course of research, the program administrator, Dr. Daniel French, will be informed so that you may be contacted immediately.

I may publish results of the study, but names of people, or any identifying characteristics, will not be used in any of the publications. If you would like a copy of the study, please provide me with your address and I will send you a copy when it is completed.

If you have any questions about this research, you can call me at (860) 343-0385 or email me at wtobin@sbcglobal.net. You may also contact my advisor, Dr. Barry Zimmerman, at (212) 817-8291 or bzimmerman@gc.cuny.edu. If you have questions about your child's rights as participant in this study, you can contact Hilry Fisher, Sponsored Research, The Graduate Center/City University of New York, (212) 817-7523 or hfisher@gc.cuny.edu.

Thank you for considering participation in the study.
Sincerely,
Suzanne Tobin

APPENDIX B

PARENTAL CONSENT FORM

I have read the letter describing this research project entitled "Assessing a self-regulation training system and its transfer to out-of-school contexts for students with emotional and behavioral difficulties." I give permission for my child to fill out four questionnaires about his or her behavior, and I agree to fill out a questionnaire about my child's behavior outside of school. I also give permission for my child's teacher to fill out a questionnaire about my child's behavior in school, and for a research assistant to observe my child's on-task behavior in the classroom. Finally, I give permission for the researcher, Suzanne Tobin, to view my child's school record in order to gain information about their attendance and grades.

I understand that the questionnaires will take about 30 minutes for my child to fill out and about 10 minutes for me to fill out. I understand that the questionnaires ask about my child's self-regulated behavior in school and outside of school, and that they contain some questions about how students manage real and hypothetical difficult situations. For example, some questions ask about conflict with others, getting homework done, and refusing alcohol and drugs. I understand that my child's name will not be on any of the questionnaires. Only a number will be on the questionnaires, and the researcher will keep a list of names that go with each number in a locked file cabinet in her home. I understand that all information gathered will be kept strictly confidential, and will also be stored in a locked file cabinet located in Middletown, CT. Only the researcher will have access to the file cabinet containing the study materials. After five years all questionnaires will be shredded. At any time my child or I can refuse to answer any questions or end participation in the study without penalty. There will be about 60 students participating in this study.

I also understand that the only risk involved in this study is that my child may feel uncomfortable while completing the written questionnaires that include some difficult questions relating to his or her behavior. I understand that my child can refuse to answer any questions without penalty. I understand that the benefit of participation in the study is that it may increase my child's self-awareness and suggest strategies to help control his or her behavior. An additional benefit is that the information gained from this study will be useful in future planning of intervention programs for students. I understand that if the possibility of any potentially troubling condition is revealed during the course of research, Dr. Daniel French will be contacted so that I may be notified immediately.

Finally, I understand that the results of this study may be published, but names of people, or any identifying information, will not be used in any of the publications. If I would like a copy of the study, I will provide the researcher with my address and she will send me a copy when it is completed.

If I have any questions about this research, I can call Suzanne Tobin at (860) 343-0385 or email her at wtobin@sbcglobal.net. I may also contact her advisor, Dr. Barry Zimmerman, at (212) 817-8291 or bzimmerman@gc.cuny.edu. If I have questions about my child's rights as a participant in this study, I can contact Hilry Fisher, Sponsored Research, The Graduate Center/City University of New York, (212) 817-7523 or hfisher@gc.cuny.edu.

I agree to have my child's school record viewed by the researcher: (Please circle one) Yes No

If you agree to have your child participate in this study, please sign below:

Participant's signature	Date	investigator's signature	Date

APPENDIX C

STUDENT ASSENT FORM

I have read the letter about the research study on self-regulation skills. I understand that I do not have to participate in this study, and that if I do agree to participate, I may stop participating at any time. I understand that all information gathered in the study will be kept confidential and will not become part of my school records. I understand that the results of this study may be published in a scientific magazine. The names of the students that participate will not be mentioned.

I understand my rights and freely agree to participate in this study. If I want to know anything else about this project, I will contact Mrs. Tobin.

_____ _____

Student's Signature Date

APPENDIX D

Student Self-Report
Self-Regulation Measure – In-School

1. When you come to school in the beginning of the week, how often do you set a weekly goal for yourself (E.g. "I want to maintain my level or move up a level" "I'm going to earn 80% of my points this week")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

2. How often do you plan out a strategy to reach your weekly goal (e.g. "I'm going to try earning 80% of my points by doing all my homework this week")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

3. How often do you check your weekly points to see how well you are doing?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

4. If you are not having a good week or you are worried about not reaching your weekly goal, how often do you try to figure out what you can do differently?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

5. When you arrive at school every day, how often do you set goals for yourself about what you would like to accomplish that day (E.g. "I want to finish all my work today and earn 85% of my points")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

6. How often do you plan out a strategy for achieving your daily goals (e.g. "I'll try finishing my work before talking to my friends" or "I'll ignore the inappropriate behavior of other kids so I don't get into trouble")?

___ Never
___ Not very often
___ Sometimes
___ Almost always

7. When working toward your daily goal, how often do you talk yourself through the steps involved in achieving that goal (e.g. "First I have to do my morning work; now I have to check my mailbox for owed work")?

___ Never
___ Not very often
___ Sometimes
___ Almost always

8. How often do you record your points each day?

___ Never
___ Not very often
___ Sometimes
___ Almost always

9. How often do you compare your daily performance to your prior performances to see how well you are doing?

___ Never
___ Not very often
___ Sometimes
___ Almost always

10. How often do you compare your performance to that of your classmates?

___ Never
___ Not very often
___ Sometimes
___ Almost always

11. If you're not having a good day and you are worried that you won't reach your daily goal, how often can you figure out what you need to do differently?

___ Never
___ Not very often
___ Sometimes
___ Almost always

12. How often can you stay focused during the day and not let anything distract you?

___ Never
___ Not very often
___ Sometimes
___ Almost always

13. If there is a disruption in your day (e.g. major point loss), how often can you re-focus and stay on task during the rest of the day?

___ Never
___ Not very often
___ Sometimes
___ Almost always

14. When confronting a problem in school (e.g. with schoolwork or with another student), how often do you remind yourself about the best way to handle such a problem (e.g. "I don't want to get in trouble so I'm just going to ignore that person")?

___ Never
___ Not very often
___ Sometimes
___ Almost always

15. When you are tempted to do something that could get you in trouble, how often can you think about the consequences and avoid the situation?

___ Never
___ Not very often
___ Sometimes
___ Almost always

16. When you don't feel like doing your school work, how often can you motivate yourself to complete it anyway?

___ Never
___ Not very often
___ Sometimes
___ Almost always

17. When you feel like swearing or raising your voice in school, how often can you control yourself by using a strategy such as counting to ten or taking a deep breath?

___ Never
___ Not very often
___ Sometimes
___ Almost always

18. If another student directs a negative comment or gesture toward you, how often can you brush it off and move on to other things?

___ Never
___ Not very often
___ Sometimes
___ Almost always

19. When something makes you really angry, how often can you find a way to control yourself and figure out a possible solution?

___ Never
___ Not very often
___ Sometimes
___ Almost always

20. During an academic period, how often can you raise your hand quietly instead of calling out?

___ Never
___ Not very often
___ Sometimes
___ Almost always

21. When other students are teasing someone, how often can you find a way to resist joining in?

___ Never
___ Not very often
___ Sometimes
___ Almost always

22. How often can you find a way to resist initiating inappropriate behavior in school?

___ Never
___ Not very often
___ Sometimes
___ Almost always

APPENDIX E

Student Self-Report
Self-Regulation Measure – out-of-school

1. When you do homework or study for a test outside of school, how often do you set goals for yourself (e.g. "I'll work for 30 minutes" "I'll finish 10 problems")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

2. When you do homework or study for a test outside of school, how often do you plan out a strategy to help you (e.g. "I'll read the chapter and highlight the key concepts")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

3. When you do homework or study for a test outside of school, how often do you stay focused and finish what you need to do?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

4. When you do homework or study for a test outside of school, how often do you check to see how well you are understanding the material?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

5. When you do homework or study for a test outside of school, how often do you talk yourself through the necessary steps (e.g. "First I have to read the directions, then look at the example")?

   ___ Never
   ___ Not very often
   ___ Sometimes
   ___ Almost always

6. When you have difficulty doing your homework outside of school, how often do you try to figure out a different strategy to help get it done (e.g. ask for help, read the directions again)?

___ Never
___ Not very often
___ Sometimes
___ Almost always

7. When you don't feel like getting out of bed in the morning or going to school, how often do you find some way to motivate yourself (e.g. think about the consequences)?

___ Never
___ Not very often
___ Sometimes
___ Almost always

8. If somebody directs a negative comment or gesture toward you outside of school (e.g. a kid in your neighborhood, your sibling), how often do you brush it off and move on to other things?

___ Never
___ Not very often
___ Sometimes
___ Almost always

9. When confronting a problem at home (e.g. your sibling takes something of yours without asking), how often do you talk yourself through a solution that avoids a fight?

___ Never
___ Not very often
___ Sometimes
___ Almost always

10. When something makes you really angry outside of school, how often do you find a way to control yourself and figure out a possible solution?

___ Never
___ Not very often
___ Sometimes
___ Almost always

11. When you feel like swearing or raising your voice at home with your parents, how often do you control yourself by using a strategy such as counting to ten or taking a deep breath?

___ Never
___ Not very often
___ Sometimes
___ Almost always

12. When you don't like following the rules at home, how often do you think of a way to follow them anyway (e.g. imagining the consequences if you don't)?

___ Never
___ Not very often
___ Sometimes
___ Almost always

13. When you have a problem with another kid outside of school, how often do you find a way to resolve it without fighting or making threats?

___ Never
___ Not very often
___ Sometimes
___ Almost always

14. When other kids are teasing someone in your neighborhood, how often do you find a way to resist joining in?

___ Never
___ Not very often
___ Sometimes
___ Almost always

15. How often do you resist initiating inappropriate behavior outside of school (e.g. provoking a sibling, teasing someone in your neighborhood)?

___ Never
___ Not very often
___ Sometimes
___ Almost always

16. When you are tempted to do something illegal outside of school, how often do you come up with a strategy to avoid it?

___ Never
___ Not very often
___ Sometimes
___ Almost always

17. When you are tempted to drink alcohol or use drugs with your friends outside of school, how often do you use a strategy to avoid doing so?

___ Never
___ Not very often
___ Sometimes
___ Almost always

18. When you are trying to avoid drinking alcohol or using drugs outside of school, how often do you mentally keep track of the time span since your last drink or drug use?

___ Never
___ Not very often
___ Sometimes
___ Almost always

19. When you are trying to avoid drinking alcohol or using drugs outside of school, how often do you compare yourself to previous attempts to avoid these activities?

___ Never
___ Not very often
___ Sometimes
___ Almost always

20. If you are unable to resist drinking alcohol or using drugs, how often can you do something differently the next time to avoid these activities?

___ Never
___ Not very often
___ Sometimes
___ Almost always

21. When you are out with your friends, how often do you check the time in order to arrive home before your curfew?

___ Never

___ Not very often

___ Sometimes

___ Almost always

APPENDIX F

Teacher Ratings

1. How often does the student ignore negative peer interaction (e.g. hurtful gestures or comments) rather than respond inappropriately?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

2. How often does the student speak respectfully to others rather than swear, raise their voice, or use an inappropriate tone?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

3. How often does the student remain in their assigned area, rather than wander around or leave the room without permission?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

4. How often does the student remain on-task and focused on the activity rather than sleep, stare into space, talk to another student, etc.?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

5. How often does the student raise their hand quietly to participate rather than call out?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

6. How often does the student record his or her points when the teacher reviews them?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

7. How often does the student take space appropriately or use some other anger management strategy (e.g. breathe deeply or count to ten) rather than throw, kick, hit, destroy, or knock over something?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

8. How often does the student use self-talk to guide their behavior (e.g. talk out loud about what they were doing or going to do)?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

9. How often does the student change from using one strategy to another in order to deal effectively with a problem (e.g. The student tried unsuccessfully to resolve an issue with a peer, so they sought help from a teacher to resolve the issue)?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

10. How often does the student's self-rating of their day match the teacher's rating?

0	1	2	3
None of the time	Some of the time	Most of the time	All of the time

APPENDIX G

Parent Ratings

1. My child is able to remain focused on his/her homework outside of school.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

2. If my child has difficulty with his/her homework, he/she uses a strategy to figure it out (e.g. asks for help or reads the directions again).

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

3. My child studies for quizzes or tests outside of school.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

4. My child follows the rules at home.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

5. My child resolves conflict with family members without yelling or swearing.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

6. Outside of school, my child resolves problems with other kids without fighting.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

7. Outside of school, my child ignores or brushes off a hurtful comment or gesture from other kids/siblings.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

8. My child comes home before his/her curfew.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

9. My child controls his/her anger (e.g. refrains from kicking, punching, or throwing things) when he/she is mad.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

10. My child refrains from drinking alcohol or using drugs outside of school.

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

11. My child refrains from doing illegal things outside of school (e.g. stealing, vandalism).

0	1	2	3
Not true at all	Not Very true	Somewhat true	Very true

APPENDIX H

Self-Efficacy for In-School Behavior

1. How well can you meet your daily goals in school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

2. How well can you keep track of your daily points?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

3. If you're not doing well in the beginning of the day, how well can you improve and do better the rest of the day?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

4. How well can you meet your weekly goals in school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

5. How well can you keep track of your weekly points to see how you are doing?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

6. If you are not doing well in the beginning of the week, how well can you improve your performance and do better during the rest of the week?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

7. How well can you stay focused during the day?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

8. How well can you complete your schoolwork?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

9. How well can you refrain from swearing or raising your voice in school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

10. How well can you ignore or brush off negative comments and gestures from another student?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

11. How well can you control your anger in school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

12. How well can you remember to raise your hand quietly instead of calling out?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

13. How well can you resist teasing others?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

APPENDIX I

Self-Efficacy for Out-of-School Behavior

1. How well can you complete your homework outside of school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

2. How well can you study for a quiz or test outside of school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

3. How well can you follow the rules at home?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

4. How well can you make yourself get up and go to school every day?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

5. How well can you come home before your curfew?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

6. How well can you control your anger outside of school (e.g. refrain from kicking, punching, or throwing things when you're mad)?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

7. How well can you refrain from drinking alcohol or using drugs outside of school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

8. How well can you refrain from doing illegal things in the community (e.g. stealing, vandalism)?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

9. How well can you refrain from picking on or teasing other kids outside of school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

10. How well can you resolve problems with other kids outside of school without fighting or making threats?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

11. How well can you ignore or brush off a hurtful statement or gesture from another kid outside of school?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

12. How well can you resolve problems at home without yelling or swearing at family members?

1	2	3	4
Not well at all	Not very well	Pretty well	Very well

APPENDIX J

Student Information Form

ID# _____ Male ___ Female ___

Date of Birth: _____

Current Level: _____

Number of absences in 2004: _____

Number of temporary classroom exclusions in 2004: _____

Number of Step 5 procedures in 2004 (if applicable): _____

Number of suspensions in 2004: In school: _____ Out of school: _____

Weekly percentage of on-task points last calculated: _____

Please list the student's current grade in each subject he or she is taking:

Subject	Grade
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

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