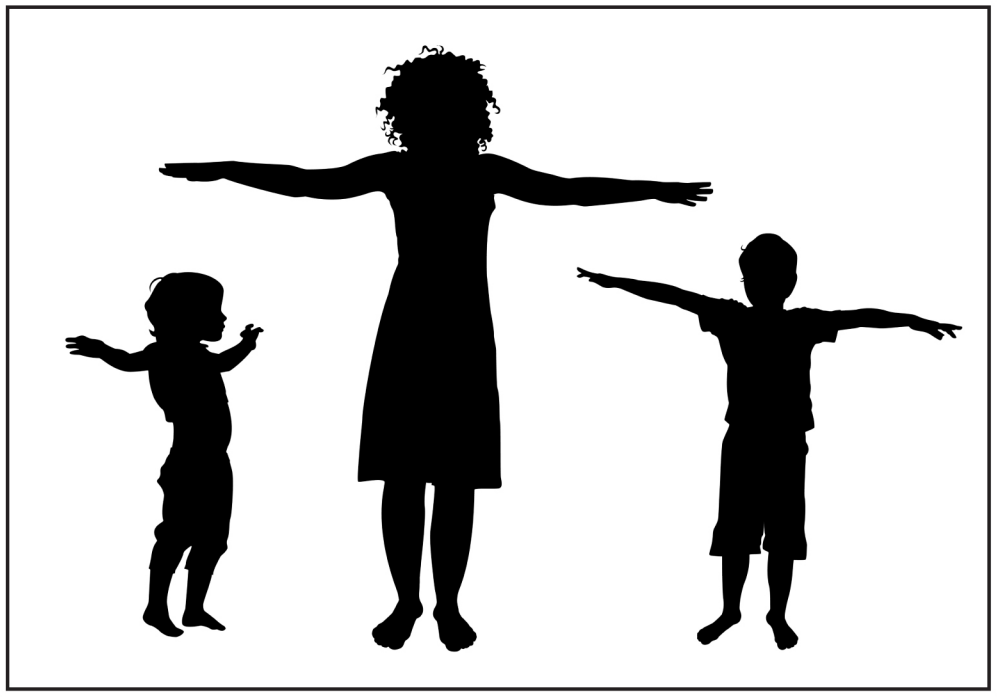
BEHAVIOR MANAGEMENT

TRADITIONAL AND EXPANDED APPROACHES



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Foreword by Ruth Eren

Behavior Management

Traditional and Expanded Approaches

Edited by
Norris M. Haynes

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Foreword

Given the complexity of our times and the diversity of the student population in today's schools, it is no wonder that teachers, school psychologists, counselors and administrators struggle to meet the emotional needs of the children they serve. As a former teacher, school psychologist and administrator, I constantly sought effective interventions that would be successful in meeting the broad array of emotional needs and addressing the problem behaviors presented by troubled youngsters. *Behavior Management: Traditional and Expanded Approaches* is a source that would have been helpful to me in my quest to find interventions that I might consider for individual students.

Dr. Haynes has constructed a text with contributions from practicing professionals, colleagues and graduate students that will be of immediate use to the practitioner in the schools, making that important link between research and practice. He addresses the traditional behaviorist learning theories (operant instrumental learning), social learning, and cognitive factors that impact behavior as well as some non-traditional approaches. But most importantly, he includes case studies and practical application of these theories. His seven step approach to behavior management is easily understood and can be immediately implemented within a public school setting with very thorough data collection and analysis procedures.

Although this book is not specific to diagnostic identification labels, it does include a chapter specific to behavioral interventions for autism, highlighting a program which illustrates effective implementation of applied behavioral analysis strategies for this population.

This book would not be complete if it did not link to current school initiatives. Chapters five, six and seven elaborate on response to intervention (RTI), positive behavior intervention and supports (PBIS), cognitive behavior

management and character education. Many of these interventions are currently being implemented in schools. This book not only discusses research related to these interventions, but again, gives practical implementation direction and procedures for their use.

There is no one intervention that will work for all children and the use of an evidence based practice does not, in itself, always ensure success. In our quest to provide effective interventions we must always balance the use of evidenced based practices with new ideas that have yet to be validated. We must not believe unsubstantiated claims of such interventions without clear data and a strong body of research to support their effectiveness . Dr. Haynes gives voice to such a novel approach to a behavioral intervention, that is not evidenced based, by including a chapter on the use of yoga.

The final two chapters in this book sum up Dr. Haynes premise that behavior management is not narrowly characterized by a basic behavior stimulus response paradigm but rather embraces a child's cognitive, emotional and behavioral response to the challenges he/she faces in a complex world. Traditional, evidenced based approaches to behavior management continue to be the foundation of intervention but for some individuals, we may allow room for additional approaches to address unique needs.

This book is an important contribution to the field of behavior management in today's schools. It offers a wealth of research and practical implementation strategies for those who work in schools, making that ever so important link between research and practice. Without this link, in texts such as this, school professionals will continue to be frustrated with failed attempts to successfully address the social emotional needs of the children they serve and the resulting behaviors that disrupt their opportunity for educational success.

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Introduction

Norris M. Haynes

Problem behaviors continue to be a major source of concern in schools and classrooms, on playgrounds, in communities and in many homes. Uncontrolled, unregulated and unaddressed undesirable behaviors are disruptive and harmful. In schools and classrooms, these behaviors interfere with teaching and learning and undermine students' ability to achieve at their highest potential. On the playground and in communities, undesirable behaviors often result in fighting, bullying, and other forms of violence and victimization. In homes, negative and difficult behaviors interfere with family dynamics, reduce parents' authority and control, and often cause stress and anxiety among parents and children.

It is important to note that behavioral concerns are not limited to children but extend also to adolescents and adults in a variety of settings. Anxiety, addictions, obsessive and compulsive behaviors, anger, procrastination and impulsivity are among the many behaviors that can be successfully treated using different behavior management strategies. Therefore, there is a compelling need and reason for behavior management strategies to be taught and understood by concerned and qualified individuals.

Many of the behavior management approaches being used are based on traditional behaviorist learning theories such as the classical learning and operant/instrumental learning theories. These theoretical models place significant emphasis on stimulus response relationships and see behavior as a function of environmental factors that either precede the behavior or follow the behavior. Other traditional behavior management approaches include some consideration of the importance of cognitive factors in mediating the influence of environment on behavior. Most notable among these approaches are the social learning or modeling approaches. These more traditional approaches are discussed in chapters one to four. In chapter four the authors examine in

detail the application of traditional behaviorist approaches to working with individuals who have autism.

Most recently, significant developments have taken place in how behavior problems are viewed and in how they are addressed. Some of these developments are discussed in chapters five to eight. These chapters include a closer and deeper examination of more systemic approaches such as positive behavior supports and response to intervention in school settings, cognitive behavior management strategies, social and emotional learning, character education and the use of yoga. In Chapter nine, the discussion of the application of behavior management strategies to high-risk and challenging behaviors among at-risk youth in schools and classrooms provides a valuable contribution to this book. The authors provide rich and practical insights into how school psychologists, school counselors, special education teachers and other school-based support personnel may use the methods and techniques of the range of behavioral strategies to address challenging behaviors among children and youth. In the final chapter of this book, chapter ten, the author makes a strong case for seeing and treating behavior management, and the various approaches and strategies discussed in this book, as part of a more systemic, personalized and holistic effort to address the multifaceted nature of challenging behaviors. He emphasizes the importance of including, examining and addressing children's development along critical developmental pathways, and underscores the need to consider the socio-cultural contexts in which children learn and develop when designing behavior management programs.

Chapter One

Overview of Learning Theories That Undergird Traditional Behavior Management Approaches

Norris M. Haynes

There are three basic learning theories that undergird traditional behavior management strategies. Traditional behavior management strategies are being defined in this book as those that are premised on the notion that undesirable behaviors have been learned and can be unlearned. There is a relationship among three elements that need to be changed. The three elements are (1) the environmental conditions or stimuli that precede the behavior (2) the behavior to be changed (3) the consequences or results of the behavior. The three basic learning theories are: (1) classical learning (2) instrumental or operant learning (3) social learning. (Sawyer, 2006; Schunk, 2007; Kazdin, 2008) These three learning theories are discussed in greater detail below.

MAJOR LEARNING THEORIES

Classical Learning/Conditioning

Ivan Pavlov (1849–1936), a Nobel-Prize winning Russian physiologist is perhaps the most notable theorist associated with the classical learning theory. Pavlov stumbled onto classical learning, as it were, as he studied the salivating reflexes of dogs. Pavlov noticed that when a dog was presented with food, the dog salivated. He also noticed that even before food was presented, the dog would salivate in the presence of other stimuli that repeatedly occurred just before the food was presented in anticipation, as it were, of receiving the food. It was as if these stimuli signaled that food was coming. Pavlov referred to this as psychic salivating. The food came to be called the unconditioned stimulus because it naturally stimulated the dog to salivate. Salivating to the

food was not based on any conditions. It was a natural response. The salivating elicited by the food came to be called the unconditioned response. The stimulus such as a bell or metronome that was paired with the food several times and then came to elicit the salivating response without the presentation of the food, came to be called the conditioned stimulus. Its power to elicit salivating was based on the condition that it was paired with food repeatedly first. The salivating elicited by the bell or metronome came to be called the conditioned response. Classical learning/conditioning involves several steps that are described in tables 1.1 and 1.2.

Principles of Association and Generalization

In the classical learning paradigm, there are two general principles that operate. The principles of "association" and "generalization." In the case of Pavlov's experiment, the bell became associated with food and elicited a similar response from the dog as food did. In the case of the student being tested, the test becomes associated with classical music and elicits a similar

Table 1.1. Steps in the Classical Learning Paradigm

Pavlov's Experiment	*Applied to Students*
Step One: Pavlov's Experiment • Dog presented with Food • Dog salivates • Food (sight, smell & taste) causes salivating • Food is **unconditioned stimulus** • Salivating is **unconditioned response**	Step One: Applied to Students • Classical music is played in classroom • Students feel relaxed • Classical music elicits relaxed feeling • Classical music is **unconditioned stimulus** • Students' relaxed feeling is **unconditioned response**
Step Two: Pavlov's Experiment • Pair Bell with Food • Bell is rung • Food is presented to dog • Dog salivates • Food is **unconditioned stimulus** • Salivating is **unconditioned response** • Bell is **conditioned stimulus**	Step Two: Applied to Students • Pair test with classical music • Classical music is played • Students feel relaxed • Music is **unconditioned stimulus** • Relaxed feeling is **unconditioned response** • Test is **conditioned stimulus**
Step Three: Pavlov's Experiment • Bell is rung • No food is presented • Dog salivates • Bell in **conditioned stimulus** • Salivating is **conditioned response**	Step Three: Applied to Students • Test is given • No classical music is played • Students feel relaxed • Test is **conditioned stimulus** • Feeling relaxed is **conditioned response**

Table 1.2. Summary of the Classical Learning Paradigm

Pavlov's Experiment	*Applied to Students*
• Unconditioned Stimulus: Food	• Unconditioned Stimulus: Classical Music
• Unconditioned Response: Salivate	• Unconditioned Response: Feeling Relaxed
• Conditioned Stimulus: Bell	• Conditioned Stimulus: Test
• Conditioned Response: Salivate	• Conditioned Response: Feeling Relaxed

response from the students as classical music does. The conditioned response is in essence the unconditioned response that becomes generalized to the conditioned stimulus. The stronger the response elicited by food or classical music, and the stronger the association between the food and the bell, or the test and classical music, the stronger the response that the bell will elicit in the absence of food and the test will elicit in the absence of classical music.

Fading and Extinction

Repeated presentation of the bell without food, or tests without classical music will result in the decrease or fading and eventual cessation of salivating in the case of the bell and the dog and in relaxed feelings in the case of the classical music and students. Fading is the gradual decrease of the conditioned response, salivating when the conditioned stimulus bell is presented, or relaxed feeling when the conditioned stimulus test is presented, due to the continuous absence of the unconditioned stimulus food or classical music. Extinction is the eventual cessation of the conditioned response, salivating or relaxed feeling due to the continuous absence of the unconditioned stimulus food or classical music, when the conditioned stimulus bell or test is presented.

Practical Applications

Classical learning approaches based on principles of association and generalization are used to gradually reduce (fade) and stop (extinguish) undesirable behaviors. For example, in the case of smoking cessation programs, this may involve pairing smoking with noxious or unpleasant stimuli such as a bitter taste, a horrifying visualization of a diseased lung or even shock. In the case of overeating it may involve pairing certain foods with unpleasant tastes or negative imagery to produce a reduction in eating of those foods, and in the case of a child who hits other children, the hitting behavior may be paired with an unpleasant sound, or withdrawal of attention to reduce the hitting behavior. Classical learning approaches and principles of association and generalization are also used to establish desirable behaviors. For example, in the case of increasing confidence in flying, the sound and sight of an airplane may be paired with deep breathing and muscle relaxation to produce feelings

of relaxation and a reduction in anxiety. This process is often used in systematic desensitization and may be viewed as the classical learning version of "shaping". In the case of getting a class to respond positively to a substitute teacher, this may involve pairing a substitute teacher with a teacher who is loved and respected over a period of a few days to produce positive regard for and cooperation with the substitute teacher.

Activity #1

A. Think of at least three situations in which the classical learning approach to behavior management may be applied to extinguish an undesirable behavior. Identify the unconditioned stimulus (US), the unconditioned response (UR), conditioned stimulus (CS) and conditioned response (CR) in each situation.
B. Explain in detail the three steps in the classical learning approach as shown above.

Activity #2

A. Think of at least three situations in which the classical learning approach to behavior management may be applied to establish and increase a desirable or desired behavior. Identify the unconditioned stimulus (US), the unconditioned response (UR), conditioned stimulus (CS) and conditioned response (CR) in each situation.
B. Explain in detail the three steps in the classical learning approach as shown above.

Operant Conditioning or Instrumental Learning

Burrhus F. Skinner (1904-1990) is the theorist most notably associated with operant conditioning or instrumental learning. This approach is called operant conditioning because proponents believe that the organisms or individuals become conditioned to operate on their environments to influence the outcomes. The approach is also called instrumental learning because organisms and individuals learn to use their behavior as instruments to get what they need and want. Skinner's experiments with rats and pigeons helped to demonstrate the aptness of these two designations of "operant conditioning" and "instrumental learning." The experiments helped to establish the relationships among stimulus, response and reinforcement. In Skinner's experiments, rats learned to act in ways that allowed them be rewarded by receiving food or by avoiding being shocked (escape learning). The basic premise that Skinner's experiments established was that in certain situations and under given

conditions (antecedent) the rats acted (behavior) to influence the outcome (consequences). Antecedents are precursor conditions or situations (stimuli) that produce, stimulate, facilitate, encourage or nurture certain behaviors. Consequences are the results of behavior that can serve as reinforcers by strengthening a given behavior or as punishers by reducing a given behavior. In the case of Skinner's rats, the following antecedent, behavior and consequence (ABC) relationship applied:

Antecedent: In Maze and Hungry
Behavior: Run Through Maze & Press Lever
Consequence: Food

This ABC paradigm is basic to the application of operant conditioning/ instrumental learning in behavior management approaches with individuals in a variety of situations. In given situations (Antecedents) individuals act (Behavior) to influence the outcomes (Consequences). For example, many students study diligently to get good grades.

Antecedent: School work
Behavior: Study
Consequence: Good Grades

Generally individuals use their behavior as instruments to achieve want they want (i.e. reinforcers) or to avoid want they do not like (punishers). Hence, the term instrumental learning. They operate on the environment to influence the outcome (hence the term operant learning) just as skinners rats pressed the lever to get food and just as students study hard to get good grades. They also act to avoid punishment just as skinner's rats ran away to avoid shock and just as students do not cheat in school to avoid failure. (Skinner, 1953).

Reinforcement and Punishment

Reinforcers are consequences that increase the probability that a given behavior may occur. They may be primary (directly satisfy a physiological or emotional need) or secondary (paired with and exchanged for primary reinforcers). Secondary reinforcers are used mostly in token economy systems approaches to behavior management. Reinforcement is not just the application of reinforcers. Reinforcement may be positive (when a reinforcer is applied) or negative (when a punisher is removed). Punishers are consequences that reduce the probability that a given behavior may occur. Punishment is not just the application of punishers. Punishment may be positive (when a punisher is applied) or negative (when a reinforcer is removed**).** In this context positive means applied and negative means removed.

Table 1.3. Summary of Reinforcement and Punishment Types

	Positive Applied (+)	*Negative Removed (-)*	*Result*
Reinforcement	reinforcer applied=positive reinforcement	punisher removed=negative reinforcement	Behavior Increase
Punishment	punisher applied=positive punishment	reinforcer removed=negative punishment	Behavior Decrease
Direction	+ Application of Reinforcement/ Punishment	- Removal of Punishment/ Reinforcement	

An explanatory paradigm of positive and negative reinforcement is presented in table 1.3.

Schedules of Reinforcement

Interval schedules of reinforcement are based on the passage of time without regard to number of responses or the number of times the behavior occurs as long as the response or behavior occurs at least one time within the established timeframe. Ratio schedules of reinforcement are based on the number of responses or times that the behavior occurs in a given time frame. Interval and ratio Schedules can be fixed or variable. With fixed interval schedules a fixed amount of time must pass before the reinforcement is given as in giving a student social reinforcement, such as praise, after every fifteen minutes that he/she sits still. With variable interval schedules the amount of time that must pass before the reinforcement is given varies or changes, such as after five minutes, then after one minute, then after twenty minutes. An example would be varying the amount of time that the student must sit still before giving praise. With fixed ratio schedules a fixed number of responses must be observed before the reinforcement is given e.g. giving praise after every five times the behavior occurs e.g. grading nightly homework assignments. With variable ratio schedules the number of responses that must be observed before the reinforcement is given varies or changes such as after the behavior occurs five times, then after one time then after twenty times e.g. varying the number of times a student must sit still before giving him/her praise. An explanatory paradigm of reinforcement schedules is presented in table 1.4.

Practical Applications

In behavior management programs, operant/instrumental conditioning/learning is used to reduce negative and undesirable behaviors among students and

Table 1.4. Summary Table of Reinforcement Schedules

Type of Reinforcement	*Fixed*	*Variable*	*Basis*
Ratio	Fixed # of responses required for	Variable # of responses required	Based on # of times behavior occurs
Interval	Fixed amount of time must elapse	Variable amount of time must elapse	Based on time elapse
Variation	Does not Vary	Varies	

increase positive and desirable behaviors. Some important principles should be considered when applying operant, instrumental learning approaches:

- Target behaviors must be observable and measurable.
- The consequence (reinforcer or punisher) must be carefully selected for appropriateness and effectiveness.
- The consequence must follow the behavior as soon as possible.

Additionally, it is important to set realistic, reasonable and achievable behavioral goals using shaping when necessary to achieve the desired ultimate behavioral outcome. Shaping is the reinforcement of successive approximations to a behavioral goal. Often, in school and classroom settings, token economy systems are used to modify students' behaviors. In a token economy system students are given tokens (stars or points) as reinforcers for desirable behavior that they accumulate and then exchange for other more primary reinforcers such as a snack or a toy. Another variation in the use of reinforcers is the use of an activity that the individual likes to do to serve as a reinforcer for a desirable behavioral objective. This is called the premack principle according to which an activity is used as a reinforcer as opposed to an object. For example, if Sue raises her hand instead of shouting out the answer, the teacher may allow her to spend an extra ten minutes doing art which she enjoys. In addition to manipulating the consequence of the behavior, it is also possible to change the behavior by manipulating or changing the antecedent conditions that precede the behavior. This is called stimulus control and involves manipulating or changing the antecedent conditions that trigger and encourage undesirable behavior or by changing the stimulus situation to one that will trigger and encourage desirable behavior.

Activity #3

A. Think of at least three situations in which the operant conditioning/instrumental learning approach to behavior management may be applied

to reduce or eliminate an undesirable behavior. Identify the antecedent condition (A), the target behavior (B) and the consequence (C).

B. Explain in detail the ABC relationship in each of the three situations presented.

Activity #4

A. Think of at least three situations in which the operant conditioning/instrumental learning approach to behavior management may be applied to establish or increase a desirable or desired behavior. Identify the antecedent condition (A), the target behavior (B) and the consequence (C).

B. Explain in detail the ABC relationship in each of the three situations presented.

Social Learning Theory

Albert Bandura (1925-present) is the theorist who is most prominently associated with social learning theory. He maintains that behaviorism, as represented by classical and operant learning approaches, is too simplistic an approach to understanding and explaining behavior, such as aggressive acts. He sees behaviorism as focusing too much and perhaps only on observable and measurable variables while avoiding more internal and subjective mental processes. So he added cognitive or mental variables to his theory. He criticizes the notion that the environment causes behavior, such as in the stimulus-response paradigm of behaviorism, as being too one-sided and limiting. He asserts that behavior also causes the environment, just as the environment causes behavior. He calls this reciprocal determinism. The environment and the behaviors of the individual affect each other.

Bandura further emphasizes the interaction among there elements in considering personality and behavior. He considered the environment, the behavior and the mental or cognitive processes, such as language and imagery, which mediate those two. So one may consider Bandura's position as: S-P-R (stimulus-psychological processes- behavior) as opposed to S-R (stimulus-response) as in the strict behaviorist tradition. Given Bandura's emphasis on cognitive or psychological processes, he is often considered to be one of the fathers of cognitivism or cognitive behaviorism. Bandura's emphasis on cognitive processes, including imagery, provides the basis for two key and important concepts that form the backbone of most of social learning theory. These are observational learning or modeling and self-regulation. (Bandura, 1969, 1977).

Observational Learning/Modeling

Bandura's original demonstration of observational learning and modeling was through his bobo doll studies. He filmed a young woman aggressively assaulting a bobo doll (an inflatable balloon-like figure shaped like an egg weighted in the bottom so that it bobs back up when it is knocked down). The confederate, who was one of Bandura's students, punched and kicked the figure as she shouted "sockeroo!" She then sat on the inflatable figure, hitting it with a hammer all the while in an aggressive and threatening manner. Bandura then showed the film to kindergartners who then went out to play in a play room with a bobo doll and some hammers. Some observers took notice of what the kindergartners did.

Many of the children punched, kicked and hit the inflatable doll with the hammers, as they shouted "sockeroo" just as the adult confederate had done. They were in fact imitating the confederate's behavior. The children's behavior changed without any external rewards and just through observation. Observational learning or modeling had taken place. According to Bandura, based on findings from his studies, several steps are involved in observational learning/modeling:

1. Attention. First, for learning to occur, the learner must be paying attention. In the cases of the bobo doll experiment, the children paid attention to what the confederate did. They replicated the confederate's behavior almost exactly. Attention is influenced by characteristics of the model such as whether the model is attractive, deemed to be powerful, competent or in some important ways similar to the learner. For young children, other characteristics might be important such as if the model is colorful or dramatic.
2. Retention. Second, the learner must be able to retain or remember the information to which he/she paid attention. The cognitive processes introduced by Bandura, such as imagery and language, play a crucial role in retention. Being able to store observed behavior in memory as imagery and describe the observed behavior using language helps to facilitate the reproduction of the observed behavior.
3. Reproduction. Third, the learner has to be able to reproduce or perform the behavioral acts that he/she observed and remembers. There may be a level of physical and skill readiness needed in order to reproduce the observed behavior. Practicing a given behavior may help to improve the learner's ability to reproduce it.
4. Motivation. Fourth, there has to be some kind of incentive for the learner to imitate the observed behavior. Bandura identified three kinds of

incentives which he called reinforcements. Unlike traditional behaviorists, Bandura maintained that reinforcements do not cause individuals to learn as much as they inspire or motivate the learner to demonstrate what he or she has learned. The three kinds of reinforcements are as follows:

- vicarious reinforcement: observing the individual whose behavior is being imitated receive reinforcement for the imitated behavior. It is as if the learner himself or herself internalizes the relationship between the observed behavior and the reinforcement.
- promised reinforcements: expecting, hoping or imagining being reinforced for performing the imitated behavior.
- past reinforcement: having been reinforced in the past for performing the imitated behavior.

Similarly, the learner learns not to imitate certain behaviors based on three types of punishments which are the converse of the three types of reinforcements identified above.

- vicarious punishment.
- promised punishment.
- past punishment.

Practical Applications

Social learning through modeling and imitation occurs much more frequently than is often recognized. Individuals generally, but particularly children, learn both appropriate and inappropriate behaviors continually in a variety of settings and through various media sources. Children are especially susceptible to the influence of modeled behavior on television and in their immediate physical environments. The intentional application of Bandura's social learning approach can have significant value and benefit in ways that the more traditional behavioral approaches may not. A major advantage in applying the social learning approach to behavior management is the recognition and incorporation of cognitive processes such as language and imagery in the behavior change paradigm.

Individuals, including students in schools and classrooms, can learn appropriate behaviors by observing the behaviors of other individuals and the outcomes of those behaviors, remembering and being able to describe the relationship between the observed behavior and outcomes, and then reproducing the desired behavior. For example, in a classroom in which an aggressive student's behavior is disruptive, this student may learn to act in a socially acceptable way by observing a live model or a videotaped model act appropriately and be reinforced for doing so.

Activity #5

Think of at least three situations in which the social learning approach to behavior management may be applied to decrease or eliminate an undesirable or undesired behavior. Identify and explain the Attention (A), Retention (R), Reproduction (R), and Motivation (M) steps.

Activity #6

Think of at least three situations in which the social learning approach to behavior management may be applied to establish or increase a desirable or desired behavior. Identify and explain the Attention (A), Retention (R), Reproduction (R), and Motivation (M) steps.

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Chapter Two

The Seven Step Approach to Behavior Management

Norris M. Haynes

The seven steps discussed in this chapter are designed to increase the probability that individuals and groups acquire and practice behaviors that are effective in achieving appropriate behavioral goals (Zirpoli, 2005). The steps generally incorporate methods for addressing important questions to be considered when seeking to modify behaviors. These questions may be classified in terms of: nature, frequency and intensity, place and time, effects, intervention and evaluation of intervention.

NATURE (STEP 1)

- How would I describe the behavior of concern?
- How is the behavior different from what I would expect or hope for in the situation?

FREQUENCY AND INTENSITY (STEPS 2 TO 4)

- How often does the behavior occur?
- How strong is the behavior on a scale from 1 to 5?

PLACE AND TIME (STEPS 1-4)

- Where does the behavior occur?
- When does the behavior occur?

EFFECTS (STEP 5)

- What happens when the behavior occurs?
- Who is affected by the behavior and in what way?
- What is likely to happen if the behavior is not addressed?

INTERVENTION (STEP 6)

- What are the available options in attempting to modify the behavior?
- Which option is best and why?
- How should I go about implementing the best option?

EVALUATION OF INTERVENTION (STEP 7)

- How would I know if the intervention is effective?

The seven steps, based on Zirpoli (2005) are:

STEP 1
DECIDE IF A PROBLEM EXISTS

The purpose of step one is to make an initial determination as to whether or not a behavioral problem does in fact exist, and if one does exist, what the nature of the problem behavior is based on referrals or expressions of concern from teachers, parents or other persons who are concerned about the possible existence of a behavior problem. During step one the following should occur:

- The target behavior is identified and described.
- An objective observation of the behavior is conducted.
- The child or adult whose behavior is of concern is interviewed.
- Significant others involved with the child or adult with regard to the behavior of concern are interviewed.
- Other data on the behavior are collected, using checklists and rating scales (see chapter three).

STEP 2
DETERMINE IF INTERVENTION IS WARRANTED

The purpose of step two is to establish whether the behavior of concern is serious enough to warrant the development of an intervention plan. If more

than one behavior problem are identified, then during this step, the behaviors are ranked for intervention based on the degree of their seriousness including their frequency, intensity and effects. During step two the following should occur:

- The frequency, intensity and effects of the target behavior(s) are identified and described.
- If there are more than one behavior of concern, they should be rank ordered in terms of frequency, intensity and effects.
- What happens when the behavior occurs should be determined.
- How others are affected by the behavior and in what ways should be determined.
- A determination should be made of what is likely to happen if the behavior is not addressed.
- Other more extensive and in-depth data on the target behavior(s) should be collected, based on interviews with the child or adult whose behavior is of concern, as well as with significant others involved with the child or adult, with regard to the behavior of concern. Checklists and rating scales can also be used (see chapter three).

STEP 3
DETERMINE IF MEDICAL AND/OR PSYCHOLOGICAL REASONS EXIST THAT CONTRIBUTE TO THE PROBLEM BEHAVIOR

The purpose of step three is to determine whether there are any identified or identifiable physical or mental health conditions that may be causing or affecting the target behavior. The reason for this is that the intervention to address a behavior that is medically induced may require medical intervention or a combination of drugs and behavioral therapy. It is also important to know whether the individual, whose behavior is of concern, is being treated for a medical condition, and whether the treatment itself may be causing the behavioral symptoms. During step three the following should occur:

- Significant others involved with the child or adult, with regard to the behavior of concern, should be interviewed to determine the existence of any medical or mental-health related conditions.
- Medical and psychological records where appropriate should be legally and confidentially examined.

- Other data on the behavior should be collected, using checklists and ratings as warranted and needed.

STEP 4
CONDUCT A FUNCTIONAL ASSESSMENT

The purpose for conducting a functional assessment is to determine the relationships among the antecedent conditions which form the context in which the behavior occurs (A), the behavior itself (B), and the consequences of the behavior (C). This is often referred to as an ABC analysis. Knowing the function that a behavior serves, that is, what need the behavior satisfies for the individual, through the consequences that follow the behavior, can help the interventionist to modify the behavior by addressing the function. Functional assessment is an effective means to identify the antecedents and consequences associated with the occurrence of a student's undesired behaviors. ((Cooper, Heron & Heward, 2007;Chandler & Dhalquist, 2002; & Alberto and Troutman, 2003. Represented in Table 2.1 is an example taken from Chandler & Dhalquist (2002). In the example presented in Table 2.1, the student wants the teacher's attention. The function of the behavior is attention.

Table 2.1. Functional Behavior Assessment (FBA) Paradigm

Antecedents	*Behavior*	*Consequences*
Teacher enters classroom	Student throws paper	Teacher reprimands student
Teacher enters classroom	Student throws paper	Teacher praises other students *Function of behavior not met*
Teacher enters classroom	Student greets teacher politely	Teacher smiles at student *Function of behavior met*

STEP 5
CURRICULUM BASED ASSESSMENT (CBA)

The purpose for conducting a curriculum based assessment is to determine the goodness of fit between the curriculum, or what is being taught in a classroom, and students' academic readiness to receive what is being taught. The notion is that if there is a disconnect between the material being taught in a classroom and students' cognitive capacity to receive it, the result could be that students may display behavior problems as a way to ask for help or

to escape from the learning situation. This may apply to students who are under-prepared for the material and for whom the material is too advanced or to students for whom the material is not advanced enough and who may be bored or feel unchallenged. CBA provides a mechanism for teachers to assess how students are performing when a given curriculum is used. It generates information needed to modify the curriculum to obtain desired performance results among students.

The curriculum-based assessment helps to answer several important questions in an effort to determine the reason for a student's misbehavior or off-target behavior in the classroom. The questions are:

- Could the fact that the curriculum is too difficult or not challenging enough be the cause of the student's misbehavior or off-task behavior?
- Are concepts being taught and explained clearly enough for the student and if not can this be the cause of the student's misbehavior?
- Are there other factors in the learning environment that the teacher can control that may be contributing to the student's misbehavior?

During step five the following should occur:

- The student's present performance level (PPL) or level of academic work at which the student succeeds at near 100% should be assessed. This is an assessment of the student's mastery level of assessed subject matter.
- The inter-student variability or differences in PPL among students should be assessed.
- The intra-student variability or differences in PPL in different subject areas for the same student should be assessed.
- A determination should be made as to whether there is a curriculum mismatch or disparity between the student's PPL and the curriculum.
- The teacher can use probes which are exercises designed to determine the aspects of the curriculum that the student has mastered and thus determine the student's entering skills.
- The teacher can use error analysis which is a process that indicates the types of errors students make on their academic assignments.

STEP 6
BEHAVIOR MANAGEMENT INTERVENTION

The purpose of behavioral interventions is to modify, reduce and eliminate undesirable behaviors and to establish and increase desirable behaviors. The

behavior management approach used is based on several factors: the nature of the behavior problem, characteristics of the individual demonstrating the behavior problem, the goals for behavior change and proven effectiveness of specific intervention strategies with the target behavior. In some cases, a combination of different approaches to behavior management may be most effective than just one approach. In this chapter more traditional approaches to behavior management are discussed. Traditional approaches combine elements of operant (instrumental) learning, classical learning and to some extent, elements of social learning. In subsequent chapters, less traditional approaches that incorporate more emphasis on cognitive and affective intervening variables are discussed. These include Cognitive Behavior Management (CBM), Social and Emotional Learning Approaches, Character Education and Yoga.

The basic premise of traditional approaches to behavior management is that individuals use their behavior as instruments to achieve want they want (i.e. reinforcers) or to avoid want they do not like (punishers), hence the term instrumental learning. They operate on the environment to influence the outcome, hence the term operant learning just as Skinner's rats pressed the lever to get food and just as students study diligently to get good grades. They also act to avoid punishment. Just as Skinner's rats ran away to avoid shock, students may not cheat in school to avoid automatic disqualification and failure. Behavior management approaches are used to reduce negative and undesirable behaviors among students and increase positive and desirable behaviors. Some important principles must be observed:

- Target behaviors must be observable and measurable.
- The consequence (reinforcer or punisher) must be carefully selected for appropriateness and effectiveness.
- The consequence must follow the behavior as soon as possible.

There are several basic concepts, processes and techniques that characterize traditional behavior management approaches. These are presented and discussed below:

Reinforcement

Reinforcement is a widely used concept and aspect of traditional behavior management approaches. Effective reinforcement results in the increase of a desirable behavior when a reinforcer or reinforcing event follows the behavior. A reinforcer is any stimulus that immediately follows a behavior and that serves to maintain or increase the behavior.

Reinforcers are consequences that increase the probability that a given behavior may occur. They may be primary (directly satisfy a physiological or emotional need) or secondary (paired with and exchanged for primary reinforcers). Secondary reinforcers are used mostly in token economy systems approaches to behavior management. Reinforcement may be *positive* (when a reinforcer is applied) or *negative* (when a punisher is removed).

Punishment

Punishment is an important concept, the use of which is not as widely practiced or encouraged as is reinforcement in traditional behavior management approaches. Effective punishment results in the decrease of an undesirable behavior when a punisher or punishing event follows the behavior. A punisher is any stimulus that immediately follows a behavior and that serves to decrease the behavior. Punishers are consequences that reduce the probability that a given behavior may occur. Punishment may be positive (when a punisher is applied) or negative (when a reinforcer is removed).

Schedules of Reinforcement

How and when reinforcement is given is a critically important aspect of traditional approaches to behavior management. The reinforcement schedule used is based on: the nature of the target behaviors for change, the individual whose behavior is being targeted, the context in which the behavior change is expected to occur and the specific behavioral goals of the behavioral intervention. The schedules that are often used are described below:

- Interval Schedules**:** reinforcement is based on the passage of time without regard to number of responses or the number of times the behavior occurs as long as the response or behavior occurs at least one time.
- Ratio Schedules: reinforcement is based on the number of responses or times that the behavior occurs in a given time frame.
- Fixed Interval: A fixed amount of time must pass before the reinforcement is given, as in giving a student social reinforcement, such as praise, after every 15 minutes that he/she sits still. This would be represented as FI 15.
- Variable Interval**:** The amount of time that must pass before the reinforcement is given varies or changes within specified time periods, such as after 5 minutes, then after 7 minutes, then after 12 minutes. An average amount of time may be calculated. This may be represented as VI 8 (24/3).
- Fixed Ratio: A fixed number of responses must be observed before the reinforcement is given, such as giving praise after every 5 times the behavior occurs. This would be represented as FR 5.

- Variable Ratio**:** The number of responses that must be observed before the reinforcement is given varies or changes, such as after the behavior occurs 5 times, then after 1 time, then after 3 times. An average number of responses may be calculated. This would be represented as VR 3 (9/3).

Differential Reinforcement (DR) Schedules

Differential reinforcement schedules are used to reduce undesirable behaviors or increase desirable behaviors. These are called differential schedules because they focus on differentiating the target behavior from other behaviors that may co-occur with the target behavior. The various DR schedules include:

- Differential Reinforcement of Zero (0) Rate of Responding (DR0). With this schedule, the goal is to completely eliminate the target behavior. Example, John swears at other children at least 10 times during the school day. The goal is to eliminate John's swearing. A DR0 schedule of reinforcement is used. John receives a token each day he does not swear and if he accumulates five tokens for the week he can exchange them for a treat of his choice from among a collection of healthy treats.
- Differential Reinforcement of a Low Rate of Responding (DRL): With this schedule, the goal is to reduce the occurrence of the target behavior to an acceptable level. This may be used as part of a shaping approach. Example, John swears at other children at least 10 times during the school day. The goal is to reduce John's swearing toward eventually eliminating it over the course of several weeks. A DRL schedule of reinforcement is used. John receives a token each day he does not swear and if he accumulates three tokens during the first week he can exchange them for a treat of his choice from among a collection of healthy treats. During the second and third weeks he must receive four tokens and during the fourth week he must receive five tokens, one each day, in order to receive the treat at the end of the week. Therefore for the first three weeks John is on a DRL schedule which shifts to a DR0 schedule during the fourth week.
- Differential Reinforcement of a High Rate of Responding DRH): With this schedule, the goal is to increase the occurrence of the target behavior. Example, John does not complete his assignments on time. The goal is to get John to complete and submit as many assignments as possible and to get then right. A DRH schedule of reinforcement is used. John receives a token each day he completes and submits all assignments and gets then all right. If he accumulates five tokens during the week he can exchange them for a treat of his choice from among a collection of healthy treats.

- Differential Reinforcement of an Alternate Response (DRA): With this schedule, the goal is to increase the occurrence of an alternate target behavior. Example, the teacher would like John to raise his hand when he wants to speak instead of just shouting out. John receives a token each day he raises his hand whenever he wants to speak without exception. If he accumulates five tokens during the week he can exchange them for a treat of his choice from among a collection of healthy treats.
- Differential Reinforcement of an Incompatible Response (DRI): With this schedule, the goal is to increase the occurrence of an alternate target behavior that is incompatible with the target behavior that is being reduced or eliminated. Example, John swears at other children at least 10 times during the school day. The goal is to get John to be polite instead of swearing and to say hello to at least 10 of his peers each day. Saying hello is incompatible with swearing. A DRI schedule of reinforcement is used. John receives a token each day he says hello to ten of his peers and if he accumulates five tokens during the week he can exchange them for a treat of his choice from among a collection of healthy treats.

Shaping

Shaping is the reinforcing of successive approximations to an overall behavioral goal. The overall goal is broken down into smaller achievable sequential behavioral objectives. Shaping is the reinforcing of the achievement of each subsequent behavioral objective in the set of behavioral objectives. Zirpoli, (2005, 203-204) identified the following as steps in shaping:

- Determine the terminal behavior or behavioral goal.
- Determine the successive approximations or steps necessary to complete the terminal behavior.
- Identify a starting point or behavior that the student currently performs that approximates either the terminal behavior or the first step to the terminal behavior.
- Reinforce closer approximations to the terminal behavior until the behavioral criterion for each successive approximation or step has been achieved (reinforce improvement, not perfection).
- Move from one step to the next until the terminal behavior has been learned/shaped. Withhold reinforcement for behaviors that are not clear steps toward the terminal behavior.

Chaining

The purpose of chaining is to connect discrete behaviors to one another in a sequence to form a chain of discrete behaviors. Each behavioral link in the chain is sequentially reinforced and serves as the discriminating stimulus for the next behavioral link until the behavioral chain is established**.** Chaining of behaviors may be done in a forward progression or in a backward regression. Examples of forward and backward chaining, involving teaching students how to work on computers in a media center to access a website and complete a task on that website, are presented below:

Forward Chaining

In forward chaining the behavioral links are taught beginning with the first link and ending with the last link. The chain is successfully learned when the student is able to perform all of the seven behavioral steps/ links satisfactorily.

Step 1: Entering the media center.
Step 2: Turning on the computer.
Step 3: Logging in.
Step 4: Accessing the designated website.
Step 5: Completing the assigned task.
Step 6: Logging out.
Step 7: Turning off the computer.

In the example above, the student will be taught and reinforced for entering the media center appropriately (step 1). Then the student will be taught how to turn on the computer (step 2). The student receives reinforcement for performing both steps 1 and 2 satisfactorily. The student continues to be taught each subsequent step through step 7 and is reinforced for successfully performing subsequent combination of steps accurately.

Backward Chaining

In backward chaining the behavioral links are taught beginning with the last link (Step 7) and ending with the first link (step 1). Again, the chain is successfully learned when the student is able to perform all of the seven behavioral steps/ links satisfactorily.

Step 7: Turning off the computer.
Step 6: Logging out.

Step 5: Completing the assigned task.
Step 4: Accessing the designated website.
Step 3: Logging in.
Step 2: Turning on the computer.
Step 1: Entering the media center.

In the example above, the student will be taught and reinforced turning off the computer appropriately (step 7). Then the student will be taught how to log out (step 6). The student receives reinforcement for performing both steps 7 and 6 satisfactorily. The student continues to be taught each subsequent step through step 1 and is reinforced for successfully performing subsequent combination of backward steps accurately.

Other forms of chaining include *serial training* in which behavioral links in the chain are taught sequentially and one at a time based on a set of criteria; *concurrent training* in which more than one behavioral link in the chain are taught at the same time; *total task training* in which all behavioral links in the behavior chain are taught simultaneously.

Token Economy System

In a token economy system, individuals, usually students in a school setting, or children in a home environment, receive tokens (stars or points) as secondary reinforcers, for desirable behavior, that they accumulate then exchange for other more primary reinforcers. The token economy program is a symbolic reinforcement system (Kazdin, 1982). Tokens serve as symbolic secondary reinforcers that can be exchanged for the more valued primary reinforcers. Ziporli (2005) identified the following as elements of an effective Token Economy Program:

- Tokens should be something that students can see, touch, count.
- Tokens should not be so small or large that young children cannot store them, handle them, and count them. Tally marks or checks may be effective with some, especially older students.
- Students must be able to exchange the tokens for actual reinforcers.
- Students should not be able to obtain tokens from sources other than their teacher. If stealing is a potential problem, the teacher may choose to store the tokens.
- Students must understand that the tokens they earn can be exchanged for various reinforcers. To learn how the system works, some children, especially young children may have to be walked through the exchange process immediately after earning tokens.

- Tokens should not be so small or large that young children cannot store them, handle them, and count them. Tally marks or checks may be effective with some, especially older students.
- Students must be able to exchange the tokens for actual reinforcers.
- Students should not be able to obtain tokens from sources other than their teacher. If stealing is a potential problem, the teacher may choose to store the tokens. Teachers must respect the differences in their students' spending habits. Some students will prefer to save their tokens; some will prefer to spend all of their tokens at each exchange.
- Each student should have the opportunity to earn at least one token per exchange period. Also, no maximum should be placed on the number of tokens a student may earn.
- Students who earn only a few tokens or even just one should have the opportunity to exchange their tokens for small reinforcers. (Zirpoli, 2005 PP. 203-204).

Stimulus Control

While the majority of the traditional behavior management interventions focus on manipulating the consequences of behavior, some approaches also include attention to the antecedent or stimulus conditions that precede the behavior. Removing or modifying the antecedent conditions that trigger and encourage an undesirable behavior, or changing the stimulus situation to one that will trigger and encourage desirable behavior, could be an effective intervention strategy. For example, in a situation in which a recovering smoker relapses when she drinks, removing drinking as a precursor may help to prevent smoking relapse. Similarly, in a situation in which a recovering alcoholic relapses when he smokes, removing smoking as a precursor may help to prevent alcoholism relapse. In a classroom situation, when a student misbehaves when seated next to a particular other student, changing the seating arrangements may help to change the misbehavior.

Contingency Contracting

A helpful and highly recommended behavior management technique that is often included as part of an overall behavior management approach is the establishment of a written behavioral contract between the individual whose behavior is the target for change and the interventionist who is trying to help the individual change the behavior. A contingency is established between the expected behavior and an outcome in the form of reinforcement. The reinforcement is contingent or dependent on the behavior occurring. In a

classroom setting, a teacher may establish a contract with a student regarding improvements in attendance, attention and time on task, or academic performance or all three in exchange for specific consequences. In a counseling setting, a counselor may establish a contract with a client regarding improvements in procrastination, lying or tardiness in exchange for specific consequences. Zirpoli (2005) noted that "contracts provide a means for teachers and students to place in writing behavioral expectations, reinforcers, and other consequences." (p. 211).

Specific Strategies for Reducing and Eliminating Undesirable Behaviors

Extinction: is a process that involves gradually reducing the frequency and/or intensity of a previously reinforced target behavior by withholding reinforcement over a period of time. Sometimes during the extinction process, there is a temporary recurrence or uptake of the behavior being extinguished even though the behavior is not being reinforced. This is called spontaneous recovery. Also, sometimes immediately following extinction there may be a temporary increase in the frequency or intensity of a target behavior. This is known as extinction burst.

Timeout: is used when unacceptable or inappropriate behavior occurs in a situation that may be reinforcing it. It involves removing an individual from the reinforcing situation for a period of time contingent on the performance of inappropriate behavior. The guidelines for timeout suggest that for young children (for example, younger than five years old), timeout should be limited to two to eight minutes and for older children (for example between five and ten years old), the time children spend in timeout should be increments of I minute per year of age.

There are different types of time-out that are usually subsumed under two broad categories: Non-exclusion Timeout and Exclusion Timeout.

Non-exclusion timeout: in this group of timeouts the individual is not removed from the reinforcing situation but attention and other reinforcers are removed from the individual. Types of non-exclusion time-out include:

- Planned Ignoring in which social attention that is reinforcing the undesirable behavior is removed. John whines to get his mother's attention whenever she is talking on the phone. John's mother ignores his whining.
- Removal of Specific Reinforcers from a situation that are sustaining or influencing an undesirable behavior. John whines when he sees cookies

on the table in order to gain sympathy and get a cookie. John's mother removes the cookies from the table.
- Time-Out Ribbon in which a colored ribbon identifies the individual as having acted inappropriately. In the classroom during circle time, John whines and disturbs the listening of other children. John's teacher after repeated warnings pins a red ribbon on John's shirt.

Exclusion timeout: in this group of timeouts, the individual is physically removed from the reinforcing situation. Types of exclusion timeout include:

- Contingent Observation Time-Out: the individual's attention is directed away from the reinforcing situation such as having the individual turn his/her back and face the opposite direction. John whines when he sees cookies on the table in order to gain sympathy and get a cookie. John's mother directs John to turn away from the cookies and face the opposite direction.
- Isolation-Time-Out: the individual is directed away from the reinforcing situation perhaps in another section of the room where the reinforcing situation or event may be occurring. John whines when he sees cookies on the table in order to gain sympathy and get a cookie. John's mother directs John to go away from the table to the opposite end of the room.
- Seclusion Time-Out: the individual is completely removed from the reinforcing situation to another location. John whines when he sees cookies on the table in order to gain sympathy and get a cookie. John's mother directs John to go to his room and stay there for five minutes until she comes to get him in five minutes.

Response Cost: When an inappropriate behavior occurs, the individual performing the behavior has to pay a price. The price that the individual pays is the response cost. It is the removal of reinforcers that is contingent on the performance of inappropriate behavior.

*Restitution or Simple Correction***:** When an inappropriate behavior results in the environment in which it occurs being changed or modified in some way, the individual performing the inappropriate behavior is required to restore the environment to its original state before the individual's behavior changed it.

Restitutional Overcorrection: When an inappropriate behavior results in the environment in which it occurs being changed or modified in some way, the individual performing the inappropriate behavior is required to restore the environment to not just to its original state before the individual's behavior changed it but to a state even better than the original.

Positive Practice: This involves an individual practicing an appropriate behavior as a consequence of having practiced or performed an inappropriate behavior.

Positive Practice Overcorrection: This involves an individual practicing an appropriate behavior repeatedly as a consequence of having practiced or performed an inappropriate behavior. (Shea & Bauer, 2007; Zirpoli, 2005; Darch & Kame'enui, 2004; Cipani, 2004.)

STEP 7
EVALUATING THE INTERVENTION

Behavioral interventions should be evaluated for two basic reasons. First, to determine whether or not the intervention is being implemented with fidelity and how well it is working (formative evaluation). Second, to ascertain the impact of the intervention after adjustments have been made based on the findings from the formative evaluation. The evaluation designs that are usually used are single subject designs because most behavior management programs are targeted at the behavior of individuals and not groups. In some instances, the behavior of more than one individual may be targeted with the same intervention or different interventions. Generally, descriptive rather than inferential data analyses are conducted to demonstrate the extent or degree, if any, of behavioral change. Some of the most frequently used single subject designs are described below**:**

A-B Design

In this design baseline data (A) on the behavior are collected then the behavioral intervention is introduced (B) and data are collected again.

- **A**: Baseline Condition: "A"
- **B**: Intervention Condition: "B"

A-B-A Design

In this design, baseline data (A) on the behavior are collected, the behavioral intervention is introduced (B), the intervention is withdrawn and there is a return to the baseline condition (A) and data are collected again.

- **A**: Baseline Condition: "A"
- **B**: Intervention Condition: "B"
- **A**: Withdrawal of Intervention and Return to Baseline Condition: "A"

Reversal Designs

In this design, baseline data (A) on the behavior are collected, the behavioral intervention is introduced (B), the intervention is withdrawn, there is a return to the baseline condition (A), data are collected, then the intervention (B) is reintroduced.

A-B-A-B

- **A**: Baseline Condition: "A"
- **B**: Intervention Condition: "B"
- **A**: Withdrawal of Intervention and Return to Baseline Condition: "A"
- **B**: Withdrawal of Baseline Condition "A" and reintroduction of Intervention Condition "B"

Alternating/Changing Conditions Design without Baseline between Conditions

In this design, baseline data (A) on the behavior are collected, the behavioral intervention (B) is introduced, the intervention is then withdrawn, and a new intervention (C) is introduced.

- **A**: Baseline Condition: "A"
- **B**: Intervention Condition: "B"
- Introduction of Intervention Condition "C"

Alternating/Changing Conditions Design with Baseline between Conditions

In this design baseline data (A) on the behavior are collected, the behavioral intervention (B) is introduced, the intervention is withdrawn, there is a return to the baseline condition (A), data are collected, and then a new intervention (C) is introduced.

- **A**: Baseline Condition: "A"
- **B**: Intervention Condition: "B"
- **A**: Withdrawal of Intervention and Return to Baseline Condition: "A"

- **C**: Withdrawal of Baseline Condition "A" and introduction of Intervention Condition "C"

APPLYING THE SEVEN STEPS: A CASE STUDY MICHELLE
FACTS ABOUT MICHELLE

Michelle:

- Is10 years old and in the third grade. She is below grade level given her chronological age.
- Is falling behind in her school work.
- Has been diagnosed with a learning disability.
- Is reported to be a difficult student to teach in her regular classes.
- Is reported by her teacher to be unmotivated.
- Enjoys music.
- Is most comfortable and productive in music classes.
- Was referred by her teacher.

How did Michelle come to your attention?

Michelle's teacher referred her to the PPT. Therefore, Michelle's teacher should be the first source of information in helping to clarify her concerns about Michelle.

STEP 1
DETERMINE IF A PROBLEM EXISTS

Purpose: Screening for Behavior Problems.
Collect data from:

1. *Michelle's Teacher* who referred her: Interview Michelle's teacher to get a general sense of Michelle's behavior in class. Ask Michelle's teacher to complete teacher rating and teacher ranking instruments using the Systematic Screening for Behavior Disorders (SSBD) or the Early Screening Project (ESP) or some other appropriate rating instrument. For descriptions of these instruments, see pages 45-46 in Zirpoli (2005).
2. *Michelle Herself*: interview Michelle about her school interests and extracurricular interests and about her likes and dislikes.
3. *Observations of Michelle* in her classroom to determine how Michelle behaves in the classroom and how she interacts with others.

STEP 2
DETERMINE IF INTERVENTION IS WARRANTED

Purpose: Social Validation of Target Behavior and Ranking of Problem Behaviors.
Collect data from:

1. *Michelle's Teacher Who Referred Her*: Interview Michelle's teacher to operationalize what she means by Michelle is difficult to teach and what she means by Michelle is unmotivated. What does Michelle do or not do that makes her difficult to teach? What does Michelle do or not do that makes her seem to be unmotivated? Get specific behaviors from the teacher. Ask Michelle's teacher to complete a behavior checklist and/or behavior rating scale such as the Walker-McConnell Scale of Social Competence and School Adjustment, the Behavioral and Emotional Rating Scale (BERS) or the Behavior Assessment System for Children (BASC). For descriptions of these instruments, see pages 57-59 in Zirpoli (2005).
2. *Identifying and Rank Ordering of Michelle's Target Behaviors*: Use ranking questions such as those in Zirpoli (2005) to help rank order behaviors and determine if intervention is warranted. In Michelle's case, based on the limited information provided it would appear that the answer to question # 2 is yes. Michelle is falling further behind. She is difficult to teach. More information about Michelle's behavior should be known after her teacher completes the rating scales above.
3. *Classroom Observations:* Observe Michelle during interactions with her classmates.

STEP 3
DETERMINE IF MEDICAL AND /OR PSYCHOLOGICAL REASONS EXIST THAT CONTRIBUTE TO MICHELLE′S PROBLEM BEHAVIORS

Purpose: Identify Physical and Mental Health Conditions That May Affect Michelle's Behavior.

Note: Michelle is suspected of having ADHD and is diagnosed with a learning disability.

Collect data from:

1. *Checklists and/or Ratings Completed by Michelle's Parents and/or her Teacher* using for example, the Scale for Assessing Emotional Disturbance (SAED), Child behavior Checklist (CBCL), or the Teacher

Rating Form (TRF). These instruments are described on page 65 in Zirpoli (2005).
2. *Naturalistic Behavioral Observations.*
3. *Psychometric Assessment of Michelle's Global Intelligence and Academic Achievement*. Michelle is diagnosed with a learning disability.

STEP 4
CONDUCT A FUNCTIONAL BEHAVIOR ASSESSMENT (FBA) OR AN A-B-C ANALYSIS

Purpose: Identify the antecedents and consequences associated with Michelle's undesirable behaviors.

1. *Define Michelle's Problem Behaviors*: Interviews with Michelle's teacher, Michelle's teacher's and Michelle's parents' ratings, observations of Michelle, and interviews with Michelle will clarify and operationalize Michelle's teacher's statement of the problem when she noted in her referral that Michelle is unmotivated and difficult to teach.
2. *Gather Information Regarding Michelle's Environment and Her Behavior:* Talk with Michelle's teacher and observe what happens in the classroom, the time of day that Michelle is most difficult and most unmotivated, how Michelle does with the existing curriculum and what happens as a consequence of Michelle's behaviors.
3. *Hypothesize the Function of Michelle's Behavior:* Michelle is at least one grade level and probably two grade levels behind for her age. She is 10 years old and in the third grade. The majority of 10 year olds in the United States are in the fifth grade. It is possible that Michelle's lack of motivation and difficulty to teach is due to the fact that the work may not be challenging enough for her or may be too challenging for her (given her learning disability). This would be the antecedent condition (A). Therefore, Michelle may be resisting and avoiding work (B) either to find something more challenging to do or to avoid the embarrassment of failure (C). It is possible too that Michelle's suspected ADHD (which may have been confirmed in Step Three, may be contributing to her problems. We will work with the hypothesis that Michelle's behavior is one of avoidance to avoid embarrassment based on the psychometric assessment of her global intelligence and academic achievement.

STEP 5
DETERMINE IF MICHELLE'S PROBLEM IS A RESULT OF A SKILL DEFICIT: CONDUCT A CURRICULUM BASED ASSESSMENT (CBA)

Purpose: Identify any and all learning, academic or social skills deficits that may be related to the target behavior(s).

Given that Michelle is 10 years old and in the third grade, and given that she is diagnosed with a learning disability, Michelle's PPL will be determined and a curriculum based assessment will be conducted to establish at what level and in what way the teacher should best engage Michelle.

STEP 6
DEVELOP A BEHAVIORAL MANAGEMENT INTERVENTION PLAN FOR MICHELLE

Purpose: Reduce Michelle's undesirable behaviors and establish and support positive and desired behaviors.

Given the hypothesis that Michelle's behavior is one of resistance and avoidance to prevent failure and embarrassment, Michelle's PPL will be determined and the curriculum adjusted to better meet her academic needs. A behavior plan will be developed to provide Michelle with continuous reinforcement for producing desired work. Continuous reinforcement will be used in the beginning to establish the desired behavior of being engaged in work and performing tasks. Gradually, continuous reinforcement will be discontinued, and a variable ratio interval schedule of reinforcement will be used to reward Michelle for performing desired work. The variable ratio schedule is expected to produce a high rate of performance on Michelle's part. Given that Michelle likes music, the opportunity to listen to and to play music will be used as a reinforcer. Music as reinforcement will be used to help shape Michelle's behavior to the desired goal of performing at the expected level for her age, given the limitations imposed by her Learning disabilities and her ADHD. The plan will include a contract with Michelle and her parents that Michelle will perform desired behaviors as the teacher stipulates, including doing her school work in the expected manner in exchange for the reinforcement. Michelle's parents will provide the support needed at home to successfully implement the plan. Michelle, her teacher and Michelle's parents will sign the contract.

STEP 7
CONDUCT ONGOING EVALUATION OF THE BEHAVIORAL INTERVENTION USED WITH MICHELLE

Purpose: Determine if the behavioral management intervention plan used with Michelle is effective.

Baseline data (A) on Michelle's work productivity and performance will be collected before beginning the Behavioral Intervention Plan. The Plan (B) will then be implemented and data will be collected during the intervention to see if Michelle's productivity and performance increase. After three months the reinforcement will be removed and there will be a return to baseline condition (A) to see if Michelle's productivity and performance stay the same or decrease. The Plan will be reinstated (B) if it is determined that it needs to be i. e. if Michelle's behavior begins to deteriorate significantly. The external reward of extra music time may be replaced by social reinforcement and eventually by the internal reward in the form of personal satisfaction that Michelle gets from doing well. The goal is to establish desirable behavior on Michelle's part even when there is no external reinforcement.

OBTAINING CONSENT/ASSENT

Child's Participation

It is important to obtain consent from the legal guardian of a child prior to proceeding with step one in the seven step approach. This indicates that a legal guardian has voluntarily agreed to the participation of a child in the process.

Consent Statement Example:
I _____ willingly give consent for my child _____ to participate in the behavior management process being implemented by _____ _____. I have been informed and fully understand the attached seven steps that are involved in implementing the behavior management program. If I have any questions or concerns I know that I am free to call Name_____at telephone number_____or to e-mail at email address_____.

Signatures:
Parent:_____
Interventionist:_____

Supervisor (ifneeded):_____
Date:_____

Adult's Participation

It is important to obtain consent from an adult prior to proceeding with step one in the seven step approach. Obtaining assent indicates that an adult has voluntarily agreed to participate in the process.

Assent Statement Example:

I _____ willingly agree to participate in the behavior management process being implemented by _____. I have been informed and fully understand the attached seven steps that are involved in implementing the behavior management program. If I have any questions or concerns I know that I am free to call Name_____at telephone number_____or to e-mail at email address_____.
Signatures:
Parent: _____
Interventionist: _____
Supervisor(ifneeded):_____
Date: _____

APPENDIX
BEHAVIOR MANAGEMENT PROCESS FORM (BMF)

A behavior management form (BMF) such as the one used in the case of Michelle and in the case presentation of "J" by Nicole Shlomo (chapter 3), helps with the collection, organization and management of information. Below is an example of a recommended BMF.

I. Background Information:
Name: _____
Birth Date: _____ Age: _____
Gender: Male____ Female_____
Ethnicity: _____ (how does the client describe himself/herself)
Address: _____
_____
_____

Occupation/Profession: _____

_____

Student: Yes___ No___

If Yes, Name of School:_____

Grade: _____

II. Formal Behavioral Assessment Plan

Step 1: Decide If a Problem Exists: Yes_____ No_____

A. Identify and Describe the Problem.
B. Identify and Specify Target Behavior for Change.
C. Source of Information for 1A above.
D. Collect Baseline Data Using Data Collection Form.
   - What data to collect?
   - When to collect data?
   - From whom will data be collected?
   - In what form will data be collected?
   - Where will data be collected?
   - How do data appear in tabular and graphic form?

Step 2: Determine If Intervention Is Warranted: Yes___ No_____

A. Explain Why Intervention Is Necessary (what could happen if there is no Intervention?).
B. Source of Information for 2A above.

Step 3: Determine If Medical and/or Psychological Reasons Exist That Contribute to the Problem Behavior: Yes____ No_____

A. Describe the medical/psychological contributions to the target behavior.
B. Sources of Information for 3A above.

Step 4: Perform a Functional Assessment

A. *Antecedents*: Describe the Antecedents (i. e. preexisting conditions related to the target behavior).
B. *Behavior*: Restate the Behavior.
C. *Consequences*: Describe the Consequences of the Behavior (what are the results of the behavior?).

Step 5: Determine if the Problem is the Result of a Skill or Performance Deficit: Yes____ No___

A. Describe the Nature of the Deficit and Its Relationship to the Behavior.
B. Source of Information for 5A above.

C. Was A Curriculum-Based Assessment Performed and With What Result?

Step 6: Develop Behavior Management Intervention

A. State Behavioral Goals

B. Describe Behavioral Intervention

- What will be done to change the behavior?
- Where will the intervention occur?
- How often will the intervention occur?
- What theoretical model applies (classical, operant, modeling, token economy, cognitive behavioral)?
- What is the reinforcement or punishment will be used if any?
- Who will be involved in implementing the intervention?

Step 7: Conduct Ongoing Evaluation

Continue to collect data from Step 1C above.

- What data are you collecting?
- When are you collecting the data?
- From whom are you collecting data?
- In what form are the data that you are collecting?
- Where are you collecting the data?

Analyze data using tables and graphs.

- How do data appear in tabular and graphic form?
- What do the data show?

Answer the question: "What pattern of change, if any, do you see in the target behavior?"

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Chapter Three

Data Collection and Analysis Procedures

Norris M. Haynes with Nicole Shlomo

Critical to the implementation of behavior management programs are the collection and analysis of data. Effective programs are data driven in that they collect data prior to the introduction of the intervention (diagnostic and baseline data), during the intervention (process or formative data) and at the end of the intervention (outcome or impact data). Rich sources of data can inform the identification, description and targeting of specific behaviors, and the development of the behavior management plan, with clearly articulated behavior change goals. In this chapter, data collection, recording and analysis methods are discussed. (Cooper, Heron, & Heward, 2007).

DATA COLLECTION AND RECORDING METHODS

Interviews

One of the first sources of information about a behavior problem is the interview with the individual whose behavior is targeted for change. This interview can yield valuable information about the antecedent conditions that trigger or support the behavior, the function of the behavior and elements of the behavior itself that can inform the development of the behavior management program. In addition, interviews should be conducted with significant others who are knowledgeable about the individual and the behavior. These individuals may include parents, siblings, teachers, friends and peers depending on the nature of the behavior, the situation in which the behavior occurs, and the context in which the intervention is to be implemented.

Observations

Observing the behavior of interest in context is a valuable and objective source of information. An observation protocol or a checklist can be very helpful in recording observations about the target behavior.

Archives/Files

These include notes, records and referral documents provided by schools and individuals who are legally authorized to keep and disclose this information. Accessing these data must be done legally, ethically and with the full and voluntary assent of the subject whose behavior is being modified, or consent of a legal guardian of a child or dependent, who has legally recognized authority to share the information.

Peer Nominations

Another important way to gain information about specific behaviors in school and classroom settings is by asking students to nominate other children with regard to certain characteristics and behaviors. This is akin to conducting a socio-metric analysis of the social structure of the group or classroom. For example, the trigger questions may be: "who would you be most likely and least likely to select to be the leader of this classroom or group and why?" or who do you think is most likely and least likely to be disruptive in class?"

Checklists and Rating Scales

A number of screening and assessment instruments are used to identify, assess, diagnose and classify target behaviors at different steps in the seven step behavior management approach discussed in chapter two. Zirporli (2005) provides a fairly in-depth examination of these assessment instruments with clear explanations of how and why specific instruments are used. Presented below is a brief overview of some of these checklists and rating scales that may be used at steps one to three in the seven step process based on Zirpoli (205, 41-75).

OVERVIEW OF CHECKLISTS AND RATING SCALES SCREENING FOR BEHAVIOR PROBLEMS (STEP 1)

- Checklists and Rating by Others (Systematic Screening for Behavior Disorders: SSBD; Early Screening: Project ESP).

- Teacher Rankings (SSBD, ESP).
- Self-ratings (Skill streaming).
- Sociometric Techniques (Peer rating, Peer nomination, Peer evaluation).
- Interviews with Parents, Target Students and Others Who Know the Child (informal: phone calls, conferences.
- Behavioral Observations (SSBD, ESP).

SOCIAL VALIDATION OF TARGET BEHAVIORS (STEP 2)

- Ranking of problem behaviors.
- Data collection methods:
- Checklists and ratings by others (Skill streaming Checklists, Social Skills Rating System: SSRS, Walker-McConnell Scale of Social Competence: W-M; Behavior Assessment System for Children: BASC).
- Naturalistic observations (target student and peers).
- Ranking target behavior questions.

IDENTIFY PHYSICAL AND MENTAL HEALTH CONDITIONS THAT MAY AFFECT BEHAVIOR (STEP 3)

- Checklists and ratings by others (Scale for Assessing Emotional Disturbance: SAED; Child Behavior Checklist: CBCL; Teacher Rating Form: TRF).
- Clinical and naturalistic behavior observations (Daily School Behavior Record Card, Kazdin Behavioral Codes; Behavioral Avoidance Test: BAT).
- Psychometric assessment (intelligence tests, tests of academic achievement).
- Laboratory measures (GDS).

A summary of data collection methods at steps one to three in the seven step process is presented in table 3.1.

Table 3.1. Summary of Data Collection Methods at Steps One to Three in the Seven Step Process

Behavior Assessment Model Step:	*Checklist/Rating Scale*	*Self Rating*	*Observation*	*Interview*
I. Does Problem Exist?	x	x	x	X
II. Is Intervention Necessary?	x		x	
III. Are There Medical/ Psychological Reasons?	x		x	X

DATA COLLECTION FORM

Data collection forms are helpful in recording data for later use and analysis. They should be as simple as possible but designed in a manner to allow for the recording of as much valuable information as possible. Below is an example of a data collection form:

Behavior Data Collection Form

Name of Person Completing This Form: _____

Title of Person Completing This Form: _____

Name of Client: _____

Target Behavior: _____

_____

_____

_____

When did behavior begin (onset)_____

Where does behavior occur? (location context)_____

How often does behavior occur? (frequency)_____

How long does behavior last? (duration)_____

How is behavior displayed? (topography)_____

What time of day does behavior occur? (temporal context)_____

What events immediately precedes the target behavior? (antecedents/precursors _____

What events immediately follow the target behavior? (consequences)_____

Who is affected by behavior and how? (impact)_____

DATA RECORDING SAMPLES

Data can be recorded in a variety ways. The appropriate data recording method depends on the behavior being observed, the data collection approach, the intervention plan including behavior change goals and the evaluation plan including the planned research design and data analysis. Sample data recording sheets are presented in tables 3.2 to 3.5.

A sample data recording sheet by day and by time segments is presented in table 3.2.

A sample data recording sheet by day and by time of day is presented in table 3.3.

A sample data recording sheet showing behaviors displayed during five-minute observation periods is presented in table 3.4.

Table 3.2. Data Recording Sheet: Day by Time Segments

Five Minute Segments	*Day 1 Date:*	*Day 2 Date:*	*Day 3 Date:*	*Day 4 Date:*	*Day 5 Date:*	*Day 6 Date:*	*Day 7 Date:*	*Total*
Time 1								
Time 2								
Time 3								
Time 4								
Time 5								
Time 6								
Total								

Note: will show data for a given behavior during six time segments for each day during a seven day period.

Table 3.3. Data Recording Sheet: Day by Time of Day

Time of Day	*Day 1 Date:*	*Day 2 Date:*	*Day 3 Date:*	*Day 4 Date:*	*Day 5 Date:*	*Day 6 Date:*	*Day 7 Date:*	*Total*
Total								

Note: will show data for a given behavior during specific times of each day during a seven period.

Table 3.4. Behaviors Displayed During Five-Minute Observation Period

Day/Behavior	*1*	*2*	*3*	*4*	*5*	*Total*
T	2	0	2	1	0	**5**
C	0	2	3	1	1	**7**
D	1	1	0	0	3	**5**
G	1	2	0	1	0	**4**
A	2	1	1	2	2	**8**
Total	**6**	**6**	**6**	**5**	**6**	**29**

Note: shows the total number of each behavior TCDGA for one subject.

Adapted from Zirploi p. 109.

Table 3.5. Multiple Behaviors for Three Individuals during Five-Minute Period

	1		*2*		*3*		*4*		*5*	
Name	30 secs	30 secs	30 secs	30 secs	30 secs	30 secs	30 secs	30 secs	30 secs	30 secs
Jeremy	T	D	G	G	T	A	A	G	D	A
Jason	G	T	C	C	T	C		T	D	C
Justin	A	A	D	A	C	C	C	A		A

Note: shows the total number of each behavior TCDGA for each person: Jeremy, Jason and Justin.

Adapted from Zirploi p. 109.

A sample data recording sheet showing multiple behaviors for three individuals during a five- minute period is presented in table 3.5.

DATA ANALYSIS

With single-subject evaluation designs, which are characteristic of behavior management interventions, the analysis tends to be mainly descriptive, consisting of tabular and graphic displays of data with narrative explanations. In essence, the analyses are presentations of profile changes in behavior over time starting with baseline data and moving through implementation to post intervention data. To demonstrate this, a case study example prepared by a school psychology graduate student, Nicole Shlomo, as part of an assignment in an applied behavior interventions class is presented below. The example moves through each step in the seven step process and demonstrates the integration and display of data.

FORMAL FUNCTIONAL ASSESSMENT AND BEHAVIOR MANAGEMENT PROCESS FORM (FABMF) EXAMPLE
I. BACKGROUND INFORMATION:

Name: *J*
Birth Date: Confidential Age: Confidential
Gender: Male: X Female: ___
Ethnicity: Confidential
Address: CT
Occupation/Profession: Associate
Student: Yes_X__ No___
If Yes, Name of School: *University*
Grade: *Student*

II. FORMAL BEHAVIORAL ASSESSMENT PLAN
STEP 1

Decide If a Problem Exists Yes__X___ No_____

Identify and Describe the Problem

J had trouble feeling awake and alert throughout the day without caffeine. J reported that he had been drinking caffeinated drinks for the past 4 years. He tended to have an average of 5 caffeinated drinks a day in order to feel as if he was functioning normally. If he did not drink caffeinated beverages throughout his day J felt less energized and sluggish. He also reported that his caffeine drinking habit had become expensive as he purchased several drinks a day. J's sleep patterns did not seem to be affecting his problem because he reported that he was getting enough sleep at night.

Identify and Specify Target Behavior for Change

The target behavior for change was J's frequent caffeinated beverage purchasing and drinking throughout the day. An effort was made to reduce J's drink intake to 1 caffeinated beverage a day.

Source of Information for 1A above:

The information on the nature of the problem and its frequency was collected through an oral interview with the client, J.

Collect Baseline Data Using Data Collection Form

Baseline data on the frequency of J's caffeine drinking behavior were collected and recorded by J on a daily basis for two weeks. These data were collected on forms with columns that included the date and the number of caffeinated drinks consumed each day. An energy level rating scale from 1-7 was also used to collect data and reported by J at the end of each day to determine his perceived level of drowsiness. The data collector then displayed the data in Table 3.6 and Table 3.7 and in Figure 3.1 and Figure 3.2.

During the two-week data collection period, J drank a total of 68 caffeinated beverages with an average of 4.86 drinks per day. There was no clear pattern of the behavior observed. The data showed that J drank 6 caffeinated drinks on September 29th and 30th, 5 caffeinated drinks on October 1st-6th, 4 drinks on October 7th, 3 on October 8th, 4 on October 9th, and 5 drinks on October 10th-12th. J's perceived energy level was low, as indicated by his energy level rating scale, which shows he believes he is lacking energy. J's average daily energy level was 2.43 on a scale from 1-7. Additionally, J's perceived energy level was highest on October 8th, the day he consumed the least amount of caffeinated beverages.

Table 3.6. Number of Caffeinated Beverages Consumed September 29th to October 12th

Date	*Number of Caffeinated Drinks Per Day*
Wednesday, September 29	6
Thursday, September 30	6
Friday, October 1	5
Saturday, October 2	5
Sunday, October 3	5
Monday, October 4	5
Tuesday, October 5	5
Wednesday, October 6	5
Thursday, October 7	4
Friday, October 8	3
Saturday, October 9	4
Sunday, October 10	5
Monday, October 11	5
Tuesday, October 12	5

Total number of caffeinated drinks: 68. Average number of drinks per day: 4.86.

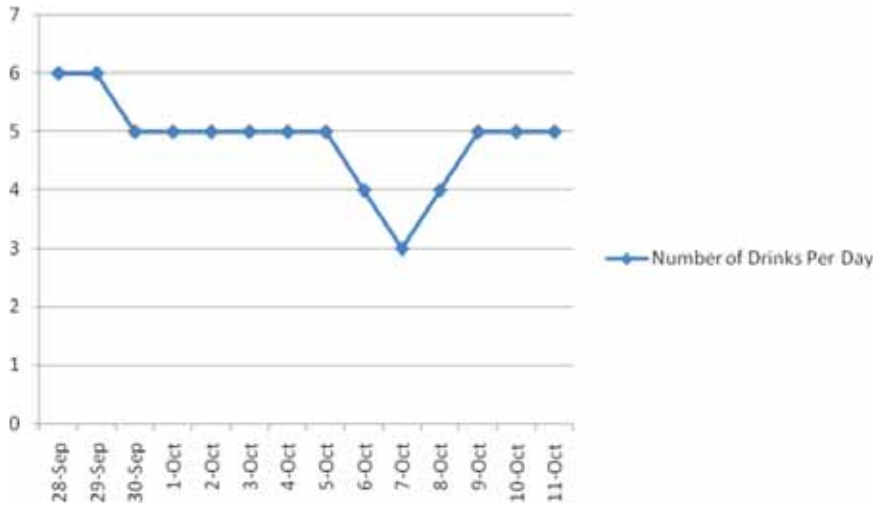

Figure 3.1. Number of Caffeinated Beverages Consumed September 28th to October 11th.

Table 3.7. Perceived Energy Level September 29th to October 12th

Date	*Perceived Energy Level (1-7)*
Wednesday, September 29	3
Thursday, September 30	2
Friday, October 1	1
Saturday, October 2	3
Sunday, October 3	3
Monday, October 4	2
Tuesday, October 5	4
Wednesday, October 6	3
Thursday, October 7	2
Friday, October 8	6
Saturday, October 9	2
Sunday, October 10	2
Monday, October 11	3
Tuesday, October 12	2

Note: Average energy level: 2.43.

STEP 2

Determine If Intervention is warranted Yes_X__ No_____
Explain Why Intervention Is Necessary (what could happen if there is no Intervention?)

In this case, an intervention to decrease J's caffeine consumption behavior was warranted. J had reported that he felt that his caffeine drinking behavior was unhealthy and did not make him feel energized at the end of the day. J reported feeling a "crash" and his perceived energy level was low at the

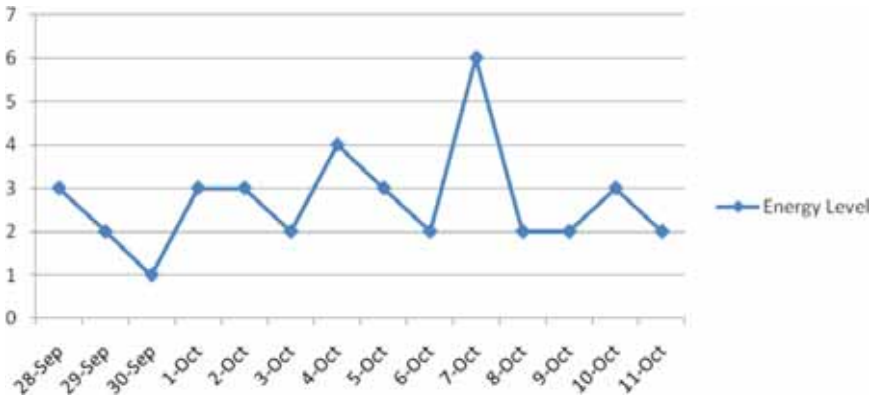

Figure 3.2. Perceived Energy Level September 28th to October 11th.

end of the day. Moreover, J was not pleased with how much money he was spending on a daily basis to support his behavior. He felt that change needed to take place. He did not believe his sleeping habits were the cause of his low energy, since he got an average of 7 hours of sleep at night.

Source of Information for 2A above:

The source of this information was an interview with the client, J.

STEP 3

Determine If Medical and/or Psychological Reasons Exist That Contribute To the Problem Behavior Yes____ No X

DESCRIBE THE MEDICAL/PSYCHOLOGICAL CONTRIBUTIONS TO THE TARGET BEHAVIOR

There were no medical or psychological problems that seemed to exist at the time. J stated that he did not have a medical condition that caused his drowsiness and further stated that he got at least 7 hours of sleep each night.

Sources of Information for 3A above

The source of this information was an interview with the client, J.

STEP 4

Perform a Functional Assessment:

Antecedents: Describe the Antecedents (i.e. preexisting conditions related to the target behavior)

J felt tired and inattentive. Since he dealt with customers all day at work and had to stay focused in classes at night, he used caffeine to make himself feel more alert prior to taking part in these activities.

Behavior: Restate the Behavior

J consumed caffeinated beverages to give himself energy throughout the day.

Consequences: Describe the Consequences of the Behavior (what are the results of the behavior?)

After consuming caffeinated beverages, J initially felt energized and alert. Particularly in the morning, J reported feeling more focused and alert after consuming a caffeinated beverage. However, as his days went on, J felt that he needed to continue consuming these beverages in order to maintain his energy level. Yet, the drinks did not have the same effect and by the end of the day, J's perceived energy level was low. J also spent too much money supporting his behavior and this made him unhappy.

STEP 5

Determine if the Problem is the Result of a Skill or Performance Deficit: Yes____No___Not Applicable __X__

Describe the Nature of the Deficit and Its Relationship to the Behavior
N/A

Describe the source of Information for 5A Above
N/A

Was A Curriculum-Based Assessment Performed and With What Result?
N/A

STEP 6

Develop Behavior Management Intervention

State Behavioral Goals

The behavioral goal was to decrease J's daily consumption of caffeinated beverages to 1 per day.

Describe Behavioral Intervention

What was done to change the behavior?

The behavioral intervention included several components. Based on the functional behavioral assessment, it was determined that J's caffeine consumption behavior served the purpose of allowing J to initially feel more alert and energized. The main antecedent to J's behavior was determined to be feeling drowsy and tired. Therefore, it was necessary to change this antecedent. In order to do so, J had to become energized before going to work.

J reported that drinking a glass of orange juice in the morning helped him feel more energized. Therefore, J replaced his coffee drinking with orange juice in the mornings. Also, instead of eliminating this behavior altogether, J gradually reduced his caffeine intake by one drink per day. The first week of the intervention, J was allowed to consume no more than 4 caffeinated beverages a day, the second week he was limited to 3, the third week he was limited to 2, and the fourth and final week he was only be allowed 1 caffeinated beverage per day. J was expected to report whether or not he met his goal each day. As part of his intervention, an operant conditioning model was used in which J could obtain positive reinforcement in the form of verbal praise by the behavioral interventionist. If J met his daily goal he would tell his interventionist, Nicole, and she would praise his behavior. Lastly, J had mentioned that his behavior was expensive to maintain as he spent too much money on caffeinated beverages each day. In his interview, he also said that he really liked to collect watches. Therefore, a behavioral intervention in the form of a token economy was used. J self-monitored the number of caffeinated beverages he drank and gave himself a tally each time he met his daily limit. If he exceeded his expectations and reduced his intake to less than the goal, he would give himself two tallies. At the end of the intervention, each tally could be traded in for the monetary amount of one beverage, approximately three dollars. At the end of the intervention, all the money he had saved up could be used to purchase a new watch to add to his collection.

Where did the intervention occur?

The intervention occurred at J's home, his place of work, as well as at school.

How often did the intervention occur?

The intervention occurred each day for four weeks.

What theoretical model applied (classical, operant/instrumental, modeling, token economy, cognitive behavioral)?

Operant/instrumental learning (positive reinforcement) and a token economy were used in the behavioral intervention.

What reinforcement or punishment was used, if any?

Positive reinforcement was used. J was rewarded with verbal praise from Nicole, the interventionist, each time he met his caffeine limit. Furthermore, positive reinforcement was used in a token economy in which J could earn the money he did not spend on beverages to buy a watch that he desired.

STEP 7

Conduct Ongoing Evaluation

In conducting an on-going evaluation of the behavioral intervention that the behavioral interventionist, Nicole Shlomo, used with J, she was guided by a series of step by step evaluation questions and responded to them as follows:

What data were collected?

A single-subject A-B design was used in this behavioral intervention. The data were collected over the course of a two-week baseline period. This data included information on the number of caffeinated beverages J drank per day as well as his perceived energy level. The information was collected via charts and scales recorded by J. Data also collected data during the four-week intervention period.

When were the data collected?

J collected the data each day during the two-week baseline period and four-week intervention.

From whom were the data collected?

The data were collected by the client, J.

In what form were the data collected?

Data collection forms were provided by the behavioral interventionist, Nicole. A table for each week was used with columns that included the date and the number of caffeinated beverages consumed each day. J used his own sheets to record his energy level at the end of each day. A final table was used to record whether or not J met his caffeine limit for each day. This table included a column with the date and an additional column for the tally marks that were part of the token economy.

Where were the data collected?

Data were collected by J in his home, workplace, and university.

How were the data analyzed?

The data were analyzed using descriptive frequency analyses and presented in table 3.8 through table 3.19 and in figure 3.3 through figure 3.14.

TABLES

Week 3 data are presented in tables 3.8 and 3.9.

Table 3.8. Number of Caffeinated Beverages Consumed October 13th to October 19th

Date	*Number of Caffeinated Drinks Per Day*
Wednesday, October 13	3
Thursday, October 14	4
Friday, October 15	4
Saturday, October 16	3
Sunday, October 17	4
Monday, October 18	4
Tuesday, October 19	3

Note: Total number of caffeinated drinks: 25. Average number of drinks per day: 4. Limit: 4 caffeinated beverages per day.

Table 3.9. Perceived Energy Level October 13th to October 19th

Date	*Perceived Energy Level (1-7)*
Wednesday, October 13	3
Thursday, October 14	2
Friday, October 15	4
Saturday, October 16	4
Sunday, October 17	2
Monday, October 18	4
Tuesday, October 19	3

Note: Average energy level: 3.14.

Week 4 data are presented in tables 3.10 and 3.11.

Table 3.10. Number of Caffeinated Beverages Consumed October 20th to October 26th

Date	*Number of Caffeinated Drinks Per Day*
Wednesday, October 20	3
Thursday, October 21	4
Friday, October 22	3
Saturday, October 23	3
Sunday, October 24	2
Monday, October 25	3
Tuesday, October 26	3

Note: Total number of caffeinated drinks: 21. Average number of drinks per day: 3. Limit: 3 caffeinated beverages per day.

Table 3.11. Perceived Energy Level October 20th to October 26th

Date	*Perceived Energy Level (1-7)*
Wednesday, October 20	4
Thursday, October 21	5
Friday, October 22	6
Saturday, October 23	5
Sunday, October 24	5
Monday, October 25	5
Tuesday, October 26	6

Note: Average energy level: 4.43.

Week 5 data are presented in tables 3.12 and 3.13.

Table 3.12. Number of Caffeinated Beverages Consumed October 27th to November 2nd

Date	*Number of Caffeinated Drinks per Day*
Wednesday, October 27	2
Thursday, October 28	1
Friday, October 29	2
Saturday, October 30	2
Sunday, October 31	2
Monday, November 1	2
Tuesday, November 2	2

Note: Total number of caffeinated drinks: 13. Average number of drinks per day: 1.86. Limit: 2 caffeinated beverages per day.

Table 3.13. Perceived Energy Level October 27th to November 2nd

Date	*Perceived Energy Level (1-7)*
Wednesday, October 27	4
Thursday, October 28	6
Friday, October 29	7
Saturday, October 30	6
Sunday, October 31	5
Monday, November 1	6
Tuesday, November 2	6

Note: Average energy level: 5.71.

Week 6 data are presented in tables 3.14 and 3.15.

Table 3.14. Number of Caffeinated Beverages Consumed November 3rd to November 9th

Date	*Number of Caffeinated Drinks per Day*
Wednesday, November 3	1
Thursday, November 4	1
Friday, November 5	2
Saturday, November 6	1
Sunday, November 7	1
Monday, November 8	2
Tuesday, November 9	1

Note: Total number of caffeinated drinks: 9. Average number of drinks per day: 1.28. Limit: 1 caffeinated beverage per day.

Table 3.15. Perceived Energy Level November 3rd to November 9th

Date	*Perceived Energy Level (1-7)*
Wednesday, November 3	6
Thursday, November 4	7
Friday, November 5	4
Saturday, November 6	7
Sunday, November 7	7
Monday, November 8	5
Tuesday, November 9	6

Note: Average energy level: 6.

The data for all weeks are presented in tables 3.16 to 3.19.

Table 3.16. Number of Caffeinated Beverages Consumed by Week

Week	*Total Number of Caffeinated Drinks*
Week 1	37
Week 2	31
Week 3	25
Week 4	21
Week 5	13
Week 6	9

Table 3.17. Total Number of Caffeinated Beverages per Day for All Weeks

Day	*Week 1*	*Week 2*	*Week 3*	*Week 4*	*Week 5*	*Week 6*
Wednesday	6	5	3	3	2	1
Thursday	6	4	4	4	1	1
Friday	5	3	4	3	2	2
Saturday	5	4	3	3	2	1
Sunday	5	5	4	2	2	1
Monday	5	5	4	3	2	2
Tuesday	5	5	3	3	2	1

Table 3.18. Average Energy Level by Week

Week	*Average Energy Level*
Week 1	2.57
Week 2	2.86
Week 3	3.14
Week 4	4.43
Week 5	5.71
Week 6	6

Table 3.19. Total Perceived Energy Level per Day for All Weeks

Day	*Week 1*	*Week 2*	*Week 3*	*Week 4*	*Week 5*	*Week 6*
Wednesday	6	5	3	3	2	1
Thursday	6	4	4	4	1	1
Friday	5	3	4	3	2	2
Saturday	5	4	3	3	2	1
Sunday	5	5	4	2	2	1
Monday	5	5	4	3	2	2
Tuesday	5	5	3	3	2	1

GRAPHS

Graphs for Week 3 (week 1 of Intervention) are presented in figures 3.3 and 3.4.

Graphs for Week 4 (week 2 of intervention) are presented in figures 3.5 and 3.6.

Graphs for Week 5 (week 3 of intervention) are presented in figures 3.7 and 3.8.

Graphs for Week 6: (week 4 of intervention) are presented in figures 3.9 and 3.10.

Overall data graphs are presented in figures 3.11 to 3.14.

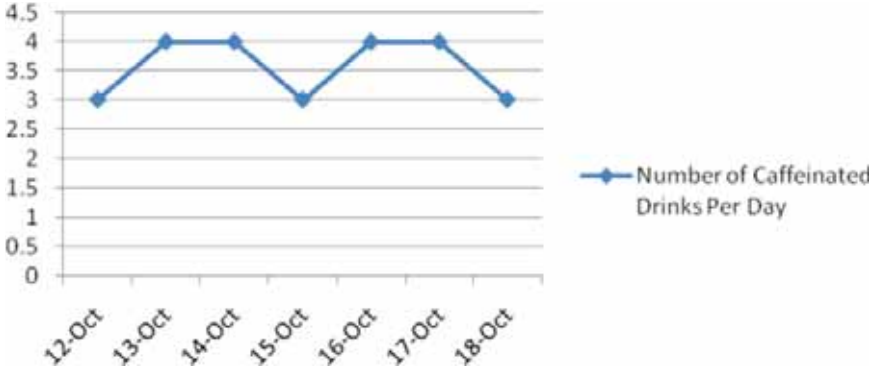

Figure 3.3. Number of Caffeinated Beverages Consumed October 12th to October 18th.

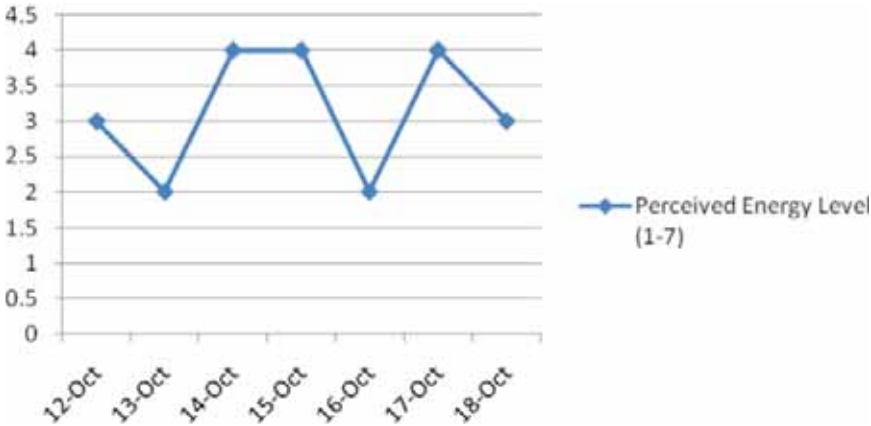

Figure 3.4. Perceived Energy Level October 12th to October 18th.

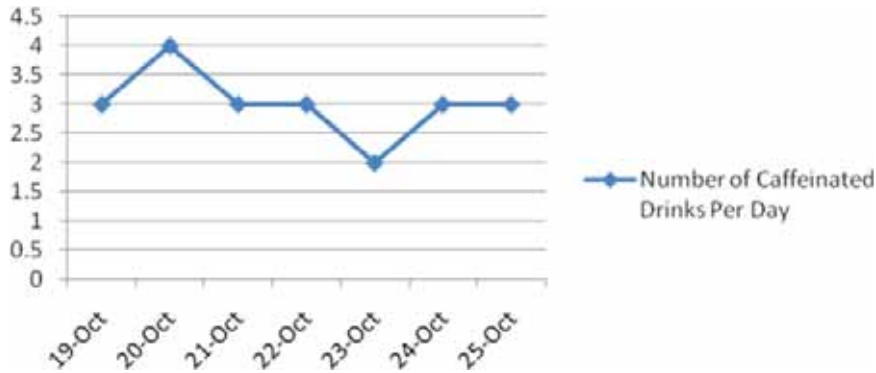

Figure 3.5. Number of Caffeinated Beverages Consumed October 19th to October 25th.

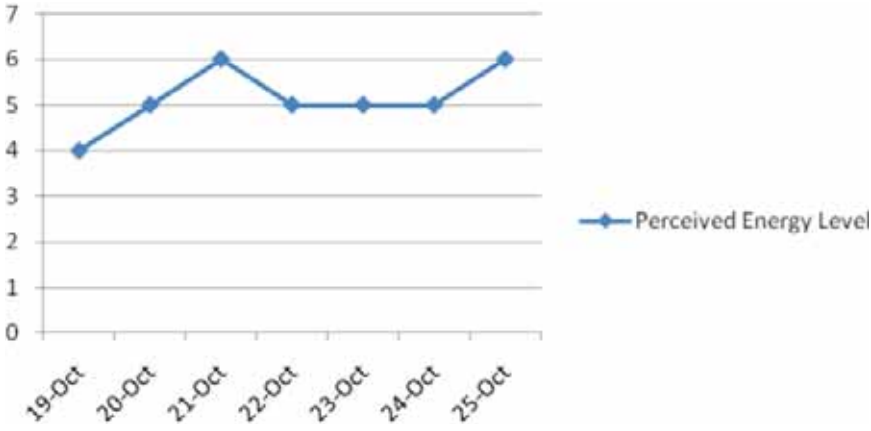

Figure 3.6. Perceived Energy Level October 19th to October 25th.

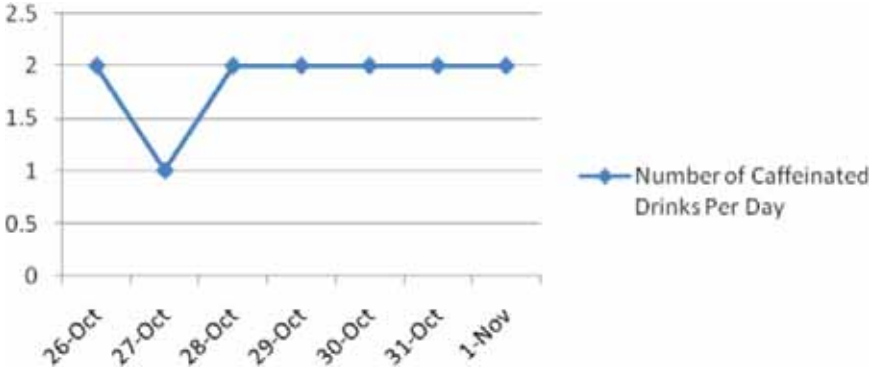

Figure 3.7. Number of Caffeinated Beverages Consumed October 26th to November 1st.

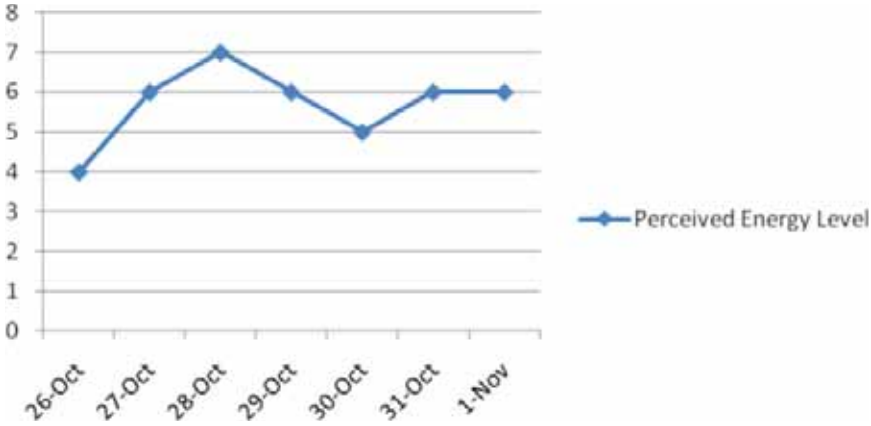

Figure 3.8. Perceived Energy Level October 26th to November 1st.

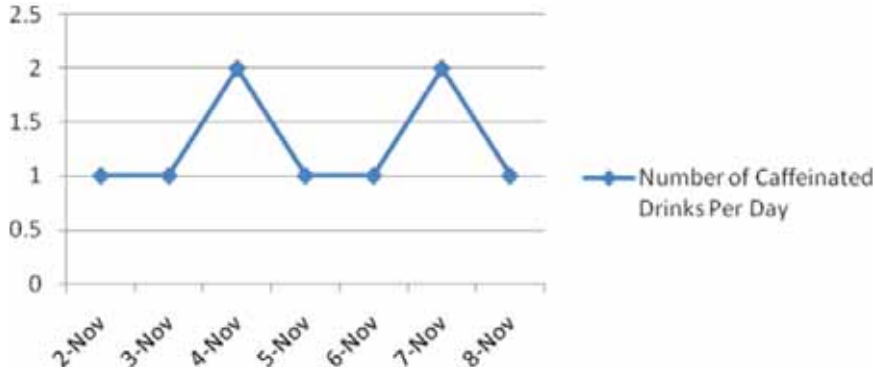

Figure 3.9. Number of Caffeinated Beverages Consumed November 2nd to November 8th.

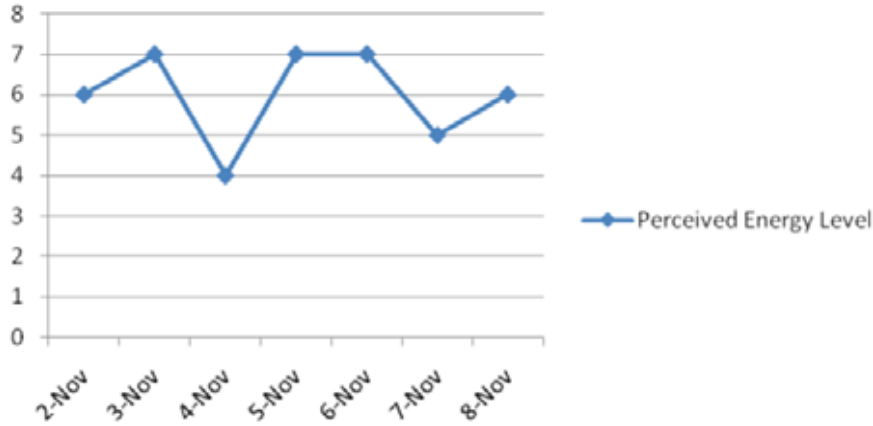

Figure 3.10. Perceived Energy Level November 2nd to November 8th.

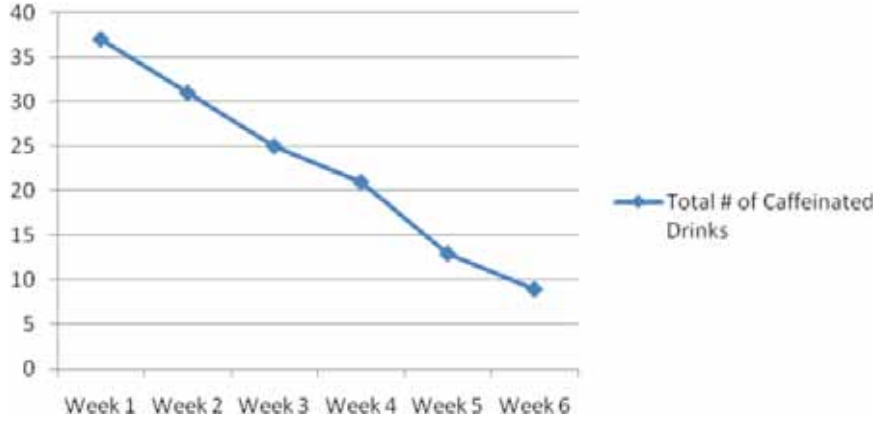

Figure 3.11. Total Number of Caffeinated Beverages Consumed Week 1 to Week 6.

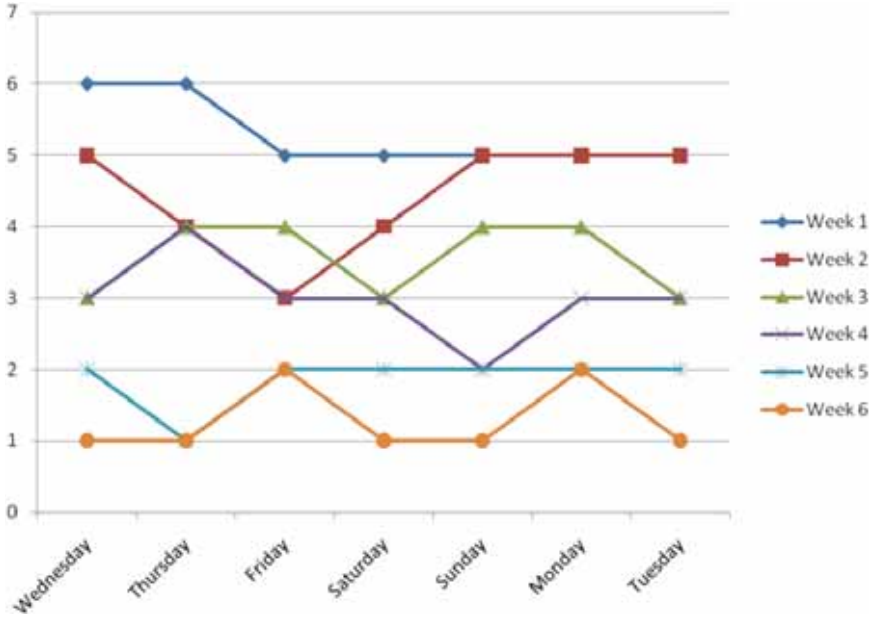

Figure 3.12. Total Number of Caffeinated Drinks per Day for All Weeks.

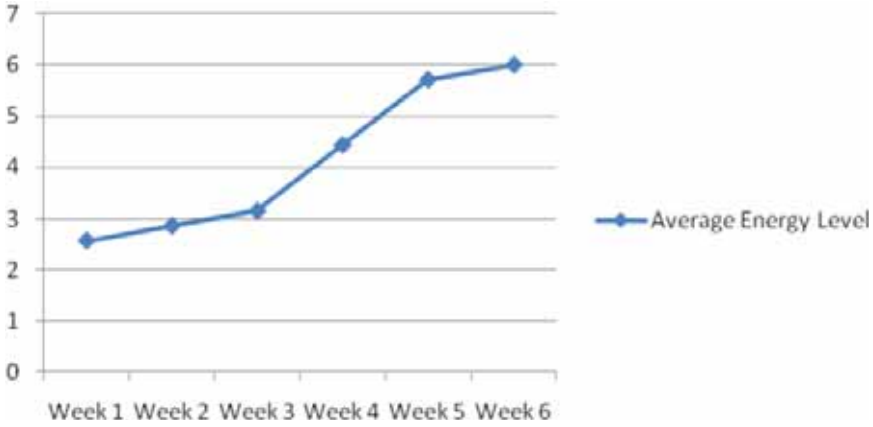

Figure 3.13. Perceived Energy Level Week 1 to Week 6.

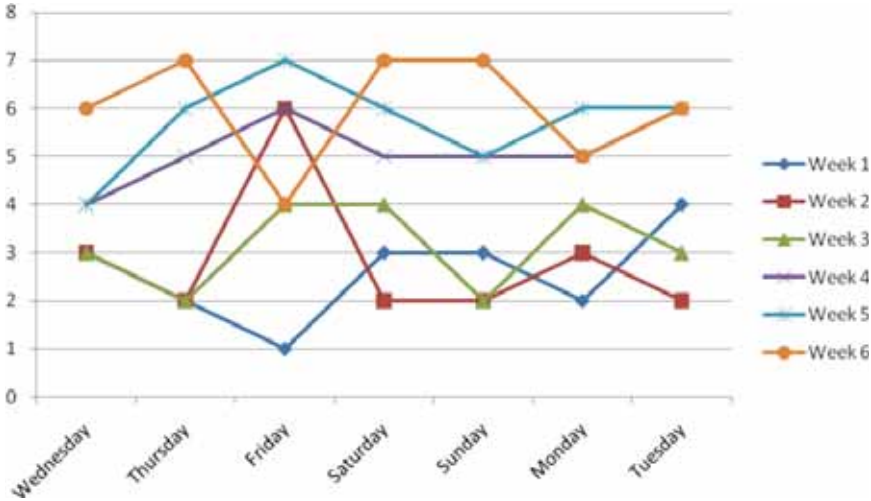

Figure 3.14. Total Energy Level per Day for All Weeks.

The data during the baseline period showed that J's caffeinated beverage consumption was excessive with approximately 5 caffeinated beverages being consumed per day. The data show that the frequency of the J's caffeine drinking behavior declined from a baseline rate of 37 drinks per week to 9 drinks per week at the conclusion of the intervention. The data indicate that J's caffeine drinking declined at a gradual rate, with approximately 7 less beverages consumed each week, beginning from week one of intervention until the end of the intervention at week 6. J was able to meet his limited weekly consumption goal each week except week 6, when he had 9 caffeinated drinks instead of the desired 7. Overall, however, the intervention was effective in reducing J's caffeinated beverage drinking behavior and his average number of drinks decreased each week.

Additionally, J's perceived energy level also increased at a steady rate of approximately 1 point per week, resulting in a rating of 6 on the 7-point scale from the baseline average of 2.715. Although J's caffeine drinking was not reduced to the desired 1 drink per day, it was significantly reduced and he felt more energized.

What pattern of change, if any, was seen in the target behavior?

The data show a pattern of gradual decline in the target behavior starting immediately from the first week of the intervention and continuing until the last week. This steady decrease in beverage consumption culminated in week 6, where J was almost able to meet the behavioral goal of 1 caffeinated bev-

erage per day. Overall the data show a steady decline in the target behavior with an approximate reduction of 7 caffeinated beverages per week. Furthermore, J's perceived energy level increased at a steady rate of approximately 1 point per week, resulting in a rating of 6 on the 7-point scale from the baseline average of 2.715.

CONCLUSIONS

Overall the behavioral intervention program that was implemented to reduce J's caffeine intake appeared to be effective since his behavior did in fact steadily decrease. Furthermore, J stated that he felt more alert at the end of each day. He also reported being satisfied that he was able to spend the money he had saved from not buying caffeinated beverages on other things, such as the watch that he most desired.

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Chapter Four

Behavioral Interventions for Autism: A Brief Review of Two Approaches

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and Nicole Shlomo

Autism Spectrum Disorders (ASD) are developmental disorders usually diagnosed after the age of two in early childhood. Experts estimate that almost 500,000 individuals under the age of 21 are living with ASD (Fombone, 2005). This means that between 1 in 500 and 1 in 166 children are born with autism every year (Fombone, 2005). The primary symptoms of autism include difficulties with social interaction, problems with verbal and nonverbal communication, and repetitive behaviors or narrow and obsessive interests (Fombone, 2005). Behavioral treatments have become the principal approach for promoting the social, adaptive, and behavioral functioning of children with autism and are primarily implemented to reinforce adaptive responses and suppress maladaptive ones (Bregman, Zager, & Gerdtz, 2005). From a behavioral perspective, autism is a disorder in which behavioral deficits and excesses have a biological basis, but can be changed through structured interactions with the environment (Arick, Krug, Fullerton, Loos & Falco, 2005). Behavioral strategies can be useful methods for addressing the needs of individuals with autism. Both the *Strategies for Teaching Based on Autism Research (STAR)* program (Arick et al., 2005) and the programmatic use of the *Differential Reinforcement of Other Behaviors* (Gongola & Daddario, 2010) utilize an overall behavioral intervention approach for addressing ASD.

STRATEGIES FOR TEACHING BASED ON AUTISM RESEARCH (STAR)

As the number of children with ASD continues to grow nationwide, teachers must become increasingly proactive in implementing programs that adapt to

the needs of students with ASD. The program, *Strategies for Teaching Based on Autism Research* (STAR) was developed by Arick, Loos, and Falco in 1977 (Arick et al., 2005) while working together to provide consultation services to a variety of programs for children with ASD. Applied behavioral analysis (ABA) forms the program's theoretical base. Specifically, the STAR program provides curriculum for teachers to effectively implement ABA instructional strategies (Arick, et al., 2005). Arick et al. (2005) describe the ABA process in depth. As a general method of instruction for children with ASD, the ABA process begins with the identification of a single problem behavior in a child with autism known as the target behavior. This is followed by a baseline assessment of the target behavior. The observer must then hypothesize the function of this behavior. A behavioral intervention is then implemented based on this initial data and hypothesis. Data is collected during the intervention. Finally, the data collected during the intervention is reviewed and assessed. If necessary, changes can be made to the intervention based on the collected data. Finally, the target behavior is reassessed. The reassessment of the target behavior may include an analysis of the generalization of improvement to the target behavior. The process is repeated as necessary.

Within the ABA framework, the STAR program addresses six curriculum areas: expressive language, receptive language, spontaneous language, functional routines, preacademic skills, and play skills/social interaction skills (Arick, et al., 2005). Expressive language refers to the ability to produce speech and communicate a message (Arick, et al., 2005). Receptive language, on the other hand, is the comprehension of the language. The basis of receptive language involves listening to what is being communicated, and understanding the message of that communication (Arick, et al., 2005). For example, a teacher may use expressive language and say to a child, "Show me the red car." The child demonstrates receptive language skills when he/she gestures toward the red car. Spontaneous language refers to a child's use of specific verbal utterances following a stimulus that does not specifically require a verbal response (Arick, et al., 2005). For example, a child saying, "play with me" in response to the presence of a game, demonstrates spontaneous language. The use of functional routines in the curriculum refers to the everyday routine that a child experiences throughout his/her day (Arick, et al., 2005). Some examples of functional routines may include: arrival at school, breakfast, and circle time. According to Arick et al. (2005), pre-academic skills are the child's current mastery of skills in their school curriculum. When working with children with autism, the basic pre-academic skills may vary according to the severity of the ASD; however common skills include: matching, sorting, sequencing, alphabet, numbers, counting, mathematics,

and reading (Arick, et al., 2005). Additionally, children with autism are found to have substantial delays in appropriate play skills (Arick, et al., 2005). For example, the use of symbolic play may be inappropriate in that a child may use a banana as a telephone or a block as a car. Aside from delays in play skills, children with autism also have substantial delays in social interaction skills, which are usually displayed by the child's interaction with others (Arick, et al., 2005). For example, the child may have difficulties taking turns with others as well as showing empathy and being polite. These skills are addressed by the STAR program's focus on play/social interaction skills (Arick, et. al., 2005).

The STAR program is unique in that it uses three primary instructional techniques within the ABA framework: Discreet Trial Training, Pivotal Response Training, and Teaching Functional Routines (Arick et al., 2005). In Discreet Trial Training, skills are taught and addressed in a logical sequence so that concepts and behaviors can be identified and broken down into simplest forms in order to facilitate learning (Arick et al., 2005). Specifically, the child is presented with an instructional cue and the child is then expected to respond (Arick et al., 2005). Giving the child a consequence, usually a positive reinforcer immediately follows this cue/response pattern and the interaction is then concluded with a pause.

Pivotal Response Training follows the same cue, response, consequence, pause, and pattern; however trials within PRT are incorporated into the natural environment so that behaviors take on a functional factor within the child's world (Arick et al., 2005). Using Pivotal Response Training, the child will choose an activity in which to engage and the reinforcer is a natural consequence of engaging properly in that activity (Arick et al., 2005). This allows the child to engage in multiple activities and locations throughout the day while being rewarded for improving their potentially maladaptive behavior (Arick et al., 2005).

Functional routines are predictable events that involve a chain of behaviors (Arick et al., 2005). These routines include natural behaviors, such as using the bathroom or eating a meal; whereby the functional outcome of the routine serves as the reinforcer (Arick et al., 2005). However, children with ASD frequently require additional reinforcement beyond the functional outcome (Arick et al., 2005). For example, a child with ASD may struggle with the routine of introductions to strangers. Each individual step of the routine would be taught to the child through chaining (Arick et al., 2005). The child would be reinforced for identifying the appropriate social situation in which an introduction should occur and then again for approaching a person that the child does not know (Arick et al., 2005).

DIFFERENTIAL REINFORCEMENT OF OTHER BEHAVIORS

While intensive programs such as STAR may demonstrate excellent outcomes for children with ASD, there are some drawbacks as well. These programs are very expensive in terms of training staff and purchasing materials. A one-time group training session for the STAR program costs approximately $250 per person ("Strategies for Teaching based on Autism Research," n.d.). Additionally, to be fully trained, an individual is required to attend multiple training sessions. Parents are frequently unable to afford to be trained themselves and additionally public school systems are unable to pay to train their staff in such a specific area of expertise. Since this program can be costly to public school systems, it is important to be able to integrate other programs into the curriculum that do not include such stringent requirements. Gongola and Daddario (2010) have recently proposed training teachers to implement the Differential Reinforcement of Other Behaviors (DRO) procedure with children diagnosed with ASD in their classrooms.

The basic principle of the DRO procedure is to reinforce a child for engaging in any response other than the target behavior for a set interval of time. Reinforcers are never removed to punish a student. Educators have been criticized for using punishment procedures as the primary intervention option when working with student with disabilities (Shea, 2004). While punishment has been found to aid in reducing inappropriate behaviors, reinforcement based procedures are considered to be best practice when working among students with disabilities (Anderson & Spaulding, 2007). They are also found to have more ethical appeal as the current trend in Positive Behavioral Supports (PBS) places emphasis on the use of reinforcement based strategies (Anderson & Spaulding, 2007). Furthermore, the Individuals with Disabilities Education Act (IDEA, 2004) states that individualized education plans must consider positive behavioral interventions in the case of student behavior that impedes learning. According to Dr. Gongola

> The beauty of DRO is that (I've found) it works for any population and range of ability levels. I used DRO with students that have very low functioning autism and the intervention worked rapidly with them. I've also used DRO with my husband. Furthermore, the DRO intervention does not need to only target a child with ASD. The intervention can be applied to a class-wide setting. This becomes very important in current educational climate in which more children with specialized needs are being placed in full-inclusion classrooms and classrooms with children with multiple disabilities. In terms of a behavior1al intervention, DRO is fairly easy for teachers to implement in such a complex educational setting. (personal communication, November 1, 2010)

Overall, DRO allows teachers to maintain instructional momentum, rather than discontinuing classroom activities to address the behavior of a child with ASD.

DRO is possibly the most widely investigated behavioral intervention for ASD (Bregman, Zager, & Gerdtz, 2005). Recent trends in the research literature support the implementation of the DRO procedure in three different ways depending on the severity of the child's ASD and specific needs of the child. Within the first approach to the DRO procedure, an adult is always responsible for dispensing the reinforcer to the child. Some children, specifically those with higher cognitive function and a basic introduction to the DRO process, may be taught to self-monitor their behavior and self-administer a reinforcer appropriately following the DRO procedure. Finally, if a child's behavior directly affects peers in their environment, practitioners have shown peers how to implement the schedule of rewards of the DRO procedure.

IMPLEMENTATION GUIDELINES AND PROCEDURES

STAR

When exploring the three main instructional strategies of the STAR program, it is important for teachers, as well as for parents to understand the interaction of instructional strategies and the curriculum areas that were previously mentioned. Having a clear understanding as to how the STAR program works enables teachers and parents to be able to monitor the progress of the student/child. These instructional strategies can also be used outside of the classroom, such as in peer settings and in the student's home. Discreet Trial programs are designed to teach the child to associate words with objects, people, actions, and events (Arick, et al, 2005). This technique is most frequently used to teach expressive and receptive language skills. For example, a single discreet trial for a child with ASD who is learning to talk may begin with a teacher giving the cue, "Speak." The child will then respond by either making a vocalization or not. If the child makes a vocalization, he or she will be rewarded with a positive reinforcer such as a small piece of candy. This is followed by a pause and then the process will be repeated in another discreet trial.

The next main instructional strategy that is utilized in the STAR program is called Pivotal Response Training. This method is behavioral-based and the main goal is for the child to be engaged throughout all activities and locations throughout the day (Arick, et al., 2005). It also enables the child to learn to respond in a more child-centered way, unlike Discreet Trail Training where the child is more dependent on the teacher and on cues/prompts. This school-based model uses this instructional method to target expressive

language and play skills by enabling the child to direct the trials by having the teacher work within the student's preferred activities (Arick, et al., 2005). An example of Pivotal Response Training in a classroom setting may be where the student chooses an activity involving a red truck. The teacher would then work within that activity by eliciting language skills and responses that may include "truck"; "I want truck"; "red," etc. The student is then reinforced by the teacher for active attempts with the correct responses. The student is also encouraged for "spontaneous actions" (spontaneous language), in which the actions are aided by the teacher's control where the teacher waits until the student responds correctly before reinforcement occurs (Northup, et al., 2009). This may be where the student sees the red truck on the desk and says, "I want" while gesturing toward the red truck. This instructional method has been shown to also be an effective method for teaching functional and symbolic play skills and socio-dramatic play (Arick et al., 2005).

The last instructional strategy that is found to be effective within the STAR program is Functional Routines. A beneficial way to access learned skills that may have been learned by Discreet Trial Training or Pivotal Response Training, is to teach the skills within a functional routine. When teaching skills within a functional routine, the child's behaviors are more easily controlled by the natural cues in the environment rather than by direct cues from a teacher (Arick, et al., 2005). Functional routines may include: arrival at school, transitions between classes, snack time, using the bathroom, playground time, and others. Each functional routine should be broken down into small steps for the child and taught in an appropriate way; usually by chaining the sequence of behaviors together. For example, a bathroom routine may consist of a cue for bathroom by going to the front of the class, grabbing the picture card with a toilet on it, taking the card to the bathroom, and placing the card in the slot on the door so that the other children know that the bathroom is occupied. The goal of using functional routines is so that the child will learn to eventually rely on natural cues and reinforcers to support his or her behavior (Kuhn, et al., 2008). Through the use of Discreet Trial Training and Pivotal Response Training, the child then has learned some receptive and expressive language skills which then could be integrated into their Functional Routine. An example of this may include the use of the skill of being able to respond to the cue "get bag," which could be utilized with the departure routine at the end of the school day.

DRO

DRO is a procedure where positive reinforcement is provided only when the target behavior is not displayed for a specified period of time (Gongola and Daddario, 2010). Thus, when using a DRO procedure, reinforcement is

provided for the zero occurrence of the target behavior for a specified period of time. According to Gongola and Daddario (2010), the DRO procedure is implemented through a distinct step-by-step process. First, the behavior of concern is defined in very specific, observable terms. This is followed by a functional behavioral assessment to determine how often the behavior occurs on the average per minute, hour, or period and the potential function of the problem behavior. Once this interval is determined, an interval slightly lower than it should be set as the length of time the child must withhold the undesirable behavior in order to be reinforced. During this time, the student is engaged in normal, everyday tasks. If a reward other than verbal praise is involved, contingency contracting should be used so that the student understands why he or she is being rewarded. If the behavior does occur during the designated time period, tell the student that the time interval is beginning again. Whole interval DRO is generally used to initiate the procedure. Under this design, behavior should not occur at all through the whole interval of time. If the behavior occurs the time is reset and the process begins again. As the behavior improves, the teacher can increase the length of the intervals. After data shows an improvement, the child may be switched to momentary DRO. Once the time is set, the student may display the behavior during the interval, however the behavior cannot occur during the moment the timer stops.

While DRO has yet to be evaluated as a stand-alone program, there is a large body of evidence to support the implementation of the DRO procedure in three different ways depending on the needs of the child. These include the needs of the child in terms of his or her target behaviors and his or her cognitive and socio-emotional capabilities. Children who are just beginning the process of the behavior intervention need to be introduced to the basic DRO procedure which involves reinforcement being applied by a monitoring adult (Taylor, Hoch, & Weissman, 2005). Some children, specifically those with higher cognitive function and a basic introduction to the DRO process, may be taught to self monitor their behavior and reward themselves for appropriately following the procedure (Tiger, Fisher, & Bouxsein, 2009). Finally, if a child's behavior directly affects peers in their environment, practitioners have shown that they can work with these peers to implement the schedule of rewards of the DRO procedure (Reese, Sherman, & Sheldon, 1998).

EVALUATION AND RESEARCH EVIDENCE

STAR

Recent research shows that the use of the three aforementioned instructional strategies used in the STAR program are demonstrably effective with chil-

dren with ASD. One study found that the use of Discreet Trial Training was very useful; reporting that as many as 47% of children who were enrolled in the structured program were able to mainstream into general education and succeed academically (McGee, Morrier, & Daly, 2000). Another study similarly found that the use of Pivotal Response Training was very effective among children with ASD. Those children were under the age of 5 and had no functional communication. Fifty percent of these children learned to use speech to communicate after being enrolled in the program using Pivotal Response Training (Stahmer, Collings, & Palinkas, 2005). A more extensive study on the STAR program was conducted in the state of Oregon as part of the Autism Outcome Study. Out of the 67 children that were monitored, the majority of the children showed significant progress in social interaction, expressive speech, and language concepts as well as a significant decrease in behaviors displayed in children with ASD (Arick, et al., 2005). The same researchers also conducted another study evaluating the effectiveness of the STAR curriculum methods and instructional strategies which monitored the progress of 25 children with ASD from five different classroom settings. The results of the study indicated that children who were engaged in this curriculum, on average, gained more than a month of language age for every month of instruction (Arick et al., 2005). In addition to these findings, the authors noticed an increase in children's' functional communication and social skills.

The above mentioned studies have outlined the positive effects of the STAR program as well as the instructional strategies that are utilized within the program. Some of these positive outcomes include: significant increase in language skills (receptive/expressive), academic skills resulting in mainstreaming to general education, improved social behavior, as well as a decrease in negative behaviors that are associated with ASD. The STAR program is a valuable program for providing a comprehensive curriculum appropriate to young children with ASD. Like most programs, some of the components of the STAR program have some limitations that were mentioned. However, there are many benefits to implementing this program. Some of the benefits are that the STAR program is easy to implement in classrooms as well as at home for parents to use as well. The lesson plans that are used in the STAR program can easily be tailored to meet the needs of individual students, and the program also meets the needs of students at various developmental levels within the three instructional strategies that are utilized ("Strategies for Teaching based on Autism Research," n.d.) While the aforementioned studies illustrated the effectiveness of the STAR program and its components, further longitudinal research needs to be conducted.

DRO

Gongola and Daddario (2010) have proposed the use of DRO in class wide settings. In an interview with Dr. Gongola (2010, personal communication) she noted that while a class wide DRO program has yet to be studied with specific focus on autism inclusion, it would be an effective and important program to implement. In addition, she emphasized the significance of recent literature regarding DRO with ASD children. DRO has been used to address a variety of concerns relevant to individuals with autism spectrum disorders. For example, DRO has been used to reduce stereotypical behavior that may interfere with an autistic child's ability to learn new skills (Shabani, Wilder & Flood, 2001). This stereotypical behavior is usually repetitious and nonfunctional, such as the case of body rocking (Shabani, Wilder & Flood, 2001). As indicated by the research, DRO has been used in three distinct ways with individuals with ASD: adult reinforces the behavior, participant self-monitors the behaviors, and a peer monitors the behavior.

An adult reinforced DRO schedule was used by Taylor, Hoch and Weissman (2005) to examine the treatment of the vocal stereotypy behavior of a 4-year-old girl with autism. In their study, preferred toys (those that produced auditory stimulation) were used as reinforcers for the non-occurrence of the behavior and were given to the child by teaching staff and research assistants who were trained in the intervention procedures. Their study compared a fixed time schedule of reinforcement (FT) to DRO to reduce vocal stereotypy. The duration of the DRO time interval was increased in 1-minute intervals beginning with an initial interval of 1-minute. The time interval was monitored through the use of a timer that was reset each time by the adult implementer. The results showed that FT revealed no effect, whereas the DRO schedule led to a reduction of the behavior during treatment sessions and across the school day. Prior to the implementation of DRO treatment, vocal stereotypy occurred at a mean of 82%, and decreased to a mean of 9% following the intervention.

The strength of this study lies in the fact that once the DRO schedule was successful during 10-minute treatment sessions, it was implemented in the classroom during typical preschool activities and the DRO interval was eventually increased to five minutes, which is a practical and manageable time interval to be used in a classroom. This type of study, that observes DRO in a natural setting, serves as a precedent to Dr. Gongola's class wide DRO program suggestion.

Limitations to this study include the use of auditory stimulating toys as reinforcers. Several of these toys produced movement in addition to the auditory stimulation, which makes it difficult to assess whether it was just the auditory stimulation that made them preferred reinforcers (Taylor, Hoch, &

Weissman, 2005). Also, only using toys limits the study of other reinforcers, such as adult attention or edibles (Taylor, Hoch, & Weissman, 2005). Lastly, this study only examined data on the reduction of inappropriate behaviors, in this case vocal stereotypy, but did not formally address the effects of the intervention on appropriate vocalizations (Taylor, Hoch, & Weissman, 2005). Since a significant deficit for children with autism is limited language skills, it is important to document that intervention procedures do not inadvertently decrease the production of appropriate vocalizations (Taylor, Hoch, & Weissman, 2005).

Another study of adult reinforced DRO conducted by Waters, Lerman, and Hovanetz (2009) showed that DRO was successful in decreasing transition-related problem behavior of two children diagnosed with autism. Their findings indicate that DRO alone would not have been successful, because the participants never met the reinforcement criterion until extinction was introduced. Extinction in combination with DRO was necessary to decrease the undesired behaviors, such as response bursting (Waters, Lerman, & Hovanetz, 2009).

Tiger, Fisher, Bouxsein (2009) focused their research study on the use of self-monitoring DRO. They evaluated the effectiveness of DRO in the treatment of the self-injurious skin picking behavior of a young man who had been diagnosed with Asperger syndrome. Initially, the therapist implemented the DRO and then trained the young man, Jack, to subsequently monitor his own behavior. Jack was told that he could earn a ticket that could be exchanged for $0.10, after each 5-minute period that he did not engage in skin picking. In the first sessions, the therapist mediated the use of the timer and the delivery of the tickets. Subsequently, however, Jack was taught to reset the timer following an instance of skin picking and reward his behavior with a ticket each time the timer sounded. The DRO intervals increased from 5 minute to 10-minute periods during the therapist's observations of Jack's behavior and eventually to 15-minute intervals during Jack's self-monitoring. In addition, according to data collected during the study, Jack implemented the DRO procedure with 91% accuracy. Results indicated that Jack's skin picking behavior decreased from picking during 56.3% of intervals in baseline sessions to 0% during therapist-monitored 5-minute sessions. Withdrawal of the treatment occasioned a return to near-baseline levels of the behavior at 39.7% until treatment was reinstated and the levels of skin picking behavior again became near-zero at .2%. The occurrences of the behavior remained steady at .2% despite factors such as the extension of the interval time to 10 and 15-minutes, the placing of Jack into novel settings, and the removal of the therapist from the environment.

Overall, this study indicated that DRO may be used as a self-monitoring intervention for individuals with autism (Tiger, Fisher, & Bouxsein, 2009). As the results indicate, both the therapist and self-monitored DRO treatment were shown to be effective. Moreover, the reductions in skin picking behavior obtained from the initial DRO conditions were maintained when the client managed the major aspects of his treatment (Tiger, Fisher, & Bouxsein, 2009). In addition to the positive results, this type of self-monitoring can be a great way to reduce the effort required by many teachers, parents or other caretakers to implement DRO. Furthermore, it does not require much effort or training on the part of the caregivers and therefore may be more likely to support maintenance of this treatment in the natural environment such as the class wide DRO program suggested by Dr. Gongola.

Moreover, self-monitored DRO may be used with individuals with multiple disabilities. A study by Shabani, Wilder, and Flood (2001) used self-monitored DRO with Larry, a 12-year old boy who was diagnosed with autism, ADHD, mild mental retardation, and seizure disorder. The study used Larry's most preferred toys and food items as rewards during a treatment that used discrimination training, DRO, and self-monitoring of behavior. Specifically, Larry was trained to perform self-monitoring procedures and work up to a 5-minute DRO interval before the intervention phase was implemented. He was also trained to discriminate between stereotypical and appropriate behaviors through modeling of both types of behavior by the therapist. The criterion for access to his reward was increased each time Larry met the specified time interval for each DRO session until he successfully completed the 5-minute interval goal. Larry was taught to use a digital timer and to place an "x" on an index card in sessions that he did not rock and exchange the "x"s for his preferred items. The experimenter had the ultimate say over whether or not Larry had engaged in the stereotypical behavior through his observations behind a one-way mirror. The experimenter would give or withhold Larry's reinforcement if he believed that Larry rocked during the session.

The results showed that during baseline, Larry rocked during a mean of 64% of intervals when sitting and reading and 83% when standing and talking to the therapist (Shabani, Wilder, & Flood, 2001). The rocking behavior decreased to a mean of 4% of intervals while sitting and 2% while standing (Shabani, Wilder, & Flood, 2001). The significance of this study is that the intervention had lasting effects. After Larry's teacher was taught how to implement the DRO intervention she reported one month later that the intervention had successfully maintained low levels of rocking (Shabani, Wilder, & Flood, 2001).

Additionally, research by Bergstrom, Tarbox and Gutshall (2010) compared the effectiveness of differential reinforcement of alternative behaviors

(DRA) and DRO in reducing the pet mistreatment behavior of a young child with autism. A significant difference was shown between the two treatments. In the investigation, DRO produced immediate and significant decreases in pet mistreatment behavior. In contrast, DRA did not decrease the pet mistreatment behavior, but instead only increased more appropriate pet treatment behavior.

DRO may also be monitored by peers as indicated in the research conducted by Reese, Sherman and Sheldon (1998). In their study, a DRO procedure, token fines, and prompted relaxation were used to reduce the agitated-disruptive behaviors of an individual with autism and mental retardation in a community group home. Baseline rates of agitated-disruptive behavior (cursing, hitting, kicking, throwing objects etc.) were gathered during three different group home activities. The duration of the DRO intervals were set up so that shorter DRO intervals were required during activities in which the baseline rates of the agitated-disruptive behavior was higher. Once shorter DRO intervals were successful in reducing agitated-disruptive behavior, they were increased to longer DRO intervals that were effective in maintaining those reductions for up to 6 months.

A peer in the group home was taught to interact with the participant and to deliver praise and tokens when the participant had not exhibited a target behavior during a DRO interval and to reset the timer when a target behavior had occurred (Reese, Sherman, & Sheldon, 1998). The peer, who was diagnosed with Down syndrome and moderate mental retardation, was given instructions and feedback over approximately 30 hours until he was able to deliver praise and the token reinforcement for three consecutive leisure time sessions (Reese, Sherman, & Sheldon, 1998). After training, the peer was monitored daily to ensure that he correctly implemented the DRO procedure (Reese, Sherman, & Sheldon, 1998).

Once 10 tokens had been accumulated by the participant they traded in for consumable rewards or special attention (Reese, Sherman, & Sheldon, 1998). The participant was also fined one token for each episode that he displayed the agitated-disruptive behavior, and the DRO interval was reset (Reese, Sherman, & Sheldon, 1998). If the participant continued to display the behavior, the interval was extended to 5 minutes, and the participant was ignored until the 5-minute interval was met and the original DRO schedule was reinstituted (Reese, Sherman, & Sheldon, 1998). The participant was also taught relaxation techniques, through modeling, to take deep breaths when cued to relax (Reese, Sherman, & Sheldon, 1998).

This study provides strong evidence for the usefulness of peers when implementing DRO. By using a peer to deliver reinforcement and monitor the participant's behavior during specific intervals, the staff was able to focus on

other clients. Peers may also serve as common stimuli to promote generalization (Reese, Sherman, & Sheldon, 1998). The use of special attention, instead of tangible rewards as a reinforcer that could be traded in by the participant is another way to promote generalization of the results. Additionally, challenging behaviors of people with ASD or mental retardation can be reduced with community programs without the use of aversive techniques. The study also indicates the importance of choosing appropriate DRO intervals in behavior reduction programs, since target behaviors were not reduced if the initial interval was too long (Reese, Sherman, & Sheldon, 1998).

The aforementioned study is limited in that the effects of the relaxation procedures that occurred alongside the DRO and token fines are unclear (Reese, Sherman, & Sheldon, 1998). The participant did not appear to calm down through the relaxation techniques. Also, this study shows DRO is effective in one group home setting, but may be difficult to implement in other institutions (Reese, Sherman, & Sheldon, 1998). The time it took to train the peer, approximately 30 hours, was substantial and required resources that might not be readily available in other group settings (Reese, Sherman, & Sheldon, 1998).

CRITIQUE

The research that was conducted regarding the implementation of the STAR program and the DRO technique showed these programs' significant efficacy when working with children with ASD. When used appropriately, the combination of Discreet Trial Training, Pivotal Response Training and Functional Routines, has a very positive effect on the outcome for a child with ASD in terms of learning the aforementioned skills and being able to appropriately apply these skills throughout their day. However, there are also some limitations to consider before deciding on whether or not to implement these intervention programs within the school-based curriculum.

STAR

Even though the Discreet Trial Training strategy seems to be a very effective method for teaching academic and receptive language skills, it also has been found to have some limitations. The major limitations of this strategy are that children can become dependent on the teacher and the cues/prompts and this strategy may result in lack of generalization of the learned skills (Arick et al, 2005).

The major advantages of Pivotal Response Training is that the child initiates the trials, there is use of natural reinforcers, it increases motivation in the child, and it also deters inappropriate behavior (Northup, et al., 2009). However, there are also some limitations to using this method such as that it is labor intensive, and the teacher who is using this method needs to be adequately trained ("Strategies based on Autism Research," n.d.). Even though this instructional strategy can be very beneficial when working with children with autism, it may be challenging to incorporate this technique in a classroom due to the fact that some teachers may not have the skills or expertise to utilize this method of instruction. However, when used appropriately, this method has been shown to have even more effective results than Discreet Trial Training. While Discreet Trial Training is the primary method for teaching pre-academic skills, receptive language skills, and expressive language discriminations, it is the Pivotal Response Training that allows the child to learn these skills in a more natural and appropriate way (Kuhn, et al., 2008).

The teaching of Functional Routines involves the chaining of macro level behaviors. This process is extraordinarily difficult for many reasons. First, teachers must spend a great deal of time and energy teaching the individual behaviors using Discreet Trial Training and Pivotal Response Training. A Functional Routine cannot be taught until these lower level skills are mastered. Additionally, chaining these behaviors together takes even more time and effort. Teachers must spend much of their time focusing specifically on one child in order to ensure that that child's behavior is consistently reinforced throughout learning with Functional Routines. Finally, teaching a child to generalize Functional Routines to multiple settings is even more difficult and time consuming. A teacher is required to follow a student around for an entire day to continually reinforce a single macro level behavior.

DRO

The overall DRO approach and related research studies, as they focus on children with ASD, have multiple limitations. Several studies evaluating the use of DRO on children with ASD only use concrete reinforcers when implementing the DRO procedure. This method completely avoids the use of social reinforcement, a common reinforcer that children encounter in their natural environment. This poses a problem for generalizing of the results of these studies to multiple environments. Additionally, many research articles use a case study design. While the researchers use quantitative data within this method, care must be taken when generalizing this data to other populations beyond the individual in the study. Another general issue with the DRO procedure is that this method does replace the target behavior with another more

appropriate behavior. Children diagnosed with autism are also frequently receiving multiple treatments outside of the study environment. This makes determining a pure cause of behavior change difficult to identify.

While DRO is frequently critiqued for requiring a great deal of time, effort, and attention on the part of instructor, the research reviewed shows that these time requirements can be mediated. For instance, if whole interval DRO is too rigorous, then variations, such as momentary DRO may be implemented. Furthermore, depending on the cognitive ability of the child and the availability of peers, the use of self-monitoring DRO and peer reinforcement of DRO can lower the time and effort required by instructors.

CONCLUSIONS AND RECOMMENDATIONS

When working with children with ASD, teachers, educators, and parents must be proactive when implementing intervention programs that are suitable to the needs of the child/student. Studies have shown that the use of the STAR program can be effective when working with this population. This program has demonstrated that the instructional strategies utilized with the STAR program have shown significant increases in language skills, social skills, as well as overall improved behavior and decreased negative behaviors. However, the primary research regarding the STAR program has studied populations within the state of Oregon. With the increase in diagnosis of children with children with ASD, further longitudinal research should be conducted to assess the progress and outcomes of children with ASD in a larger catchment area. Additionally, the fee for service structure of the STAR program regarding the training of professionals and cost of material should decrease in the future in order for the program to be implemented in more public school settings.

While DRO provides a counterpoint to the STAR program in terms of financing and ease of implementation, DRO has not been thoroughly established as a class wide intervention strategy. Future research should move beyond case study designs and begin to investigate the approach as a school based intervention program. This may be done in two ways. The first is to investigate the effectiveness of DRO use with ASD children within an inclusion classroom setting. Additional studies should focus on the use of DRO as an intervention with ASD children in self-contained classroom settings.

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Chapter Five

Response to Intervention and Positive Behavior Intervention and Supports

Taylor Carroll, Randi Lawlor, and Justin Phee

PBIS and RTI are two interventions used throughout the school environment in order to address the specialized needs of every student. Through these interventions, faculty and parents in school systems are able to monitor the behavior and academic needs of each child (Sugai & Horner, 2009). RTI is used as a preventative assessment intervention to identify learning disabilities in a child before the child begins to fail academically (Greenfield, Rinaldi, Proctor, & Cardarelli, 2010). PBIS is used in order to target behaviors and increase the overall positive environment within a school. Both of these interventions are based on a tier-system which categorizes students based on their needs. These interventions are derived from evidenced-based approaches which have proven to be effective in reducing problem behaviors, and in minimizing the number of children addressed by the special education department within schools. This is important in relationship to behavior management because both of these interventions can be used to define problematic behaviors and help to replace them with more appropriate and productive behaviors among individual students or for the school-wide population (Walker, Shea & Bauer, 2007).

BASIC PRINCIPLES, THEORETICAL FRAMEWORK AND ASSUMPTIONS OF RTI AND PBIS

Response to Intervention (RTI)

Recent changes in legislation and educational policies have led to a reform in the procedures that lead to classification of special services (Greenfield, et. al, 2010). The new emergence of No Child Left Behind (NCLB) and changes

to Individuals with Disabilities Education Improvement Act (IDEA) in 2004 have led to a focus on the quality of the instructors rather than on student behavior. This new shift in legislation has targeted teacher effectiveness as prevention for children with learning disabilities, behavior problems or concerns with academic achievement. RTI (Response to Intervention) was developed in order to identify the specific learning disabilities that students presented. This provided an alternative measure to the past method of identification of a learning disability by evaluating the child based on an IQ test. RTI relates to NCLB and IDEA in that these legislative changes were put in place in order to address needs within the entire school environment. This type of reform is facilitated in a top down manner. A strong point of this type of reform is that it allows teachers to use their knowledge and skills within the context of the federal laws (Greenfield, et. al, 2010).

The basic principles of RTI are defined by a three-tier approach which provides services and interventions for the entire school. This is used to limit the amount of academic failure in special education and general education (Greenfield, et. al, 2010). There are six core defining features of the interventions involved in RTI (Sugai & Horner, 2009). These interventions are supported by empirical evidence. The interventions are based on a spectrum to increase intensity, frequency, duration, individualization, and specialized supports. RTI helps teachers and professionals to have standardized procedures related to the student assessment and instructional decision making involved. Decision rules must be derived from data in order to assess how well students are performing and if adjustments in instruction are necessary. Another core defining feature of RTI is a strong basis on validating the integrity of implementation through assessment. Lastly, in order to identify students earlier than usual, screening is used to assess the performance of students who are unresponsive to instruction (Sugai & Horner, 2009).

Positive Behavior Intervention and Supports (PBIS)

The purpose of Positive Behavior Intervention and Support (PBIS) is to organize behavioral interventions, practices and systems within a schoolwide setting (Sugai & Horner, 2009). There are four elements of integration involved in positive behavioral intervention support. First, data are collected and analyzed in order to define the function of the problem and to develop a measure which will evaluate the progress of the intervention. The data are used in order to create outcomes and objectives of the intervention set by the people in the location of the implementation. Then, practices that have proven to be effective in the past are used in the implementation process. Systems of organizational support are put into place in order to provide a measure of

consistency and validity of the procedures that implementers execute (Sugai & Horner, 2009).

School-wide Positive Behavioral Support organizes interventions that are most effective and involve the smallest number of behavioral interventions. There are five areas within schools into which this system is divided. School-wide is defined as the entire student body as well as family and staff members in all school settings. The second area is the classroom where behavior management is integrated into academic instruction. The third, most common area is non-classroom which is defined as a context where instruction is not applied. Family is the fourth area, where community and parental involvement are necessary in order to increase student achievement. The fifth area is the individual student, where specialized behavior or academic supports are put into place for students whose behaviors are unresponsive to interventions or instruction (Sugai & Horner, 2009).

The data based support system is organized on a spectrum which considers all of the needs of the students in regard to behavioral support (Sugai & Horner, 2009). Then, the intervention is placed into a sequence of groups with specialized intensity in order to address the individual students who display behaviors that may be unresponsive to other interventions. The spectrum or behavior continuum is organized into a three-tier approach similar to the basis of RTI. The first tier is described as the primary tier which is for all students, staff and family members. The second tier is for individuals whose behaviors were not successfully addressed in the first tier and require more intervention, more feedback on their behavior, or more active supervision and monitoring. The third tier is referred to as the Tertiary tier which is for students whose behaviors have not been addressed by interventions in the first and second tiers and require more intensive, individualized and specialized behavior supports to tackle their behaviors. Each tier requires three characteristics in relation to data. First, performance data on responsiveness to the immediate environment and the intervention must be collected on students. Then, decision rules are derived from the data and used to evaluate the progress of the student within the intervention. Last, changes and modifications should be made to the intervention based on student performance (Sugai & Horner, 2009).

Although performance is evaluated and data are collected, the target of PBIS is the behavior (Bradshaw, Koth, Bevans, Ialongo, & Leaf, 2008). PBIS was developed in order to reduce behavior problems of students and increase a positive change in the school environment. School-wide PBIS encourages a change in student and staff behaviors within a school by improving the systems involved in discipline, reinforcement, data management and the procedures that are related to these areas. Theories on which School-Wide PBIS are based include: behavioral, social learning and organizational behavioral

principles (Bradshaw, et. al, 2008). Behavioral principles are used in order to reduce the amount of behavioral issues that arise within a school and social learning is facilitated through this system by changing the behaviors of the staff and having the students model this behavior (Bradshaw, et. al, 2008).

IMPLEMENTATION GUIDELINES AND PROCEDURES

Implementation of Response to Intervention

Response to Intervention (RTI) is the practice of providing high quality instruction and intervention that are matched to students' needs. It uses a child's learning rate over time and level of performance to make educational decisions about further interventions. Under an RTI framework, students who are not performing adequately based on state or national standards receive interventions at the time of need. The program eliminates waiting and prevents a child from getting further behind. Data is used in order to determine appropriate instruction and monitor student progress. Interventions are defined as strategic, purposeful adult actions that prevent learning difficulties and accelerate or enrich student learning (Sugai & Horner, 2009).

In Connecticut school systems, Response to Intervention is implemented as Scientific Research-Based Interventions (SRBI). SRBI uses interventions that have a proven track record of increasing the probability of positive outcomes for students (Crawford & Ketterlin-Geller, 2008). An important consideration for the implementation of RTI is clarity in describing the intervention. In clearly describing the features of an intervention, one can teach the components to others support them in applying these to their work and monitor the fidelity of the application (Burns & Gibbons, 2008).

Implementation of RTI is based on a three-tiered model, a model for differentiating instruction, particularly for the lowest performing students. According to the Connecticut State Department of Education, all three tiers "are part of a comprehensive educational system involving scientific, research based core general education practices and interventions, with supports from a wide range of support services personnel" (Connecticut State Department of Education, 2008). In Tier I of the RTI model, all students are monitored in the general education curriculum. There is a comprehensive system of social-emotional learning and behavioral support for all students (Connecticut State Department of Education, 2008). Core curriculum in Tier I should encompass a comprehensive system of learning and behavioral support, ranging from teaching of social skills to clear behavioral expectations for all students (Connecticut State Department of Education, 2008). Differentiation of instruction

for culturally or linguistically diverse students must be part of Tier I practices. Universal benchmark assessments must be used to establish where students should be performing at different points in the school year in order to be on track to be on grade level by the end of the year (Connecticut State Department of Education, 2008). It is recommended that curriculum-based measures be used to establish benchmarks and monitor student progress in Tier I (Brown-Chidsey & Steege, 2005). Reliable and valid assessments should be used to monitor student progress throughout the year. Student data should also be collected and analyzed from relevant diagnostic assessments and disciplinary referrals. Data teams and early intervention teams should analyze such data for each student in Tier 1.

Progression to Tier II is implemented for students who do not make adequate progress in Tier I. Tier II interventions "provide more intensive instruction or social/behavioral supports than students receive in Tier I" (Connecticut State Department of Education, 2008). Instruction in Tier II is primarily accomplished in smaller groups and is focused on specific academic or social skills. Tier II interventions are short term, usually lasting for 8 to 20 weeks. Interventionists may include the classroom teacher, a specialist, or an instructional aide or paraprofessional (Brown-Chidsey & Steege, 2005). Student progress is carefully monitored during the intervention and interventions are changed and modified as needed to assess student progress. Probes or mini-assessments are used to monitor student progress.

Students who do not make sufficient progress with Tier II interventions are considered for Tier III. Intervention in Tier III is considerably more individualized than in Tier II. Students in Tier III are in a setting with smaller teacher-student ratio (3:1), a longer duration of instruction, detailed attention to the social environment and more frequent progress monitoring (DOE). Functional Behavioral Assessments (FBAs) are implemented for students with intensive socio-emotional or behavioral needs. In Tier III, interventions are conducted by a specialist, teacher or specially trained paraprofessional with a scripted program. They use both diagnostic assessments and individual intervention plans to frequently monitor student progress and change schedules or instruction as needed (Burns & Gibbons, 2008). As in Tier II, Tier III interventions are short term, remain part of the general education system, and are supplemental to core instruction in order to meet grade level expectations. If students do not show sufficient progress by the end of the Tier III intervention period, the intervention team must carefully examine why the student is failing to make progress. Based on these considerations, the team determines whether a comprehensive evaluation for special education is necessary (Connecticut State Department of Education, 2008).

Implementation of Positive Behavior Intervention and Supports

A PBIS team of six to eight staff members and an administrator is formed to provide leadership training surrounding implementation of PBIS in the school (Bradshaw, et. al. 2008). A behavioral support coach provides on-site assistance in the implementation of PBIS. To begin implementation, the school team creates three to five positively state school-wide behavioral expectations regarding student behaviors (Bradshaw, et. al. 2008). These expectations are posted in the classroom and around the school and are known by all students and staff. Staff develops plans to define and teach these expectations to students. A school-wide system is developed to reward students who exhibit positive behaviors. Tangible, positive reinforcers are used consistently to shape and maintain behavioral expectations. The school team agrees on a system for responding to behavioral violations including consistent consequences for discipline problems. Schools may, for example, use a formal crisis plan for managing dangerous situations and train staff on procedures to use during a crisis (Bradshaw, et. al. 2008 mine, not Taylor's). The team also develops a system to collect, analyze, and use data, such as the number of office referrals or suspensions, to evaluate the implementation and effectiveness of the program. Under PBIS, schools should conduct regular evaluations to monitor progress of the program. Checks on fidelity, as well as feedback from school staff, would help the progression to effective implementation (Bradshaw, et. al. 2008). Sugai and Horner suggest four basic operating principles when implementing PBIS:

1. Use data to narrow identification of desired goals and outcomes.
2. Establish goals, objectives, and outcomes that are based on local data, described in measurable terms, and are realistically achievable with available resources.
3. Consider and adapt interventions and practices that have empirical and applied evidence of achieving expected goals, objectives, and outcomes.
4. Organize resources and systems so that implementers have the opportunities, capacities, and resources to implement the practice with accuracy and fluency over time (Sugai and Horner, 2009).

Like RTI, PBIS emphasizes prevention and occurs at three levels. At the primary level, all students are exposed to a core social behavior curriculum in order to prevent the development of problem behavior. At this level, the school team also identifies students whose behaviors are not responsive to the core curriculum. Management strategies at this level include teaching students school-wide expectations, positive reinforcement, parent engagement, and proactive discipline. At the secondary tier, supplemental behav-

ioral support is added to reduce the current number and intensity of problem behaviors. At this level, teachers frequently check in and out with students, use peer based supports and may implement a social skills club in order to support students' social skill development. Tertiary tier prevention involves individualized and intensive behavior support to reduce complications, intensity, and severity of existing behavior problems. Tertiary prevention utilizes function-based supports as well as person-centered planning (Sugai, 2008).

STRENGTHS AND WEAKNESSES OF RTI AND PBIS

Strengths of PBIS

Positive Behavior Intervention and Supports (PBIS) methods have various strengths as well weaknesses impacting their effectiveness in different school settings. PBIS implementation in school systems also known as School-Wide Positive Behavioral Intervention Supports (SWPBIS) has shown significant decreases in disciplinary actions including suspensions and office referrals and has shown various positive outcomes for children (Bradshaw, Mitchell, & Leaf, 2010). During 2008 the state of New Hampshire looked at the impact of applying SWPBIS to several of their schools throughout the state including 124 private and public schools from kindergarten through grade 12 (Muscott, Mann, & LeBrun, 2008). Results indicated that with PBIS implementation there were 6,010 fewer office disciplinary referrals and 1,032 fewer suspensions throughout all of the schools (Muscott, Mann, & LeBrun, 2008). Along with the significant decreases in disciplinary actions, teachers were able to recover 864 days of teaching, 1,701 days of learning, and 571 days of leadership, possibly contributing to the gain in mathematics for most students (Muscott, Mann, & LeBrun, 2008). Therefore not only has PBIS shown to be an effective intervention for lowering disciplinary actions, but it can also benefit students academically.

In New Hampshire the SWPBIS model was most effective in middle schools and high schools; specifically, in middle schools there was a reduction of all documented major problem behaviors by at least 50% in 6 weeks demonstrating the efficacy of SWPBIS (Muscott, Mann, & LeBrun, 2008). Results were most likely due to teachers dedicating part of their class time to talk to their students about the importance of respectable behaviors, and what these types of behaviors look like (Muscott, Mann, & LeBrun, 2008). This recent case study of schools that implemented SWPBIS shows how effective this model can be throughout the school system and in different school settings.

An important attribute of PBIS is that it predicts problems with children, and can lead to prevention of these problematic behaviors, ultimately

improving their education experiences, leading to positive outcomes (Scott, 2001). School-Wide Positive Behavior Intervention Supports interventions have also been shown to be effective among different populations of children. Past research has indicated that ¼ of children with problem behaviors in a particular school, including white students and minority students, displayed a 75% decrease in the total number of problem behaviors when SWPIS was implemented (Scott, 2001). This particular school saw a 61% decrease in safe room referrals in majority and minority students, as well as a 65% decrease in suspensions for both of these populations (Scott, 2001). Reaching out to diverse populations is another significant strength for PBIS because it does not leave anyone behind and all students have an equal opportunity to experience its effectiveness. The greatest strengths of PBIS implementation in schools are that it provides an alternative method for disciplinary action, and also increases the academic performance of students (Bradshaw, Mitchell, & Leaf, 2010).

Weaknesses of PBIS

PBIS has several positive characteristics and has been shown to be effective. It also has been shown to be ineffective in some cases. It does have weaknesses along with strengths. One primary weakness of PBIS is that it has been implemented mostly in elementary and middle schools in the United States (Flannery, Sugai, & Anderson, 2009). In 2009 research indicated that only 11% of high schools in the U.S. used Positive Behavior Intervention Supports, and it is believed to be less effective for older students (Flannery, Sugai, & Anderson, 2009). Implementation of PBIS in high school settings has demonstrated, not only little effectiveness for the students, but also considerable low staff participation. For example PBIS implemented in one high school had only 76% staff participation when 80% is the minimal requirement for PBIS to be effective (Flannery, Sugai, & Anderson, 2009).

Another limitation to the PBIS model when implemented in schools is that it requires a great deal of dedicated time from staff in order for it to be most beneficial (Flannery, Sugai, & Anderson, 2009). Some administrators and staff in high schools may not want to take the time to implement PBIS if they realize it may not be as effective for older students. The New Hampshire study also indicated that SWPBIS was less contributive to improving reading and language arts skills compared to math skills (Muscott, Mann, & LeBrun, 2008). With more empirical research, PBIS may be able to improve its techniques so it can be applied more effectively to an older population of students including those who are in high school.

Strengths of Response to Intervention

Response to Intervention (RTI) has also shown to have a significant positive impact on academic progress and improvement in students' overall performance. One of the strengths of RTI is that it provides educators with more evidence on whether to place a child in a special education class or not. School districts that follow RTI focus on student progress monitoring, which allows teachers to see how they can adjust their curriculum or lesson plans to fit their students' needs (Greenfield et al. 2010). At one urban school, teachers reported a greater increase in academic achievement among their students simply because of progress monitoring and adjusting appropriately; in fact 50% of special and general education teachers in this same school had students with greater achievements when RTI was implemented (Greenfield et al. 2010). Not only does RTI work in a general education classroom but also in special education classrooms.

Another strength of RTI is that it limits the failure of students therefore resulting in fewer special education placements (Yell & Walker, 2010). For example with RTI implementation there is no need for IQ testing, and IQ testing cannot be implemented until age 9, therefore RTI gives the school the ability to determine if children have learning disabilities before 2nd or 3rd grade (Yell & Walker, 2010). For children who are not assessed until they are 9 years old, it may be too late, and they may be already failing and falling behind (Yell & Walker, 2010). The Response to Intervention model is more effective because it is not a "wait to fail model," such as IQ assessment implementation (Yell & Walker, 2010). RTI is also beneficial for minority students especially those who are English language learners. At the urban elementary school mentioned before, there was a 5% decrease in the referral of English language learners to special education classes (Greenfield et al. 2010). When implemented in schools Response to Intervention is extremely beneficial especially for children who are in their early elementary years. This particular model can prevent failure from happening resulting in greater academic achievement and the less likelihood of children being placed in special education settings when they do not need to be there. RTI also serves as a better indicator for special education placement as well, compared to traditional techniques of assessment such as IQ and achievement scores.

Weaknesses of Response to Intervention

Response to intervention also has some weaknesses as well, including a lack of and limited empirical evidence and a weak experimental base (Reynolds & Shaywitz, 2009). There has also been little research on the long term effects of RTI such as data on students who were introduced to RTI and have

graduated high school and are presently working or in college (Reynolds & Shaywitz, 2009). Although a strength for children under the age of 9, the fact that RTI does not take IQ into consideration is a limitation for students in middle school and high school (Reynolds & Shaywitz, 2009). RTI in some cases leaves out cognitive and psychological assessment as being linked to learning disabilities, therefore RTI does not require further assessments to be made (Reynolds & Shaywitz, 2009). There are some states in the U.S. that only use RTI and some of these states do not require the child to have any further assessment or testing done (Reynolds & Shaywitz, 2009). Another potential weakness of RTI is that it is expensive to implement in schools because it uses 15% of IDEA funds to develop programs. Some schools may not be willing to spend this much money on something that has not been well researched (Yell & Walker, 2010). Schools may also want to direct the money towards other programs which may be more effective for their specific population and setting.

Suggestions and Conclusion

In order to improve both the PBIS and RTI programs it is essential that more research be done using these programs across diverse school settings and populations. There have been some suggestions made from previous studies on how to improve PBIS implementation specifically in high schools or when working with an older population of students. Researchers came up with six ways to improve the effectiveness of PBIS when implemented in high schools including: active school administrator support, greater staff training, total revision of lesson plans, having experts come in and lecture on PBIS and its effectiveness, sharing information with students about PBIS through school-wide assemblies and videos, and getting students involved with informing peers (Flannery, Sugai, & Anderson, 2009). Not only can these suggestions be used to improve implementation of PBIS and RTI models in high schools, they can also be applied to elementary and middle schools (Flannery, Sugai, & Anderson, 2009).

By getting students involved with implementation they will be able to gain greater understanding of the effectiveness of PBIS and RTI, realizing that these models will benefit them as well as fellow students, and the greater good of their school in improving behaviors and achievement. The education of teachers, staff, and school administrators about implementing both PBIS and RTI is essential because without adequate knowledge, the likelihood of implementing an effective program will be lessened. Therefore, schools should provide meeting time to simply talk about each model. During this time, experts in the field can be invited in to lecture about how to properly

implement PBIS and RTI, and about the all around effectiveness of these programs when an adequate number of people are involved and the programs are implemented properly (Flannery, Sugai, & Anderson, 2009). Research has also indicated several factors that make PBIS most effective that require commitments by school staff. These include: a commitment to PBIS as one of the top three school initiatives, consistent methods of emphasizing positive and preventative strategies to students' behaviors, commitment to teach social behaviors, organization of family, faculty and staff, a commitment to comprehensive collection, review, and analysis of data to make decisions, a commitment to partnering with families and the community, a commitment of individualized approaches for students in greater need, and lastly, a commitment to make time available for all school staff, teachers and administration to meet (Muscott, Mann, & LeBrun, 2008).

The most important and necessary element of both models is the commitment of everyone who is part of the school, including the parents. With the full commitment of the entire school body, including parents, both PBIS and RTI are more effective and are much more likely to improve the behaviors and achievements of students, as well as improve the effectiveness of teachers in the classroom (Flannery, Sugai, & Anderson, 2009). The RTI model also serves as an excellent determinant of whether a child should be placed in a special education classroom compared to more traditional methods of assessment for placement such as IQ testing (Yell & Walker, 2010). All schools including elementary, middle schools and high schools can benefit from implementing both the PBIS and RTI models because they have been shown to be extremely effective in improving all aspects of the school.

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Chapter Six

Cognitive Behavior Management

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Cognitive Behavior Management utilizes both cognitive and behavioral learning strategies to produce desired behaviors. It stresses the key roles that cognitions play in an individual's behaviors, and how, if cognitions can be altered, then behaviors will consequently be altered. In other words, individuals cannot act differently than they think; therefore, change will occur only if individuals can change their cognitions. Communication is a major component of this approach, and is critical in helping individuals recognize their undesired behaviors, the reason for their occurrence, alternatives that can replace the undesired behaviors, and how to carry out the desired behaviors. According to the Texas Statewide Leadership for Autism, CBM assumes that

> (a) an individual's behavior is mediated by cognitive events; (b) a change in mediating events results in a change in behavior; and (c) an individual is an active participant in his learning. In short, the cognitive behavioral approach assumes that individuals have both the capacity and preference for monitoring and managing their own behavior (Heflin & Simpson, 1998).

The underlying principle of this approach is that individuals are the agents of change. While it will be necessary for individuals to communicate and work with others in recognizing and modifying undesired behaviors, the responsibility and jurisdiction are ultimately placed on the individual. Humans have an innate drive to have self-control. With the correct tools, genuine support, and practice, individuals will be able to alter undesired behaviors and control how they act. CBM aims to integrate people's thoughts, feelings, and actions; it strives to teach children to change their behaviors and reward themselves for their success in doing so. According to Interactive Collaborative Autism Network, it is crucial to take into account the developmental level of the

children when implementing CBM techniques because their present level of understanding will influence the mode of intervention that should be used. Those who will benefit the most from CBM are individuals who struggle with recognizing when to exhibit certain behaviors and how to use them properly. Once CBM is implemented, an individual will begin changing how he or she "thinks and responds to feelings such as anxiety, sadness, and anger" (Interactive Collaborative Autism Network, 2010). In order for the intervention to be successful, the individual must have motivation and the desire to want to change. Through motivation, individuals will be empowered to take action and monitor, evaluate, and reinforce their own productive behaviors.

Multiple techniques have been used to manage the behaviors of children, causing much confusion over which ones are actually effective. Kazdin (2008) pointed out such inconsistencies and compiled a list of popular myths that parents have come to believe as a result. Two myths, including the use of punishment and explaining to a child why his or her behavior is wrong are two techniques that are constantly overused, despite conflicting research. Although explanation of behavior may help a child with understanding what is right and what is wrong, it will not physically change the target behavior. Constant reminders of appropriate behavior are also known to be ineffective, as they tend to reverse the likelihood a child will repeat the intended behavior next time without the reminder.

Kazdin (2008) indicated that praise and positive reinforcement are two effective ingredients in behavior change that are essential for success. However, he also warned that in order to be effective, previous misconceptions about praise and positive reinforcement must be corrected. Many parents tend to follow praise with a negative comment, also known as "caboosing," or provide it simply at the wrong time. Also, many forget the importance of repetition with positive reinforcement to create consistency in mastering a permanent behavior change. Kazdin (2008) mentioned the importance of realizing that a child is not necessarily being manipulative and in fact may be acting up simply because he or she is reinforced for the wrong behaviors. Lastly, a parent must understand that the pace and intensity of learning varies among children, which leads to constant need for modifications in behavior techniques. This is an important concept as it provides support for the idea that the environment to which a child is exposed, and the support the child receives in that environment, have an effect on his or her level of behavior change.

Bronfenbrenner's (1986) Ecological Theory provides support for the belief that a child's development of behavior is shaped by his or her environment. This theory states that five different levels of systems shape behavior. The first, the microsystem, is where individuals have the most direct contact

with their closest social agents. Examples of these agents are parents, peers, teachers, and church members. Here, individuals help with the construction of these interactions. The next level, the mesosystem, is composed of the relationships among the social agents within the micro system that can lead to both positive and negative behavior problems. For example, if a child does not have support from their parents, he or she may have trouble developing relationships with teachers and peers in school. The exosystem, the third layer, is where individuals are affected by a variable that has an indirect link to them. Here, a child's behavior may be greatly impacted by agents such as mass media. The fourth level, the macrosystem, is where culture influences come into play. Acceptable behavioral expectations of one's culture define how a child acts in various environments, including schools. The fifth and final level, known as chronosystem, reflects the time period a child lives in, or any large transitional periods in his or her life. For example, support for changing a child's behavior will be greatly affected by a death in the family. Although Bronfenbrenner (1986) provides support for how children's environments influence their behavior, his theory leaves out how children directly learn to act out the behaviors they have observed within their environments.

Social learning, including modeling, posited in Social Learning Theory, developed by Albert Bandura, provides a third factor that examines the relationship between an individual's environment and his or her behavior. Bandura (2001) states that children cognitively characterize other's behaviors around them, and shape their behaviors to shadow these representations. Children model others' behaviors within their environment and experience the consequences related to them. Environmental factors, behavior, and a child's cognition interact and affect one another interchangeably. For example, if a child witnesses a physical altercation between his/her two parents they may cognitively process it and believe that this is a representation of expected behavior between two individuals. It is possible then, that this child will model this behavior and repeat it with a fellow classmate. On the opposite end of the spectrum, a parent can use modeling to their benefit in order to teach children to perform desired behaviors.

Alan Kazdin, as well as many other researchers, has taken into account the social modeling theory, a child's environment, and the use of cognition in learning behavior. These researchers have paired these concepts with behavioral techniques to create Cognitive Behavior Management (CBM), an approach to manage and shape behavior. Because this approach looks at both the child as an individual, as well as the product of his or her environment, it encompasses all aspects of a child's life and can be applied in various settings. Parents and caregivers can be taught how to manage their children's behavior in both private and public settings. In addition, teachers can apply

this technique, or aspects of it, within their classrooms. Distinct to this approach, when the proper techniques are taught and used, is that children can begin to manage and take responsibility for their own behaviors. CBM is also a preferred approach, because it is applicable not only in various settings, but also for various populations of children. Due to its universality, CBM can be applied to both special and general education classrooms. This approach is effective in working with children and adolescents who suffer from Attention Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), Conduct Disorder (CD) and antisocial behaviors. Despite the severity of a behavior problem or the setting in which it occurs, CBM is a beneficial approach to use, as it provides specific instructions for sustaining behavior that are supported by empirical evidence.

Prior to implementing CBM techniques, the first step is that the behavior in question must first be identified and singled out from other behaviors. It must have a "significant impact on the student's functioning," and should be recognized as inhibiting the individual's growth and the growth of others within the environment (Walker et. al., 2007, p. 154). An in-depth description of the behavior should include: when and where the behavior occurs, the antecedents and consequences of the behaviors, and the severity of the behavior. It is necessary to investigate what resources are needed and the steps involved in changing the undesired behaviors. In doing so, people working with the child will be able to gather sources and provide an environment that will foster growth and improvements in behavior. Getting to know the child through numerous interactions will allow the interventionist to understand what types of reinforcements the child would find enticing and worth working for. The amount of structure used will depend on the child's levels of motivation and persistence, which are dependent on the child's developmental level.

The second step involved in the intervention involves teaching the children the desired skills. Sitting down with children and helping them to recognize why their current behaviors are not acceptable will start them down the right path towards change. Likewise, brainstorming alternative behaviors with the children will allow them to creatively explore other options. This will work towards empowering them as individuals and guide them towards recognizing that they are capable of becoming the agents of change within their own lives. To accommodate many children who are visual learners, it would be beneficial to use visuals in order to engage both their visual and auditory senses, which will heighten their overall awareness. This may include "drawing to illustrate perspective or a video of someone modeling positive behavior," (Interactive Collaborative Autism Network, 2010).

Teaching children to manage their own behaviors is the next step in the cognitive behavioral process. Those working with children should model the

desired behaviors first, and then encourage them to join in and practice those behaviors together. In doing so, the children will come to recognize a routine that can be used in circumstances where the previously undesired behavior would occur. During the preliminary steps of the modeling process, prompting may be necessary. Prompting is the "process of providing verbal, visual, aural or manual assistance to a student during the behavior change process to facilitate the completion of a task" (Walker et. al., 2007, p. 342). This can eventually be phased out as children continue through the process and come to internalize the newly desired behaviors. It will be important to recognize that children should only be reinforced for accomplishing the desired behavior. Any behaviors that stray from what is expected should not be recognized or reinforced.

Eventually, children will come to internalize the newly acquired behaviors. They will become more independent in carrying out behaviors and reinforcing themselves for a job well done. Although the shift of responsibility will be placed on the child, it will still be important to monitor his or her behavior in order to recognize where any adjustments may need to be made. If modifications are necessary, the process should start from the beginning, where the child is re-taught the behavior and asked to practice it with the assistance of the instructor.

The Parenting Center and Child Conduct Clinic at Yale University in New Haven, CT, specializes in evidence-based programs designed to help families with a wide range of parenting concerns (Yale Parenting Center and Child Conduct Clinic, 2010). One of the characteristics of this Clinic is that it only offers evidence-based treatments that are applicable to a variety of settings. Parents go to the center for various reasons, ranging from needing general assistance about day-to-day parenting issues (i.e. a child failing to listen to instruction), to a desperate parent seeking a treatment for a child with severe behavioral problems such as violent behaviors and severe aggression.

Some of the services the clinic offers include Parent Management Training (PMT), Parent Problem-Solving sessions (PPS), Problem-Solving Skills Training for children (PSST), and recently, Phone Consultations. Attention-Deficit/Hyperactivity Disorder (ADHD) evaluations are also conducted at the Center in conjunction with one of more of these training programs, or on its own. If a parent is interested in any of the above offerings, they may inquire to speak with a Certified Specialist in cognitive-behavioral management (Yale Parenting Center and Child Conduct Clinic, 2010).

Phone consultation is an option for parents who do not wish to enroll in a specific program, but would like to discuss a child's problem behavior(s) with a certified specialist. The center believes a one-time consultation can work because the Certified Specialist will inquire about specific aspects of

the child and the problem behavior in order to determine which skills are the most appropriate to change the behavior. The specialist will also offer the parent detailed instructions on how to carry out this form of behavior modification (Yale Parenting Center and Child Conduct Clinic, 2010).

If parents prefer to work with a Certified Specialist face-to-face, attending one of these training programs would be beneficial. Parent Management Training (PMT) teaches parents how to improve their parent-child relationships, have fun, and ultimately develop adaptive and pro-social behaviors in their children. Specific parenting skills are taught that address a variety of problem behaviors that vary in severity, including: temper tantrums, refusing to engage in self-care (bathing, getting dressed, etc.), refusing to share with their peers, and the like (Yale Parenting Center and Child Conduct Clinic, 2010).

The other training offered for adults is the Parent Problem-Solving training (PPS), which is often offered in conjunction with the Parent Management Training. In the PPS training, parents are asked to explore and identify current stressors they are experiencing that are potentially negatively affecting their familial relationships as well as the important relationships outside the home. The purpose is to create solutions to better cope with these problems and to decrease the likelihood of them occurring in the future (Yale Parenting Center and Child Conduct Clinic, 2010).

In the third training offered by the center, children are the focal point. The Problem-Solving Skills (PSS) training was developed to show children how to understand their thoughts, feelings, and actions, and to see the patterns among these factors. The ultimate goal of this training is for children to learn to effectively problem-solve in a positive and adaptive manner (Yale Parenting Center and Child Conduct Clinic, 2010).

As with all therapeutic interventions, a key issue to contemplate is the time commitment needed to change the unwanted behavior. In order to meet the needs of busy clientele, treatment is offered in multiple formats, including in-house sessions, interactive online sessions, phone consultation, and intensive one- and two-day programs for adults. The day programs, as well as the children-based training and the ADHD evaluations must be carried out at the center. The average amount of time families work with the certified specialists is between 4-6 months, yet some families have reported visible changes in their child's behavior as early as one month into treatment (Yale Parenting Center and Child Conduct Clinic, 2010). One of the major goals of the center is to teach parents how to effectively model pro-social behavior and develop coping skills. A second pertinent goal is to teach children to take a break, find a solution for the problem at hand, and then act on it, rather than reacting due to impulsivity (Yale Parenting Center and Child Conduct Clinic, 2010).

In his book titled: "The Kazdin Method for Parenting the Defiant Child: With No Pills, No Therapy, No Contest of Wills." Kazdin (2009) lays out the basic principles behind his method for changing children's behaviors, and how these principles can be implemented. These include: the positive opposite, positive reinforcement, reinforced practice, shaping and extinction, and using the ABC model to put all of these steps together. The first step is focusing on the positive opposite of the problem behavior. Kazdin emphasizes that as parents or educators of any kind, it is important to focus on the desired behavior, which will eventually replace the unwanted behavior. It is much easier to build up a behavior you want by positively rewarding its occurrence than by ridding a behavior through punishment or negative reinforcement (Kazdin, 2009). For instance, if a parent wants to get their child to stop refusing to eat vegetables during dinner, the positive opposite would be to say, "Try to take a few bites of vegetables with dinner," versus saying, "Eat your vegetables!," or "I don't understand how you hate every type of vegetable, please just eat them!" (Kadin, 2009, p. 31).

The second step of the Kazdin method is positive reinforcement. The key piece of positive reinforcement, according to Kazdin and other behaviorists, is consistency and immediacy. It is important to provide reinforcement immediately after the desired behavior has occurred, and to clearly state the connection between the target behavior and the reinforcement. Positive reinforcement is clearly important in modifying behavior, but in order for behavior modification to be effective, the reinforcement must also be followed by reinforced practice and shaping (Kazdin, 2009).

In the third step, reinforced practice means that the child has many opportunities to perform the target behavior correctly, and to receive the reward, or positive reinforcement. Repetition of the positive opposite of the problem behavior is essential for a strong association to develop in the child's mind between the behavior and the reinforcement (Kazdin, 2009).

The fourth step of the Kazdin method is shaping. It is important to shape a child's behavior by breaking it down into smaller steps. After the child completes each small piece of the behavior, positive reinforcement should be given, so that eventually the child will work up to the bigger task. For instance, if someone would like a child to clean up his room every day, then that person may start by setting smaller goals for the child, such as making the bed. Once the child makes his or her bed, the behavior should be rewarded, and the child should be encouraged to perform an extra step next time, such as putting dirty clothes in the hamper. After a while, the child will clean up his or her entire room. The purpose of shaping is to not overwhelm children by the given target behavior, but to teach them step-by-step in order to ensure a better outcome (Kazdin, 2009).

The fifth and final step of the Kazdin method deals with the implanted consequence when a child does not meet a behavioral expectation. A common myth of parenting is the effectiveness of punishment, which was discussed earlier in this chapter. Kazdin argues that extinction is actually a better tool to use when a child does not follow instructions (Kazdin, 2009). A parent or an educator can assist in the extinction of a problem behavior by failing to address it. For instance, if a child does not complete his or her homework, rather than keeping him or her in for recess, a teacher should ignore the problem behavior, and reward the child for another request that was executed, such as handing in a permission slip for an upcoming field trip.

The five steps of the Kazdin method seem simple enough, yet how does it work? This method of CBM is effective because the steps follow the antecedent-behavior-consequence (ABC) formula with cognition as an interceding variable.. When each piece is put together, desired behavior can result. When the correct antecedents precede the behavior, the child is given repeated opportunities to perform the behavior, and then the appropriate consequences are delivered (Kazdin, 2009).

EVALUATION AND RESEARCH EVIDENCE

Cognitive Behavior Management can be implemented in various forms, each of which is tailored around the specific population and behaviors it is targeting. Research supports the use and efficacy of CBM in various locations such as at home, in schools (both regular and special education classrooms), and in community health facilities. The effectiveness of CBM with various populations has been documented in the research, including among individuals who have been diagnosed with psychological disorders or present with symptoms of co-morbid disorders.

An investigation, at the University of Georgia, applied Cognitive Behavioral Management (CBM) to elementary school students' behavioral intervention programs to examine the overall effectiveness of the approach. Thirty first graders and 25 third graders deemed as "exhibiting inappropriate classroom behaviors" were chosen to participate in the study (Manning, 1988, 193). Random assignment was used to assign those receiving the extra treatment component and those in the control group. Students in the experimental group were exposed to Cognitive Behavioral Management and ways to control their own behaviors and emotions within the classroom. Students in the control group were also exposed to CBM, but were not "taught to use self-instruction, the critical CBM ingredient," that is used to monitor one's own behavior (Manning, 1988, p. 194). The overall assumption by Manning,

was that "children seem to be able to learn to self- instruct in order to inhibit undesirable behaviors like impulsivity and aggression, at least when the techniques are applied on a one-to-one instructor-to-tutee basis" (Manning, 1988, p. 193). Until this point, little research had been done using Cognitive Behavioral Management in the regular education classroom. The goal of this study was to shed light on the use of CBM and its effectiveness in regular education classrooms. None of the participants received special education services at the time of the experiment, and all had average IQ scores (Manning, 1988).

Prior to the administration of the treatment, teachers of the participants were asked to complete the *Brown-Hammill Behavior Rating Profile Scale* (BRP), which measured their "perception[s] of the children's classroom behavior" (Manning, 1998, p. 194). Descriptive words and phrases were used to assess the teacher's level of sensitivity towards their students' behaviors, and their feelings towards them overall. Baseline observations were also made to "ascertain whether children were on or off task, with these evaluations made for 10-second intervals over a period of 30 minutes" (Manning, 1988, p. 195). On-task and off-task behaviors were defined, and included such items as "eyes toward seatwork material, chalkboard, or other learning display centers" (on-task), and "manipulating pencils, rulers, or paper, scribbling or doodling, or being out of seat" (off-task) (Manning, 1998, p. 195). The *Norwicki-Strickland Locus of Control Scale* was also used, and yielded acceptable reliability (.6 to .7).

After the first three weeks, interviews with teachers and students were conducted to assess whether effects occurred based on the treatment intervention. Teachers "noted substantial-to-100% improvement in classroom behavior for about 75% of the experimental subjects after the third week, [and] 90% of the experimental subjects were reporting the use of self-management" (Manning, 1988, p. 195). Ten target behaviors were identified as being legitimate sources for a student's entrance into the study, including "inhibitory deficits-shouting out, being out of seat, daydreaming, playing around desk or room, disturbing others; initiating deficits-raising hand, staying seated, listening, concentrating, and keeping hands to self" (Manning, 1988, p. 196). Teachers chose students for the study by identifying those who displayed two or more of the target behaviors above. Participants met with investigators to learn "self-instruction strategies twice per week, 50 minutes per session, for 4 consecutive school weeks" (Manning, 1988, p. 196).

Post-treatment measures were administered after the study was complete, and showed that "inter-rater reliability for on-task ratings was 96%," and the BPR was given to parents and teachers to fill out regarding their children's current behaviors (Manning, 1988, p. 196). During the last session of the study, participants were expected to demonstrate the "self-instruction for

inhibiting, initiating, and reinforcing classroom behaviors (i.e. display the behaviors that were trained during self-instruction training)" (Manning, 1988, p. 196). Trained researchers were then placed in the children's classrooms to assess whether or not the children internalized and used the skills taught to them in the Cognitive Behavioral Modification intervention. An inter-rater reliability of 98% was discovered. Modeling, practicing, and cueing were used to strengthen the desired behaviors.

Manning's experiment was designed to evaluate the effectiveness of CBM on teaching first and third grade students to control their behaviors, and perform more positively in the classroom. Through her research, it is evident that children can in fact be taught to produce "self-instructional mediators that promote regulation of behavior" through the implementation of Cognitive Behavior Management (Manning, 1988, p. 204). Teachers saw tremendous improvements in students' in-class behaviors.

CBM has been shown to be effective in working with another population, children with Attention-Deficit/Hyperactivity Disorder (ADHD). ADHD is an invasive condition where individuals exhibit inappropriate behaviors of hyperactivity, inattention, and impulsivity that do not represent typical development of a particular chronological age (Anastopoulos & Farley, 2003). In addition, it is reported that a large percentage of children diagnosed with ADHD will also show signs of co-morbid conditions with Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) (Anastopoulos & Farley, 2003). This disorder causes multiple psychosocial behaviors that interfere with school, at home, and in parental and sibling relationships. Many of these behaviors warrant an effective intervention to control for them.

According to Anastopoulos and Farley (2003), in order to help relieve symptoms at home and reduce secondary symptoms related to co-morbidity, the use of a Parent Training program, in conjunction with a CBM framework, have been shown to be effective. The program of focus is designed for children four to twelve years of age and in families where symptoms of ADHD have been contributing to stress and difficulties. This particular program is completed within 8-12 one-hour sessions, and is effective in both individual and group settings. Ten phases are discussed by the therapist, completed by the parent, and followed up on through the use of homework.

Anastopoulos and Farley (2003) introduce the first phase of the program, which provides parents with an orientation of the process and an overview or background of ADHD. Here it is important for unrealistic parental expectations to be discussed and corrected. Next, the therapist focuses on understanding the relationship between the parent and child, with specific focus on the antecedents and consequences that contribute to problem behaviors. In step three, the therapist begins teaching and assigning the parent techniques that

can be used to help control for their child's behaviors. Here, parents are asked to put aside a special time of the day to be non-corrective and increase their positive attending skills by reinforcing positive behaviors. In the fourth stage, researchers have asked parents to learn to reinforce positive behaviors on a more general schedule, other than just in this "special time." Learning to give commands more effectively is also important during this phase (Anastopoulos & Farley, 2003).

Children with ADHD have a strong need for concrete rewards, which is why Anastopoulos & Farley, (2003) introduce external reinforcement through a home poker chip or point system in stage five. Through the guide of the therapist, parents design the point system around the specific target behaviors of each child. However, it is not until step six that parents can introduce response cost, or a form of punishment for not carrying out the desired behaviors. In addition to the point system, parents are taught how to correctly use time-out with their children in step seven. This step is most effective when children learn that they must comply with the desired behavior requested before they leave time out. As mentioned, because this particular population has difficulties with psychosocial behavior deficits in many environments, steps eight and nine focus on extending such practices learned in the earlier steps to help control for this. Step eight particularly focuses on managing behavior in public places, which includes both parents and children verbally committing to expectations and plans of action for punishments for undesired behaviors. In step nine, the plans implemented at home are extended to the school environment, with the help of the teachers through added techniques such as daily report cards. Step ten consists of post-intervention sessions with the parents to discuss progress and overall perceptions of the program.

Although limited studies have been conducted on parent training with a population diagnosed with ADHD, the majority of research supports the use of parent training when it is a primary source of intervention (Anastopoulos & Farley, 2003). The most effective forms have a strong focus on training parents mostly in specialty contingency techniques such as time-out, response cost, and positive reinforcement (Anastopoulos & Farley, 2003). Anastopoulos and Farley also discuss parent training effectiveness in multi-modal studies, which have been conducted by fellow researchers. It is suggested that overall family functioning is most improved when parent training is combined with psychopharmacology and self-training therapy, rather than solely medication. Parent training has also shown to be effective when controlling for co-morbid behaviors.

Another investigation looked at the effectiveness of CBM techniques in the population of children with Oppositional Defiant Disorder and Conduct Disorder. ODD and CD refer to patterns of disruptive behavior that can

greatly affect a child's functioning at home, in school, and in the community (Kazdin, 2010). ODD mainly includes stubbornness, disobedience, and tantrums. CD encompasses these too, but extends to more severe problem behaviors, such as bullying, fighting, weapon use, and running away from home. There is a high co-morbidity rate for children with ODD or CD and other psychiatric disorders, thus it can be difficult to effectively account for each presenting disorder. The formal psychiatric diagnosis of CD, according to the DSM-IV-TR, includes 32,000 combinations of presenting symptoms, and thus the same treatment options will not work for every individual with ODD or CD (Kazdin, 2010).

Two evidence-based treatment interventions that incorporate CBM techniques used to work with this population are Cognitive Problem-Solving Skills Training (PSST), and Parent Management Training (PMT). PSST focuses on cognitive processes, and helping clients brainstorm alternative solutions to interpersonal problems they are experiencing, such as lack of communication, and identifying the end result of their actions. Examples include getting in trouble for fighting, or making friends due to improved communication with peers (Kazdin, 2010). PSST works directly with the child, and eventually incorporates other key members from a child's life, such as parents. On the other hand, PMT is used only with parents, and has no child involvement. PMT focuses on the interactions between children and parents within the contexts of home, school, and the larger community. Interventions focus on sequences of interactions in the home and how they can be changed. Aspects of Applied Behavior Analysis, such as functional analysis and differential reinforcement, are also used (Kazdin, 2010). Both of these methods focus on changing how the child responds in interpersonal scenarios, in various environments. Both also use learning-based procedures to develop behavior, including but not limited to modeling, prompting, shaping, positive reinforcement, and mild punishment (time-out from reinforcement, response cost) (Kazdin, 2010).

Dr. Kazdin conducted a study assessing the effectiveness of both of these interventions. Children aged 5-12 with Conduct Disorder were studied, both as inpatients at the Child Psychiatric Intensive Care Service at the University of Pittsburg, and outpatients at the Yale Parenting Center and Child Conduct Clinic. Approximately 70% of the children studied met the diagnostic criteria for two or more disorders, and most children fell within the normal range of intelligence (Kazdin, 2010). PMT was used solely for children six-years and younger, and for those seven-years and older, a combination of PSST and PMT were used. Both PSST and PMT interventions consisted of twelve consecutive weekly sessions, and additional assistance was provided to either parents or children if needed. Children involved in the PSST were taught ver-

bal prompts to engage their thoughts and actions that in turn will guide their behavior. Modeling and role-play were used extensively, and the therapist provided great praise when the steps were carried out correctly, and offered detailed feedback about how the child could improve even further next time (Kazdin, 2010). A token economy system was used at first, and over the course of treatment, social reinforcement was relied on more heavily. Parents involved in the PMT were taught specific skills on how to develop and use these skills with their children in their homes. Most sessions consisted of modeling, role-playing and rehearsal (Kazdin, 2010).

The evaluation of these treatment methods included: descriptive intake, child, parent, and family functioning, treatment process measures, and other treatment related measures (Kazdin, 2010). According to this study, PMT and PSST used alone and in combination produce reliable and significant reductions in oppositional, aggressive, and antisocial behavior and increases in pro-social behavior among children. The combined treatment tends to be more effective than either treatment alone. Not only did the child's behavior improve, but family relations were shown to improve as well, including a decrease in parental stress. Overall, treatment-outcome studies suggest that PSST and PMT can effect positive change in severely disturbed children within both inpatient and outpatient programs. This can be done by using cognitive-behavioral procedures, which focus on interpersonal cognitive processes of both the child and the interactions between child and parent (Kazdin, 2010).

Another clinical population in which CBM has been shown to be effective is with children who possess antisocial behaviors. According to Kazdin, Siegel, and Bass (1992), common symptoms include extreme aggression, lying, fire setting, and other violent acts that violate social norms. These behaviors are commonly exhibited in children with Conduct Disorder, leading to progressively intense symptoms as children grow older. These children are extremely difficult to treat because there are many external factors that also contribute to their behavior. External factors include socioeconomic factors, false cognitive perceptions, parent psychopathology, and family dysfunction. Due to a combination of all of these factors, it is apparent how similar techniques used to treat children with ODD and CD have been selected to treat this population as well.

Kazdin, Siegel, and Bass (1992) supported the idea that PMT and PSST are effective tools when working with this population through a study that looked at ninety-seven children aged 7-13. Children were pooled from an outpatient Child Conduct Center. These children were all referred to the Center because of their aggressive and antisocial behavior. All children could read at a second grade level or higher, according to the Wide Range Achievement

Test (WRAT), and were rated by their parent or guardian as falling in the 90th percentile on the Child Behavior Checklist for aggressive or delinquent behaviors. Children were randomly assigned either to a PMT or PSST treatment only group, or a combination of the two. Procedures of both evidence-based treatments were administered in a similar form as with the ODD and CD population, yet they were tailored to fit with antisocial behaviors.

Multiple assessments were used to evaluate numerous components of children and parents' behavior changes before, during, and after the intervention. Parents through filling out the Child Behavior Checklist assessed children's dysfunction and pro-social competence. A similar assessment was used by teachers to assess for antisocial behaviors at school. To report aggressive, antisocial, and delinquent behaviors, parents were administered the Interview for Antisocial Behavior. The children were also asked to rate their behaviors using multiple assessments, including the Children's Action Tendency Scale. The Parenting Stress Index (PSI) and the Family Environment Scale (FEM) were used to collect information on parent and family functioning. Post-intervention testing was also completed by children, parents, and therapists to test for overall quality and perceptions of success (Kazdin, Siegel, & Bass, 1992).

Kazdin, Siegel, and Bass (1992) reported similar results on the effectiveness of PSST and PMT treatments in this population. Significant improvements in child dysfunction, pro-social competence, aggression, delinquency, and antisocial behaviors were found in the group who received a combination of PMT and PSST. These improvements in behavior were observed at home, in school, and in the community even up to the one-year follow up assessment. Specifically, this combined treatment showed improvements in family functioning and distress. Although, both treatments used alone have been shown to produce changes in behaviors, PSST seems to be slightly more effective than PMT, when implemented as the solitary intervention.

CRITIQUE

Despite the strong empirical evidence in favor of the efficacy of CBM, some limitations are evident. When CBM is applied in school settings, it is important to be cognizant of the limited amount of time available to teachers to set aside for students who need behavioral modification. With an average classroom size of twenty five to thirty students, (dependent on the school district), teachers' schedules are already limited, which leaves little time to apply CBM in an efficient manner. Specifically, because token economies and point chart systems are important tools included in CBM, teachers are expected to maintain them, while simultaneously running classroom lessons. Valuable

lesson time is then taken from all students in order to tend to the needs of the identified children. In addition, with school district's limited budgets, training teachers in CBM techniques may be expensive. Other expenses such as paying for substitutes if the training occurs during school hours need to be considered.

Reinforcement schedules are at the forefront of current behavior modification systems, including CBM. Although its importance is evident, there is a concern when reinforcement becomes the main incentive, rather than understanding of why the desired behavior is wanted. When it comes to phasing out an intervention, there is a concern that the desired behavior will become extinguished due to the lack of external reinforcement given. Although CBM may change behaviors, it does not necessarily provide long-term effects. Children may need additional services such as counseling, communication skills and social modeling training. Essentially, the final goal of replacing the tangible reinforcement with an internal reinforcement should be the focal point.

Cognitive Behavior Management interventions can be shaped based on the child's current developmental level. Although this is strength of this model because it allows for working with a range of ages, it is hard to believe that CBM can be effective with students who do not have the cognitive capacity to comprehend the consequences of their actions. As mentioned earlier, the main goal of CBM is for children to self regulate their behavior, which requires in depth understanding and insight. It would be difficult to agree that CBM is effective in working with young children who are not at a developmental level where they are able to connect their cognitions to their behaviors. It would seem more appropriate to implement a behavioral intervention with younger children, until they are old enough to begin linking behaviors and reinforcements to cognitions.

When looking at the clinical population, research supports the idea that CBM parent training techniques are effective ways to modify behavior when applied to children diagnosed with ADHD. This particular technique not only changes behavior in children, but also improves overall family functioning, parenting stress, and parenting self-esteem (Anastopoulos & Farley, 2003). However, it is important to note the limitations of parent training. Anastopoulos and Farley (2003) have discussed a number of them. First, some past studies analyzing multimodal techniques including medication and other types of therapy have provided contrasting ideas from the study mentioned above. Researchers state that when parent training was applied in conjunction with other types of therapy, no significant improvements in behavior were observed. In addition, because parent training techniques teach multiple types of reinforcement strategies, it is not possible to identify the specific components

of these programs that provide change in behavior. Last, limited research has been done to identify the effects parent training has on children's emotional functioning. Future research of parent training should primarily focus on which children and with which outcomes it works best.

Although studies have shown that PMT and PSST programs are effective in reducing problem behaviors, (i.e. antisocial behaviors), and strengthening pro-social behaviors in children with ODD and CD, there are criticisms to these interventions. First, it is difficult to generalize results to broader applications given that there are only a limited number of training opportunities for mental health professionals to learn these techniques (Kazdin, 2010). Training materials and workshops can only bring individuals so far, and they are not sufficient for providing PMT or PSST to others. Secondly, long-term follow up data is needed in order to truly assess the effectiveness of these programs (Kazdin 1992, 2010). Many studies and interventions fail to demonstrate the effectiveness of PMT and PSST interventions with children, that carry into adolescence and adulthood. Thirdly, there should be more focus on moderators of therapeutic change, in order to identify the factors that affect outcome and evaluation (Kazdin 1992, 2010).

Fourth, individual factors must be taken into consideration more. For instance, PMT puts a great demand on families, and not all families will take this commitment seriously. Also, due to cultural differences in child-rearing practices, and parent-child interactions, PMT and PSST interventions may not be effective or realistic for families from all ethnic and cultural backgrounds. Modifications may need to be made, depending on the situation and familial expectations as well as cultural and religious beliefs (Kazdin, 2010). Lastly, because CD, ODD, and antisocial behaviors encompass a plethora of different behaviors, it is important that future research continues to investigate the effects of PMT and PSST on each behavior. For example Kazdin, Siegel, and Bass (1992) noted that peer bonding and academic dysfunction, which may play a significant role in maintaining antisocial behaviors, were left out of treatment, leaving an uncertainty of whether or not PMT or PSST would work with these characteristics.

CONCLUSION

Overall, research has shown that Cognitive Behavior Management is an effective technique in improving problem behaviors in children and adolescents. This method of behavior modification is applicable for children in school (in both special and general education classrooms), home, mental health facilities, and community environments. Educators, parents, and clinicians can all

be trained to use CBM techniques effectively. Furthermore, these individuals can tailor techniques dependent on the population they are working with, such as children diagnosed with Attention Deficit Hyperactivity Disorder, Conduct Disorder, Oppositional Defiant Disorder, and those with antisocial behaviors.

Although there are some criticisms of CBM, the potential benefits drastically outweigh the disadvantages. Kazdin's method empowers parents and teachers, who in turn empower their children or students. Children can begin to effectively self regulate their thoughts in order to prevent the re-occurrence of unwanted behaviors. Through this empowerment, children move from an external source of control to an internal locus of control over their thoughts and behaviors.

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Chapter Seven

Social and Emotional Learning and Character Education Approaches

Ludmila Rodrigues, Inva Merolli, Jesse Crandall, and Norris M. Haynes

Many schools within the United States do not provide students with the social and emotional skills, and with the character education they need to help them to develop the positive relationships with peers and faculty that they need (DeAngelis, 2010). Data show that only twenty-nine percent of students from grades six through twelve reported that their school provided a nurturing environment for them to develop successful relationships with peers and teachers (DeAngelis, 2010). Thirty percent of schools reported that students engage in high risk behaviors, including sex and substance abuse (DeAngelis, 2010). In an effort to address these problems, social and emotional learning (SEL) programs are being more widely implemented in schools. SEL is a process that helps children develop the fundamental interpersonal and intrapersonal skills that they need to help them lead more effective lives. Social and emotional learning ultimately helps people become more aware of and develop the skills needed to better themselves and to cultivate successful and rewarding relationships (Collaborative for academic, social, and emotional learning, 2000-2010).

The skills learned in SEL programs are not just for the short term but can be used by students throughout their lives. SEL helps children to develop the capacity to be more aware of their emotions while developing empathy and concern for others. These life-long skills, can allow children to resolve conflicts, make safe choices, and regulate their emotions. Children have begun to benefit from social and emotional programs which are being implemented in many schools around the country. Many of the tools and activities needed for SEL school reform can be found at the collaborative for academic, social, and emotional learning website (CASEL, 2000-2010). There are many programs in schools across the United States, and in some other countries, that are premised on the basic principles of SEL and character education. In this chapter,

however, the authors focus specifically on the work of Bracket (2010) and Elias (2003), leaders in, and substantial contributors to the field of Social and Emotional Learning.

BASIC PRINCIPLES, GUIDELINES AND PROCEDURES

Proponents of SEL generally posit that there are five SEL competencies. These are:

- Self awareness,
- Self management,
- Social awareness,
- Relationship skills,
- Responsible decision making.

Self-Awareness

This involves being able to identify and describe one's feelings, needs, desires and motivations. For example, a student who is being called names and is being picked on by his peers is able to recognize his feelings of sadness and describe what it feels like to be picked on and called names. He will also be able to think about and express a different narrative about himself that reflects who he truly is as a person.

Self-Management

This involves the ability to monitor and regulate one's feelings and one's behavior. A student who practices effective self-management is able to monitor and regulate her emotions and impulses and demonstrate self-regulatory behaviors. These may include self-regulatory practices but are not limited to: good anger management, effective time-management skills, the ability to establish short and longer-term goals, delay gratification and the self-control and self-discipline needed to succeed academically.

Social Awareness

This involves sensitivity to one's social environment and knowledge of how to recognize, empathize with and respond appropriately to the feelings and behaviors of others.

Relationship Skills

These skills involve the ability to interact effectively and establish healthy reciprocal relationships with others. Relationship skills help elementary students learn how to cooperate with others, which helps them establish and develop friendships. In high school, relationship skills are critical to gaining acceptance, influencing and leading others and building the kinds of networks that can be very useful beyond high school.

Responsible Decision Making

This involves students' making thoughtful, constructive and healthy decisions based on careful consideration and analysis of information.

It is believed that if these five basic principles of social and emotional learning are integrated effectively into a student's life, it could greatly benefit the student's development and increase the probability that the student will succeed academically. (Brackett, 2010; Elias, 2003; Devaney, et al., 2006).

The skills of recognizing and managing emotions, developing care and concern for others, establishing positive relationships, making responsible decisions, and handling challenging situations ethically are being successfully taught in social and emotional programs which help to prepare children to successfully address challenges that they face on a daily basis (CASEL, 2000-2010). SEL programs are extremely versatile and can be implemented in many different environments including home and school (CASEL, 2000-2010) and with children of varying ages as well as with adults. SEL programs can be used with children who attend public or private schools as well as with children who are home-schooled. SEL programs can be incorporated effectively into existing school curricula and initiatives. (Devaney.et al., 2006; CASEL, 2000-2010).

IMPLEMENTATION GUIDELINES AND PROCEDURE

Facilitating social and emotional competence can be done in different ways. Durlak and Dupree (2008) noted that social and emotional skills can be taught, modeled and/or practiced. The ultimate goal of each SEL approach is the integration of the skills into children's behavioral repertoire so that children may utilize them in dealing with daily life challenges.

Guidelines

Elias (2003) identified several elements that are important in guiding SEL implementation. They may be summarized as follows:

Caring

The first, and perhaps most fundamental, is that learning requires caring. Elias noted that in order for effective learning to take place in a classroom, the classroom must have an environment in which a child feels safe, cared about, and valued. Teachers may create such an environment by greeting students by their names, showing interest in their personal lives, and recognizing their positive behaviors (Elias, 2003).

Teaching Life Skills

Another key element in the promotion of caring is the teaching of life shills. Teachers should take time to teach, not only content areas, but life skills as well—skills which can be applied inside as well as outside of the classroom. These include managing one's emotions, caring for others and making responsible decisions (Elias, 2003).

Goal Setting and Engagement

Elias notes that children are taught a wide range of materials on a daily basis. In order to remember and use this large amount of information in their daily lives, children should be provided with a sense of connection between different lessons and connectedness of these lessons to their lives. He advocates that providing goals which tie different materials together, as well as to a child's life, will allow the child to be more engaged in the classroom. Engaging students' attention, interests and motivation is critical to their learning and success. The idea of engagement is connected to another of Elias' principles; a teacher should use varied methods of instruction (Elias, 2003).

Varied Instructional Modalities

Recognizing that different students learn in different ways, it is important that a teacher use different modalities (i.e. art, drama, music, media, computers, role-playing, etc.) to reach all children (Elias, 2003).

Linking SEL to Other School Services

The next factor, which is of high importance, is the need for linking SEL to other school services. School personnel should be attentive to life chal-

lenges that students face and provide needed support such as counseling and guidance. SEL programs are more effective if there is a school-wide climate of respect and caring, supporting the learning of social and emotional skills (Elias, 2003).

Involving Parents

Getting parents involved in the implementation of SEL programs is another form of support. Doing so allows children to apply what they learn in school to their home lives, thus aiding in making social and emotional skills an integral part of their behavioral repertoire (Elias, 2003).

Community Service

Elias asserts that community service can be used as an important tool in building empathy. He maintained that community service helps to broaden children's perspective, and builds understanding and caring on a grandiose level—not only for children themselves, their teachers, classmates and families, but also for the world around them (Elias, 2003).

Time and Effort

The building of social and emotional skills among students occurs gradually and takes time and diligent and sustained effort (Elias, 2003).

Professional Development

The staff who implements SEL programs must be prepared and supported well with ongoing professional development (Elias, 2003).

Ongoing Evaluation

Conducting evaluation is crucial in determining SEL outcomes as well as acquiring the formative opinions of staff and students (Elias, 2003).

It is evident that the process of teaching social and emotional skills is one that requires much time and effort; but the positive results, as research illustrates, are worth the effort (Durlak & Dupree, 2008; Elias, 2008).

Procedures

The specific implementation procedures among some SEL programs involve three phases: the readiness phase, the planning phase, and the implementation phase (CASEL, 2000-2010).

Readiness Phase: the readiness phase begins with introduction of the SEL competency areas to school leaders (i.e. administrators). Once the concepts are discussed and understood by the administrators, the administrators must accept the value of SEL and commit to the implementation of the framework. Upon receiving support from the administrators, the focus is then shifted to presenting SEL concepts to other stakeholders (teachers, families, school personnel). If the decision is made to adopt the SEL program, formation of a Steering Committee begins. The administrator recruits members for this committee from different stakeholders within the school community (teachers, parents, counselors, psychologists, etc.) and makes sure they are well knowledgeable of SEL concepts and curricula. The Steering Committee serves to organize as well as over-see consistency of implementation of the program (Brackett et al., 2009).

Planning Phase: the planning phase starts with the development of a shared vision among the experts, administrators, and members of the steering committee of what they would like this program to achieve for students and for the school as a whole. They then share this vision with the rest of the stakeholders to increase positive energy and to achieve "buy-in" to the implementation of the program. The Steering Committee, along with the administrator, then conducts a needs and resources assessment including an examination of school climate and a determination of students' and, staff's readiness for implementation, as well as taking stock of possible barriers. This assessment provides an understanding of the school's strengths and weaknesses which can serve to support, or buffer, the implementation of the program. Upon analysis of the assessment data, an action plan—goals, benchmarks, timeline, and plans for addressing social and emotional skill development—is then developed for implementation of the program (CASEL, 2000-2010).

Implementation: the implementation phase initially focuses on professional development activities. Experts from an SEL program provide sufficient training so that implementation staff is well-versed in SEL concepts and strategies (CASEL, 2000-2010). Teachers then begin to implement SEL instruction in their classrooms, reflecting on what they experience. After reflecting on initial implementation and making necessary changes, SEL instruction is expanded to classrooms school-wide. Furthermore, SEL practices are integrated into other school activities so that the school provides a consistent environment of support for students' social and emotional growth. The implementation activities are constantly being evaluated by the Steering Committee as well as the Administrators to ensure continuous improvement (CASEL, 2000-2010).

Research has shown that two factors of the implementation process increase the effectiveness of SEL programs (Durlak, 2008). One of them is that

the program must be free of major implementation problems. That is, implementation procedures must be followed systematically and seen through with fidelity. The second factor is that the program should follow four evidence-based strategies. These strategies include offering a sequential curriculum and integrating SEL skills into the regular curriculum, using active teaching methods to promote learning, focusing sufficient attention on skill development, and establishing explicit learning goals (Durlak, 2008). If these factors are present, positive results are very likely.

SEL PROGRAM EXAMPLES

Two programs which exemplify effective, evidence-based SEL programs are: Recognizing, Understanding Labeling, Expressing and Regulating (RULER) (Brackett, 2009) and Social Emotional and Character Development (SECD) (Elias, 2008).

Recognizing, Understanding Labeling, Expressing and Regulating (RULER,) Approach

Brackett (2009) uses RULER as an acronym for: *R*ecognizing one's emotions, *U*nderstanding the causes and consequences of the emotion, *L*abeling the emotion properly using a diverse vocabulary, *E*xpressing emotion through different modes (i.e. writing, drawing, speaking) and *R*egulating one's emotions (preventing, reducing, enhancing) according to different circumstances (Brackett et al., 2009). The RULER approach serves to empower school leaders to become proficient in elements of social and emotional learning so that they are able to implement workshops, teaching methods, activities, and professional development themselves—thus providing long-term benefits for the school.

Social and Emotional and Character Development (SECD)

Elias' (2008) SECD program connects Social and Emotional Learning with Character Development. It is not enough to merely teach students facts; a successful education requires that character be developed as well (Edutopia, 2008). SECD is described as a blend of SEL and character education. After years of implementing the approaches separately, SECD was put together as a result of teacher input recommending the integration of SEL and character education (Elias, 2008). The assumption held by the approach is that successful academic performance depends on the following factors: students'

acquiring social and emotional skills, students' approaching education positively—with a sense of purpose, teachers' drawing upon and nurturing student strengths, offering students opportunities to develop, allowing students to express unique abilities and contribute positively to the classroom—and/or school/community, and offering a safe and supporting school climate which fosters empathic understanding, respect, and challenges (Elias, 2008). Elias asserts that some methods of achieving success are through coaching children in conflict resolution, modeling negotiation, discussing different opinions without personally attacking one another, and accepting others whose attitudes and values differ from one's own. Elias maintains that students who acquire such skills are more likely to succeed in school, and furthermore, in life (2008).

RESEARCH

Concepts of Social and Emotional Learning (SEL) have been studied since the 1970's (DeAngelis, 2010). Goleman (1995) brought more significant awareness of and attention to the topic of Emotional Intelligence (DeAngelis, 2010). Emotional Intelligence (EI) consists of traits of compassion, impulse control, motivation and the ability to love, among others (Goleman, 2010). Goleman asserted that EI could be taught and that schools should include EI in their curricula (DeAngelis, 2010). Research has shown that the emotional centers of the brain are linked to the neurocortical areas, where cognitive learning takes place (Goleman, 2010). When a child's emotional distress interferes with a child's attempt to learn, the centers where learning occurs are temporarily vulnerable; as a result, the child's attention is mainly focused on the distressful event or situation, rather than what is being taught (Goleman, 2010). Some research also indicates that EI can be an equal to or a better indicator of life success than IQ (Ross, Powell, Elias 2002).

The school system reaches approximately 48 million students in both public and private schools every school day. The most influential years of students' lives are spent in school. Students and adults spent approximately 6 hours together per day, 5 days a week, for 180 days a year, which equals approximately 5400 hours spent together per year. This makes the school system an ideal institution for fostering and teaching social behaviors (Ross, et. al., 2002). Unfortunately, a large number of U.S. schools lack in promoting good social and emotional health (DeAngelis, 2010). Approximately 30% of high school students report engaging in risky behaviors such as violence and substance use (DeAngelis, 2010).

The implementation of SEL in schools can be a preventive tool against emotional and behavioral problems among students (Caldarella et al., 2009). It helps lower risks that students face such as substance use and violence, and empowers them with skills in dealing with life struggles (Goleman, 2010). Research studies of programs that have implemented SEL show that the programs are effective in facilitating academic learning (Goleman, 2000). "While SEL programs vary somewhat in design and target different ages, they all work to develop core competencies: self-awareness, social awareness, self-management, relationship skills and responsible decision-making" (DeAngelis, 2010, pp. 46).

Studies have shown positive effects with the implementation of SEL programs with children of different backgrounds, from preschool through high school in urban, suburban and rural locations. A research synthesis of 300 studies of SEL programs conducted by Durlak and Weissberg (2010) showed that SEL considerably improved children's performance on standardized tests. In contrast to students who did not receive the SEL implementation, students in the SEL programs had better school attendance, less disorderly behavior; enjoyed school more, did better academically and had fewer suspensions from school. The authors concluded that, SEL improves children's relationships with others, it motivates them to learn, and it is effective in reducing disruptive, violent and drug using behaviors (CASEL, 2000-2010).

A meta analysis of 213 SEL programs has shown that students who participate in the SEL program score 11 percentage points higher on achievements tests compared to other students (DeAngelis, 2010). Another study analyzed a subset of 34 studies looking at the effects of SEL on students' grade and performance on achievement tests (Taylor & Dymnicki, 2007). The results showed that SEL improved students' school functioning with effect sizes (ES) ranging between 0.20 to 0.39 on positive social behavior, attitude, discipline, attendance, grades and achievement tests (Taylor & Dymnicki, 2007). A recent meta analysis of 200 studies evaluated the efficacy of SEL programs and showed that the students who participate in SEL programs do better in school and on standardized tests, compared to non participating students (RULER, 2010).

Three large reviews which included 317 studies with a total of 324,303 children were conducted. The reviews were organized in three parts: the universal review, indicated review and after school review. The reviewed studies demonstrated the effectiveness of SEL programs on elementary and middle school students. The Universal review consisted of 180 school based studies with 277, 977 students. The Indicated review consisted of 80 studies with 11, 337 students. The After-School review consisted of 57 studies with 34, 989 students. The overall finding indicated that the students in the SEL

programs showed improvement in their personal, social and academic lives. It also showed a gain in achievement test scores of 11 to 17 percentile points among students in SEL programs (Payton et al., 2008).

The SEL implementation showed efficacy in the school and after school programs. The follow up data demonstrated that the intervention was still effective over time; however its long-term effect was not as strong. The Universal and Indicated reviews showed the SEL program to be effective when well implemented by the school staff. The Universal and After School reviews demonstrated that programs that followed the SAFE program were more effective compared to other programs. Safe refers to:

Sequenced: Does the program apply a planned set of activities to develop skills sequentially in a step-by-step fashion?
Active: Does the program use active forms of learning such as role-plays and behavior rehearsal with feedback?
Focused: Does the program devote sufficient time exclusively to developing social and emotional skills?
Explicit: Does the program target specific social and emotional skills? (Payton, et al. 2008).

In a study conducted by Caldarella et al. (2009) the authors evaluated the effectiveness of *Strong Start: A social and Emotional Learning Curriculum* (Caldarella et al., 2009 on 26 second grade students. The results indicated that the program decreased externalizing and internalizing behaviors, and increased peer-related and pro-social behaviors. A study by Caldarella et al., 2009) used a quasi-experimental study that evaluated the impact of the Strong Start program on social and emotional competence. The results of the study demonstrated that the treatment groups showed improvement on the School Skills Rating System (SSRS) which assesses pro-social skills and troublesome behaviors among students in grades K to 12, and on the School Social Behavior Skills (SSBS) which measures social skills and attributes. A treatment group of five students was identified as at risk. Compared to the other students, the students in this treatment group experienced a noticeable decrease on the SSRS Internalizing subscales. Students who participated in the Strong Start program also experienced improvement in peer-related and pro-social behaviors, and a decline in internalizing behavior. Strong Start was successful with at risk students in increasing their pro-social behaviors.

RULER Research

The RULER approach uses research based tools that include a “classroom charter,” a “mood meter, an “emotional literacy blueprint” and later on in the

program "feeling words" (DeAngelis, 2010). Research indicates that integrating RULER skills lead to:

- Enhanced motivation and Study Skills.
- Higher academic scores in core content areas.
- Decreased hyperactivity in the classroom.
- Decreased anxiety and depression.
- Increased empathy, social competence, and leadership skills.
- Reductions in student referral for inappropriate behavior, school suspension, aggression and bullying.
- Enhanced classroom climate, including greater respect between teachers and students, more positive relationships among students, and enhanced pro-social behaviors (Brackett, 2010).

Research studies indicate that compared to students in classrooms that have not implemented the RULER approach, middle school students in the RULER program showed an 11% difference in GPA at the end of the year. There was a 19% improvement in student behavior in 15 middle school classrooms according to teacher ratings, and a 12% improvement in school climate in 62 elementary schools (Brackett, 2010). A study of 60 schools in New York demonstrated that the emotional climate of classrooms is connected to academic commitment and progress among students (Rebora, 2010).

SECD Research

Social, emotional and character development (SECD), when implemented effectively, is shown to have long term benefits for participating students. A study conducted by Elias and his colleagues at the Rutgers Social-Emotional Learning Lab compared three cohorts that received social decision-making/social-problem-solving (SDM/SPS) lessons in elementary school. The results showed that ninth grade students who were part of the intervention drank less alcohol and had less destructive problems. They also scored higher on social competence, participated more in activities and improved their job work skills (Elias, 2008).

Another study was conducted among 598 students in fifteen Seattle public schools where the neighborhood was marked by high crime rates. The students were divided into 3 groups. The first group consisted of 146 students in grades 1 to 6 who received the full SECD intervention. The second group consisted of 251 students in grades 5 through 6 who received only partial intervention. The third group consisted of 201 students who did not receive any intervention. The results of a follow-up study fifteen years later showed that the students who received the full intervention had fewer sexually transmitted

diseases (STD), had higher incomes, showed more responsibility at work and were more involved in the community (Elias, 2008).

CRITIQUE

SEL and SECD programs have been shown to be effective and to improve various aspects of students' social and academic development and performance. Some critics argue that there is no definitive construct of Emotional Intelligence (EI) or Social and Emotional Learning (SEL). There appears to be a vagueness and theoretical misunderstanding of the concept of SEL due to its being used as a large umbrella for many different kinds of programs, many of which have different ways of addressing and assessing "SEL". Critics also assert that research on the measures of EI and SEL are inconsistent with one another and are unclear, because EI is hard to make applicable and transferable into assessment measures. It is also noted by some that there is insufficient evidence of the positive effects of SEL programs. A limitation that is mentioned is a deficiency in validating empirical support, and a lack of agreement on the neuroscience research that is purported to undergird SEL research (Waterhouse, 2006). There also appears to be a deficit in comprehensive and efficient evaluations of many SEL programs. In research there appears to be a lack of robust experimental designs and controlled studies. Much of the critique and debate over SEL approaches center around questions of empirical evidence and scientifically sound demonstrated effectiveness (Hoffman, 2009).

Measuring implementation fidelity is seen by some as another limitation of SEL research. A study of 1200 prevention programs reported that only 5% of those programs examined implementation (Tanyu, 2007). Implementation may be hard to research due its complexity and measurement challenges. Zins and Elias (2006) established a guide for future research and practice. The evidence suggests that programs that consider current school resources related to SEL implementation and that make an effort to strengthen them increase the odds of implementation sustainability" (Tanyu, 2007, pp.261).

CONCLUSION

Elas (2010) noted: "we've been treating students as if they're not people, as if they're somehow sponges and not human beings that come in with their emotions in full play." Schools should educate the whole child, not just academically, but also socially and emotionally. Studies have shown that

emotions drive attention, memory, decision-making and social relationships (Brackett et al., 2009). Thus, emotions are inextricably linked to learning. SEL programs aim to teach students social and emotional skills in an effort to encourage, promote and nurture the development of knowledgeable, responsible, and caring individuals. Individuals are consequently more academically successful, better able to maintain positive relationships, and more motivated to contribute to their communities (Payton et al., 2008). Thus SEL programs are desirable and valuable despite the assertion by critics of SEL programs who argue that the implementation of such programs is too time-consuming, costly, and requires too much effort.

With the passage of the No Child Left Behind Act, the goal of education has been for the most part, narrowed to focus mainly on measuring achievement through testing. This has to some extent resulted in social and emotional learning being perceived by teachers and administrators as less important than academic learning. Yet, some evidence has shown that students who participated in SEL programs gained an average of 11% more on achievement tests than students who did not participate (DeAngelis, 2010). Thus, integrating SEL competencies into the academic curriculum not only helps to develop children's social and emotional skills, but has been shown to help students achieve at significantly higher levels than they did before being exposed to SEL programs. Critics have also argued that SEL constructs are qualitative and thus difficult to measure. However, observable differences in the behavior and academic achievement of children involved in SEL programs have been noted through numerous studies. Results of research on SEL programs show that students who are taught under the implementation of these programs demonstrate superior social and emotional skills, more engagement in pro-social behavior, enhanced academic performance, and reduced levels of conduct problems (DeAngelis, 2010). The implementation of SEL programs can be a challenging process. It requires time and effort from all stakeholders involved. However, when implemented correctly, SEL helps children succeed socially and academically.

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Chapter Eight

Yoga with Children: A New Approach to Behavioral Intervention

Alysia Tanasi, Cindy Videira, Jenelle Newcomb, and Adriana Diaz

Imagine sitting in a room with your legs crossed, focusing on nothing but the inhalation and exhalation of your breath. Your life may consist of work, caring for children, and taking care of household tasks. However, during this time your only objective is to simply be and live in the moment. What was just described is a main component of the art of yoga. Yoga involves the integration of physical movement, mental awareness, and spiritual connection. Physically, yoga can help improve flexibility, strengthen muscles, and release tension (Gillen & Gillen, 2007). It can also help lower blood pressure (McCaffrey, Ruknui, Hatthakit, & Kasetsomboon, 2005) and decrease heart rate (Madanmohan, Udupa, Bhavanani, Shatapathy, & Sahai, 2004). Additionally, yoga can help individuals find mental calmness and tranquility (Feuerstein, 2003). On a spiritual level, yoga can help one attain inner peace (Hill, 2008) and freedom from suffering (Gates & Kenison, 2002). In India, where yoga was first practiced 5,000 years ago, the art focused strongly on spirituality. Today, yoga is practiced not only for spiritual purposes but also as an exercise regime and stress reducer (Feuerstein, 2003). Recently, yoga has moved beyond the studio and into the classroom as a behavior management technique.

Adults have reported a variety of benefits as a result of integrating yoga into their lives. According to a study conducted by Atkinson and Permuth-Levine (2009), many individuals viewed yoga as a means for preventing disease. Participants in this study believed yoga would help decrease their chances of developing arthritis, fibromyalgia, and headaches. Aside from its physical benefits, participants also found that yoga helped improve many social and psychological aspects of life. Individuals stated that yoga helped them improve relationships as a result of increased patience and tolerance. Within the psychological domain, participants reported that yoga helped them reduce stress and increase self-acceptance. Many of the adults in this

study felt that yoga motivated them to create a healthier lifestyle. Yoga is a complex process and can be a vital resource for personal development and improvement.

While there has been an abundance of research on the benefits of yoga for adults, little research has been conducted on the effectiveness of yoga with children. Research on the use of yoga with children has mainly been conducted in countries other than the United States, such as Germany (Stueck & Gloeckner, 2005) and India (Kauts & Sharma, 2009). Despite the limited research conducted in the United States, many of those who have practiced yoga with children and adolescents have witnessed positive results. Implementing yoga in schools can help improve children's cognitive functioning, reduce problem behaviors, and enhance children's academic achievement.

BASIC PRINCIPLES, IMPLEMENTATION GUIDELINES AND PROCEDURES

According to Gillen and Gillen (2007), reducing stress in children is important to help balance academics while providing them with physical and emotional health training. The Yoga Calm program is designed for use with children, and combines yoga poses with mindfulness training, nervous system regulation, social/emotional skill development, and most importantly, emotional support. This allows children to become more aware of their minds and bodies and helps them make healthier life choices. Yoga Calm also provides ways of handling stress.

Gillen and Gillen (2007) outline the five major principles of the Yoga Calm program that must be taught and adhered to in order for the program to be optimally effective. The five principles are Stillness, Grounding, Strength, Listening, and Community. The authors provide instruction on how to integrate these five important principles into Yoga Calm training. By focusing on these principles rather than strict procedural guidelines, the Yoga Calm program can be adapted to work with children of different strengths and abilities.

STILLNESS

According Gillen and Gillen (2007) stillness is needed in order for students to develop a form of self-control and self-regulation. This can lead to improved self-behavior management. Children can apply the principle of stillness throughout the school day during periods of chaos, such as arrival and dismissal times. This principle can help build confidence in maintaining and

regulating self-control. Stillness is taught throughout the entire Yoga Calm program, and can serve as an effective aide to behavior modification.

The principle of Stillness is also helpful when working with children who have attention disorders (Gillen & Gillen, 2007). Gillen and Gillen recommend that before instructors can begin working with this group of children, they must believe that the children have the capability to remain still. Stillness should be practiced in small increments, as an example asking the child to remain completely still for ten seconds at a time. This technique proves to children that they have the capacity to control their own behaviors. If children with attention problems believe they can control themselves, they may be able to focus and pay more attention in the classroom setting. Practicing Stillness can enhance students' ability to remain focused on specific tasks, which is especially important for children who have Attention Deficit Disorder or Attention Deficit Hyperactive Disorder.

Gillen and Gillen (2007) provide several examples of activities that are used to teach the principle of Stillness. The "Changing Channels" activity is an example of this (Gillen & Gillen, 2007, p.108). Changing Channels can last from one to five minutes depending on the age and attention span of the group of students with whom one is working. It is designed to teach the ability to shift attention and provides a way to practice this skill. During this activity, students shut their eyes and take notice of what they are thinking. The children are asked to change the channel in their minds by imagining playing in the snow. Students are given guided imagery about being wrapped in a jacket, getting into a snowball fight and other imaginations for about 30 seconds. At the end of 30 seconds, the children are then asked to change the channel for another 30 seconds and think about a sunny beach, where the same guided imagery would follow. Four or five different changes of the channel should take place during this activity. Afterwards, the children should participate in a discussion about when it might be useful for them to apply this technique.

By completing the Changing Channels activity (Gillen & Gillen, 2007, p.108), children may learn to relax themselves by following relaxing guided imagery. The Changing Channels technique is a great coping skill for a variety of school related anxieties. This can be particularly useful in combating feelings of test anxiety. The Changing Channels activity could also be implemented in dealing with the chronic problem of bullying in schools. In the United States, 30% of children in grades six through ten report being involved in bullying (Nanse, Overpeck, & Pilla, 2001). Upon mastery of this activity, a child who is being bullied will possess the tools required to be still and walk away from the conflict. By achieving tranquility of the mind first, the child is then allowed to focus attention on their physical and emotional well-being.

GROUNDING

The principle of Grounding would be the next step in enhancing both physical and emotional well-being. This concept could also be used in behavior management. Teaching a student that "the ground is always there" (Gillen & Gillen, 2007, p. 37) can help them feel as though they have control of the environment. This process is about developing a connection between the student and their surroundings. By helping children become aware of their physical self as well as physical surroundings, a sense of safety will be established (Gillen & Gillen, 2007). When a student feels physically and emotionally safe, the student is more likely to flourish both inside and outside of the classroom.

STRENGTH

The principle of Strength, which is also crucial to behavior management, is composed of three parts: Physical Strength, Mental Strength, and Emotional Strength. These skills should be taught and maintained together. Physical Strength is developed through the use of various yoga poses. Not only does the body become physically stronger, but the sense of self also becomes stronger which helps increase feelings of safety (Gillen & Gillen, 2007). During the Yoga Calm process, students should be physically challenged but also encouraged to listen to their bodies' limits. When performing a challenging physical pose, students are encouraged to talk to themselves in a positive manner. Thinking positively can enable children to accomplish tasks in the classroom that once defeated them. This can help lower frustration, which is often displayed as aggression or classroom outbursts. Students can demonstrate emotional strength by becoming aware of and expressing their feelings while practicing yoga.

It is important to provide children with the opportunity to express feelings throughout each lesson. Guided relaxation can also be used to focus thoughts and develop positive images about the task at hand (Gillen & Gillen, 2007). A strong sense of self, as well as positive images and ideas helps develop the concept of Mental Strength. Possessing Mental Strength can reduce negative images and also reduce chances of negative external behavior having an influence on individual children. When a student has developed Physical and Mental Strength, they become confident in their ability to express themselves immediately, instead of suppressing their emotions, which results in increased Emotional Strength (Gillen & Gillen, 2007).

LISTENING

The principle of Listening is used to help develop a sense of self as well as improve cognitive functioning. According to Gillen and Gillen (2007), this is achieved by listening to the messages that come from the mind, body, and heart. This is particularly important to instill in those children who are constantly plagued by danger and fear, such as children who are victims of abuse. As Gillen and Gillen noted, Listening can help a person make better choices. There is a distinct difference between hearing and listening. If a student is in-tune to himself, he may be more likely to listen and process information being presented by the teacher, instead of just hearing what is being said. When practicing Listening in the classroom, it is important for the instructor to encourage open discussions about every student's thoughts and feelings. The authors state that Listening needs to be performed in the presence of instructors who are capable of listening to their own thoughts and feelings. If a student feels as though he or she wants to express himself or herself and time does not allow, or the instructor is feeling impatient, the student should be allowed to set-up a time where he/she can do so, preferably with someone who is well versed in the principle of Listening (Gillen & Gillen, 2007). When students and teachers listen to each other, there will be fewer miscommunications in the classroom. If teachers are in-tune with how their students are feeling, they may be better prepared to deal with any emotions that may be affecting class work. By addressing these emotions, feelings, and/or concerns, students may feel less resentful and overwhelmed, which can lead to increased productivity in the classroom.

COMMUNITY

In order for the Yoga Calm program to be effective and improve academic achievement, students must understand the principle of Community. In order to do this, there are various games and activities that have been developed that show the way that communities both support and challenge us as individuals. For example, Gillen and Gillen (2007) introduce the "Archetype Game" (p.105) which is a social/emotional activity designed to help students practice role discrimination. The activity lasts for about 15 to 20 minutes. During this time, children are asked to think of an archetype (Clown, Explorer, King, Queen, Angel, etc.) and on the count of four they are asked to stand up and become a statue mimicking the archetype they are trying to represent. While music is played, students walk about the classroom in character until they are told to freeze. The process is then repeated. Students are asked to keep

their space and refrain from touching and talking during this time. If a rule is violated, the student must sit out for one archetype. In order to make students more aware of what is taking place during the activity, students are asked to pay attention to which archetypes are easy and uncomfortable for them to act out. At the end of the game, a discussion should be held where students are allowed to talk about their favorite archetypes. It is also important to discuss when certain archetypes should and should not be used.

The "Archetype Game" reinforces the principle of Community because students must be respectful of each other's space throughout the activity. During the discussion session students are able to talk about their thoughts and feelings, which must be respected by other classmates. This helps develop students' confidence in their ability to express feelings. Children are most likely to excel in an environment free of animosity and miscommunication. Allowing children the opportunity to express their feelings encourages a positive learning environment, fit for academic achievement. Acting out and taking notice of different archetypes during the "Archetype Game" (Gillen & Gillen, 2007, p.105) can help students become more aware of the fact that everybody is different. Being able to tell what sad, happy, or angry looks like can be useful in new situations (i.e.; meeting someone for the first time and deciding whether or not they can be trusted).

In order for a community to be effective, its members must learn how to be compassionate. The Yoga Calm program teaches compassion by allowing students to express their emotions, giving students a chance to become familiar with how other people feel and difficulties that others may be facing. The ultimate goal is to get the students to want to help each other, which is especially helpful in underprivileged populations. Yoga Calm's social/emotional activities provoke conversations involving different points of view and the community games offer an opportunity to practice positive responses to bullying and other negative behaviors that are common in the school setting (Gillen & Gillen, 2007). In order to begin practicing these five important principles, a proper teaching environment must first be created.

The main component of a proper teaching environment in relation to the Yoga Calm program is an environment that is therapeutic. Gillen and Gillen (2007) suggest creating a therapeutic environment by creating a routine that is always followed. Ground rules should be clearly posted, and can include suggestions about what students should do if they are having a difficult time (i.e., use positive self-talk with examples) as well as what to do if struggling with certain poses (i.e., students should take it upon themselves to sit down). Distractions should be removed from the environment (phones, toys, assignments, bright lighting, etc.) and a sign should be placed on the door to let people know that a session is in progress to avoid unanticipated interruptions.

Slow, calming music should be used since it can motivate students as well as provide them with auditory cues for moving in a coordinated manner. The instructors should take time before the Yoga Calm session, preferably at least five minutes, to focus on centering themselves.

Gillen and Gillen (2007) also provide tips on how to manage the classroom. First of all, rules should be firm. A Yoga Calm routine should usually start with a Stillness exercise and instructors should not move on until they feel as though everyone is still. This may require asking students to hold their bodies perfectly still for 30 seconds, and after they have remained still for 15 seconds, the instructor can move on. Rewards are acceptable at the beginning if necessary, but they should be phased out so that students can focus on the internal reinforcement of participating in the program. Having a paraprofessional on hand to handle problem behaviors that may arise can be helpful, especially if dealing with a particularly problematic group of students. If a child is being difficult, it can be effective to challenge him or her by letting him or her know that he or she will be leading the class next. When a child is allowed to lead the class, the instructor should still be the only person providing verbal instructions. The student simply models the desired poses and behaviors. An instructor should not perform poses they are not comfortable with as it may make the students feel uncomfortable as well. Lastly, it is important that instructors let the students know that they care about each student individually by complimenting each student's individual gifts and talents. If instructors make mistakes, they should not try and cover it up as students will most likely recognize the mistake and begin to think the instructor is being dishonest.

BENEFITS OF YOGA

Yoga has been used as a successful intervention within the classroom. Robin Feinberg, a yoga instructor in Connecticut, claims that yoga enhances the well-being of children and is useful when dealing with problem behaviors (R. Feinberg, personal communication, October, 24, 2010). Feinberg has witnessed an improvement in emotional control and a reduction in temper tantrums, mood swings, and outbursts of crying among the children she has worked with. Dr. Kristine Kaloides, a school psychologist at the Beecher Road School in Connecticut, has practiced yoga with children in the school system for over 18 years (K. Kaloides, personal communication, October 20, 2010). She has received support from students, parents, and staff who have seen an improvement in the academics, behavioral regulation, and cognitive functioning of their students.

Yoga enhances the cognitive functioning of children and adolescents. Yoga has been found to increase memory and processing speed (Kauts & Sharma, 2009). In one study, a group of ten to thirteen year old girls required less time to execute a mental test after practicing yoga daily (Manjunath & Telles, 2001). This increase in memory and processing speed can be applied in the classroom as children often rely on memory for test taking and planning skills for projects and writing papers. Yoga also helps to increase the attention span of children. A study done by Subramanya and Telles (2009) found that meditation with movement increased performance on attention and memory tasks. Attention is an important skill for students to have in the classroom to process and comprehend information being presented. The cognitive improvements that may result after implementing yoga in the classroom can be a great benefit to students' learning and understanding of material.

Yoga is viewed as an effective means of behavior management with children both inside and outside of the classroom. Kauts and Sharma (2009) have found that yoga lowers levels of aggression in children. In relation to overall aggression, yoga has also been seen to reduce levels of bullying among children (Powell, Gilchrist, & Stapley, 2008), which can be extremely beneficial in the school setting. Bullying has been a chronic problem within school environments for many years. Yoga has the potential to help the children who bully, as well as the children who are the victims of bullying. It is the strong belief of school psychologist, Kristine R. Kaloides, Psy.D, that yoga has significantly benefited school aged children within the behavioral domain. She has witnessed students applying yoga techniques to deal with personal problem behaviors (K. Kaloides, personal communication, October 20, 2010). In one example given by Kaloides, two male students who often presented problem behaviors were sent to sit in the hall during lunch after causing trouble. Kaloides later found the two students practicing deep breathing in the hall as a way of reducing their stress and aggression levels from the incident in the cafeteria. Kaloides has continuously seen an improvement in behavior management as children learn to apply yoga techniques to deal with frustration and anger.

In addition to enhanced cognitive functioning and behavioral improvement, yoga has been found to enhance the academic achievement of children in the classroom (Kauts & Sharma, 2009). A positive correlation was found between participating in yoga and GPA in a Los Angeles, CA inner city school (Slovacek, Tucker, & Pantoja, 2003). In a culture where GPA is an important factor in determining future academic and professional opportunities, such as college acceptance, yoga can be enormously useful. When used after a physical activity such as gym or recess, yoga can calm children down and help them to focus and transition into an academic activity. If children

are able to focus themselves sooner, they will absorb more information in the classroom, which will result in higher academic achievement. Academic achievement can also be obtained through developed leadership skills. Dr. Kaloides often allows her students to lead yoga, which she believes has led to improvement in their leadership skills (K.Kaloides, personal communication, October 20, 2010). Powell et al. (2008) found an improvement in following instructions and group cooperation among students. Leadership and increased group cooperation skills are valuable both in the classroom and in social domains, such as for friendship making. GPA and leadership skills are vital for helping college and job applicants stand out in a crowd. Possessing these skills can increase students' chances for success.

EVALUATION AND RESEARCH EVIDENCE

Several studies have been conducted on the effectiveness of yoga with students. A study conducted by Kauts and Sharma (2009), in India, included 800 boys and girls between the ages of fourteen and fifteen from eight separate schools. The study was designed to evaluate the effect of yoga on performance in math, science, and social studies (individually and collectively), in relation to stress. All of the students were given a survey used to assess their level of stress, and were then placed in appropriate groups. Eighty-nine students were in the high-stress experimental group; 70 students were in the high-stress control group; 75 students were in the low-stress experimental group; and 67 students were in the low-stress control group, for a total of 301 participating students. The high-stress and low-stress experimental groups received daily, one hour yoga interventions, for seven weeks. Kauts and Sharma found that students who received the yoga intervention received better scores on math, science, and social studies combined scores than those who did not receive the yoga intervention (0.01 level of significance). Kauts and Sharma also collected evidence (0.05 significance level) that students with low stress perform better academically, than those with high levels of stress.

Kauts' and Sharma's (2009) study has shown that Yoga can be used as a means to reduce stress, which may help improve academic performance. Yoga Calm is designed to teach lifelong stress management skills, as well as social/emotional skills (Gillen & Gillen, 2007). Stress management skills, after being developed through a program such as the Yoga Calm program, can be applied in a variety of settings. One of these settings could be academic examinations.

A controlled-design study conducted in Germany, by Stueck and Gloeckner (2005) was designed to teach children and adolescents self-regulation

strategies that could be used to reduce stress and improve their reactions to the pressures and demands that occur in everyday life. Throughout the course of the program, there was a total of fifteen, 60-minute sessions that consisted of relaxation, yoga exercises, and a social interaction game. There were a total of 48 participating subjects, with 21 subjects participating in the experimental group, and 27 subjects participating in the control group. Subjects were between the ages of 11 and 12 and indicated high levels of examination anxiety. With a significance level of $p \leq .05$, aggression, feelings of helplessness in school, and physical complaints all decreased immediately after the completion of the 15 session program, while there was an indicated increase in stress-coping abilities. Also at the $p \leq .05$ level of significance, levels of anxiety remained lower when assessed 3 months after the completion of the intervention, as did impulsivity. This suggests that students retain the information learned in the program, continue to utilize it, and are able to use it in more than one setting.

Through practicing the principle of Community, Gillen and Gillen's (2007) Yoga Calm program promotes communication among community members (students). If children are given the tools they need to communicate their feelings, it is possible that rates of aggression will decrease. Children will be less likely to snap when they are being bullied, and will be less likely to bully each other since they will have a better understanding of each other's feelings. Also, if children feel as though they have people to turn to, feelings of helplessness may decrease. Stueck and Gloeckner's (2005) study provided further support for the use of the Yoga Calm program by showing that a yoga program resulted in decreased aggression, feelings of helplessness, and anxiety.

In a randomized controlled trial conducted by Mendelson et al. (2010) the feasibility of using a mindfulness-based intervention for children in an urban school setting in Baltimore, MD and the effect of the intervention on the students was evaluated. Participants in this study were from four different schools and included fourth and fifth graders. Random assignment was used to designate two control schools, and two schools that would receive a 12 week mindfulness-based intervention. Fifty-five fourth graders and 42 fifth graders participated in the study. Fifty-one students received the intervention and 46 students remained in the control group. Interventions took place during normal school hours in 45 minute sessions, four days a week, for 12 weeks. The intervention was composed of several different parts, which included yoga-based physical activity, breathing, and guided mindfulness. Results showed that it is feasible to introduce a mindfulness-based intervention into an urban school setting. The intervention group experienced reductions in involuntary stress responses, which may indicate

that mindfulness-based interventions enhance the self-regulation capacities and reduce worrying thoughts in children. Gillen and Gillen's (2007) Yoga Calm provides a structured program, along with training and certification, that could be easily introduced into school systems where there are high levels of stress and anxiety.

In a study conducted by Slovacek et al. (2003), a Yoga Ed program in an inner-city school in Los Angeles, CA was evaluated. Four-hundred and five students in a K-8 charter school participated in the Yoga Ed program, which took place over the course of an entire school year. The study was designed to evaluate whether or not Yoga Ed classes were effective in improving elementary and middle school students' attitudes about themselves and school, and improving their emotional and physical health. Kindergarten, first, and second grades focused on physical awareness and skills. Grades three through five focused on mental/emotional awareness and skills, and grades six through eight focused on self/community/universal awareness.

Slovacek et al. (2003) found that at the elementary school level, students who had high rates of participating in yoga class, had fewer discipline problems ($r = –.463$, $p < .01$). A negative correlation between yoga participation and a number of discipline problems also appeared at the middle school level ($r = –.367$, $p < .01$). Also, at the middle school level, a positive correlation existed between yoga participation and GPA ($r = .399$, $p < .01$). A pre and post yoga questionnaire was distributed and completed by 310 students in grades three through eight. In a question where students were asked to rate whether or not they liked themselves and thought they were a great person, positive responses increased by 20 percent.

Perhaps, participation in the Yoga Ed program resulted in lower rates of discipline problems at both the elementary and middle school levels because students learned to think before acting. They may have also learned deep breathing in order to relieve stress. If this is the case, then it is reasonable to believe that the Yoga Calm program would also result in decreased amounts of disciplinary action being taken. Yoga Calm devotes a large portion of its instruction to the practice of deep breathing (Gillen & Gillen, 2007). Also important to note is that all of the students in the school studied by Slovacek et al. (2003) were involved in the Yoga Ed intervention. Since all students participated in the intervention, everyone may have benefited from it and felt less stressed. Students that are less stressed may not act out as often, resulting in less disciplinary action being taken. Based on the evidence provided by Slovacek et al., for the Yoga Ed program, the Yoga Calm program should be implemented throughout the entire school in order to achieve the maximum desired effect. It is reasonable to assume that children who are calm and relaxed are more confident with who they are, and believe in themselves,

resulting in better school performance. The research presented in this paper offers support for the use of yoga with children.

CRITIQUE

The purpose of this paper is to argue for yoga to be implemented in the classroom setting to improve cognitive functioning, reduce problem behaviors, and enhance the academic achievement of students. Research supports the idea that yoga is beneficial, but this research has mostly been conducted on adults. Therefore, it is prudent to point out that there is not much research that has been done with the school aged population and the research that does exist does not examine the effects of yoga with children in the American culture. There is significant reason for more studies to be done with children. The Yoga Calm program appears to be good in design but there is a lack of empirical evidence to support its effectiveness. With stronger evidence supporting its effectiveness, increased use of the Yoga Calm program holds promise for increasing understanding of the effects that yoga could have on children in the school setting.

This approach stands to offer cognitive, behavioral, and academic advancements. A cognitive strength that students can achieve is the ability to calm their minds and focus more in class. Children can learn to become better students by exercising self-control and being able to focus completely during lessons. Yoga enhances listening skills, which can be directly related to academic achievement. Additionally, yoga helps children learn to work cooperatively with others in the classroom, which enhances the sense of community.

Research has been done that shows how yoga helps reduce feelings of stress and anxiety in both adults and children. The study done by Kauts and Sharma (2009) compared level of stress and academic performance, and found that a yoga intervention helped children receive higher scores in academic areas such as math and science. This study was done in India, and a huge cultural discrepancy does exist, but for those children yoga improved academic scores. Right now there is a high demand on teachers and school systems to make sure that all children are meeting state and federal test performance standards. If there is a chance that yoga can improve a child's test scores, there could be more state and federal interest in implementing yoga in school systems. Ultimately, if yoga helps children feel less stressed and reduces levels of anxiety, it is in the best interest of school administrators to allow students to have that experience.

Dr. Kaloides, the school psychologist in Woodbridge Connecticut referenced earlier in this chapter, has a program in place in her school that she

feels is tremendously beneficial. Kaloides mentioned seeing improvement in children with attention deficit and hyperactivity disorder (ADHD). She has seen increases in concentration among those with ADHD. Hyperactive students have engaged in abbreviated yoga stretches to keep them on task in the classroom. These are common diagnoses that can be seen in the school aged demographic, so finding an intervention that can be effective in working with them is extremely important.

Unfortunately there is no research based on the work that takes place at Dr. Kaloides' school. Changes of the magnitude described by Dr. Kaloides at her school should be empirically documented. Another factor to take into consideration is that the small amount of research that has been done has also primarily been focused among elementary aged children. There could be significant differences among young children, older children and adolescents. Teenagers are developmentally in a different place than younger children, and these fundamental differences could impact how yoga could differentially affect them.

If yoga were to be implemented in schools on a larger scale, this would require more time and training for teachers. Teachers are already under an incredible amount of pressure to meet mandated requirements that ensure that their students are performing at state and district expected academic levels. A yoga program would indeed be one more requirement that a teacher would have to master, so this is something to consider when trying to implement a yoga program in a school. It would make most sense to have one person trained and informed about the program, such as Dr. Kaloides is for her school, who could work with the children in the classroom. This would allow yoga to be implemented within schools without increasing requirements for all teachers.

With regard to The Yoga Calm program, there are a few specific limitations. The program places heavy emphasis on communication. Children, who have communication deficits, may have a difficult time expressing emotions and engaging in specific program activities. This may be especially difficult for students who have other hearing impairments (OHI), who are non-verbal, or who have developmental disabilities. In addition, the yoga calm program does not specify whether assistance should be given to students who are struggling with the poses or do not understand the poses. There is no clear direction for what to do when a child needs help, or how to handle children who have physical handicaps. These limitations may make it difficult to implement this program in diverse school settings.

CONCLUSIONS AND RECOMMENDATIONS

Future research on the use of yoga with the school aged population would be necessary before implementing nationwide yoga programs in schools. There

is a serious lack of research on yoga with children. More research would be required to establish the validity of the effectiveness of yoga as a behavior management modality with children. More research would also help to provide more in-depth understanding of how yoga affects children in the school environment. Research would also have to be conducted on the implementation and effects of yoga with children who have developmental disabilities. Yoga has the potential to be a great intervention for students with disabilities so further research on this population is highly recommended. The American culture is unique in comparison to other cultures in that its citizens are very diverse. More research on the effectiveness of yoga with children in the United States could discover specific benefits for this diverse population of children.

The saying "our children are our future" is not a cliché, it is truth, and society has a great responsibility to make sure that children are being given the best opportunity to lead healthy and productive lives. Children live in a hectic world of busy parents, school pressures, incessant lessons, video games, malls, and competitive sports. One does not usually think of these influences as stressful for children, but often they are. Given these stressors and others such as facing a learning or developmental disability, there is a need to develop effective coping and management strategies to meet these challenges. Yoga can help students adjust to academic and social pressures and could be a valuable aspect of a school's curriculum.

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Chapter Nine

Implementing Behavior Management Approaches in Supportive School Contexts: Addressing High-Risk Behaviors among At-Risk Students

Patricia De Barbieri, Joy E. Fopiano, and Norris M. Haynes

Behavior management approaches are most effective in addressing high-risk behaviors among at-risk children and youth, when implemented in school contexts that are supportive, nurturing and responsive to the diverse needs of students. The authors of this chapter advocate very strongly that the social and emotional climate in schools be treated as importantly and be very much a part of all interventions designed to address high risk behaviors. The context provides the infrastructure and the foundation within which, and on which, the durability and success of an intervention rest.

As collaborators in our blended professions of family-, individual-, school-counseling, and school psychology for over a decade, the common lens through which the authors of this chapter approach addressing the social, emotional and behavioral challenges among children and youth in schools is one of chronic loss. Chronic loss refers to loss on a daily basis of what a child needs to thrive (Black, 1981). It encompasses a child's or youth's continuing social and emotional struggle for a sense of wholeness and completeness which often finds expression in high-risk behaviors, such as eating disorders.

Children who may be lacking significant elements that they need to survive and then to thrive or who may feel psychologically, socially and emotionally challenged, may be emotionally inhibited from connecting to the school community and unable to take advantage of the learning opportunities that schools provide. So, again, loss in this chapter is broadly defined as missing or lacking physical, social and emotional connectedness to something or someone that is needed and wanted to make one's life better. There are numerous situations that contribute to chronic loss for youth which include but are not limited to: poverty, parents' contentious divorce, imprisonment of a parent or guardian, struggling with chronic or terminal illness of a family member, a family member's substance abuse, eating disorder, sexual abuse,

job loss, physical abuse, cyber-bullying, peer rejection, teen pregnancy, violence witnessed or experienced, homelessness, feelings of isolation and depression, natural disasters (fire, hurricanes, draught, tornado), and war.

All of these examples of loss pose serious threats to children's emotional safety and their "connectedness" to their school community. The list of examples of loss while not exhaustive, create in today's society an increasing number of school-age *high risk* youth. For while they are experiencing emotions that tax their energies, they may feel separate and apart from peers and school learning. Research demonstrates that students' connectedness to their school community is an important part of their success (Brooks, 1991; Joyner, et.al., 2004). Therefore it is critical to focus on reaching at-risk children and supporting them to re-engage in their classroom and school communities. Eating disorders, as a high-risk behavioral condition, is prominently highlighted throughout this chapter, given its increasing prevalence among both male and female students in schools, and its severe impact on all aspects of the life of those affected by it.

Traditional and alternative behavior management strategies offer important methods for providing social and emotional support structures that help children to experience personal and academic success. Behavior management is not narrowly characterized in this book by a stimulus-response-reinforcement paradigm but is recognized as embracing the total configuration of cognitive, emotional and behavioral responses to life experiences. Challenging attitudes and behaviors, encouraging healthy behavioral choices and building resilience even when dealing with chronic loss are the areas on which this chapter is most focused.

CONNECTING EMOTIONALLY

As was noted in earlier chapters in this book emotions influence students' attention in class, their capacity to process and retain information and their ability to perform well. Therefore, it is important for teachers and other school-based personnel to recognize the students in classes and in schools, who are challenged emotionally. These students may be compliant, but still harbor pain that takes their energy away from class activities. A student suffering chronic loss may feel so emotionally depleted, that the student may not have the physical or psychological energy needed to focus and concentrate on academic tasks. Students who are dealing with chronic loss may believe that their situation is so extreme that they feel disconnected and apart from their friends, peers, adults in their schools and even from family members. A child suffering chronic loss may continue to attend school; may appear with

low motivational energy, and may be reported to struggle to connect to others and to the learning. The skills they employ to get through their days such as: don't talk about how you feel, don't allow yourself to feel, and don't trust anyone (Black, 1981) may help them to survive but seriously impair their ability to connect with others and build relationships. We know that children, especially at-risk children and youth, benefit from connectedness to school. Behavior management strategies that attend to cognitions, and emotions, as well as to behavior can pull students into learning and can build for them a repertoire of consistent success. Academic success can support their self-esteem, social-emotional development, and assist in their connection with the school community. Through behavior management children can learn strategies that can support them to move through their difficult problems and build resiliency.

The Center for Disease Control (CDC, 2009) cites connectedness to school as being correlated with positive school achievement. Further, the CDC proposes from their National Youth Risk Behavior Survey (CDC, 2009) that students who do not engage in health-risk behaviors receive higher grades than their classmates who do engage in health-risk behaviors. Behaviors including: substance abuse, being sexually active, watching television for three or more hours per school day, and not being physically active for five days per week are all behaviors correlated with lower school achievement. These behaviors then, are flags to which we must attend. Using academic grades as a measure, the CDC suggests that students with higher grades are less likely to have engaged in high-risk behaviors. Where behaviors are flagged and an intervention is designed, students have the opportunity to learn new successful strategies. Therefore, research clearly suggests that it is critical to monitor grades and consistent school success as a measure of risk requiring intervention and support. This is a foundational screen for knowing whom to consider for early behavior management intervention. It is well advised to attend to these behaviors very early to create a net of safety before at-risk behaviors escalate towards school failure.

According to the U.S. Department of Health and Human Services, National Center for Chronic Disease Prevention and Health Promotion (CDC, 2009), young people who feel connected to their school are less likely to engage in many risk behaviors, including; early sexual initiation, alcohol, tobacco, other drug use, violence and gang involvement. A strong network of support and effective behavior management interventions build resilience and resourcefulness in times of crisis, feelings of despair, or when friendships are not going well in an area of one's life. A repertoire of behavior management skills and a strong connectedness network assist with a child's self esteem, socio-emotional skill building and academic performance (Brooks, 1991).

The authors of this chapter posit that school success promotes resiliency and effective behavior management strategies can help achieve school success and build resilience.

DEVELOPMENTALLY SENSITIVE APPROACHES: THE CASE OF GWEN

Considering the age and stage of development of a child provides insight into potential skill levels. Cognitive and emotional skills may not be developmentally consistent with any one given student. This can confuse both the child and the adults with whom the child interacts. This may potentially yield an incomplete grasp of a child's own behavior(s) and possible consequences. When a school psychologist or school counselor understands that many of the students referred are suffering powerful losses, each at his or her own developmental level, including perhaps the early loss of a student's own childhood, one can better empower individuals to build protective factors that can support success. Take for example Gwen who lost her brother to a terminal illness when she was 13-years-old. The trauma of this loss during the transitional middle school years, coupled with the estrangement of her parents during their grief, was enough separation and loss and increased stress to trigger the onset of Anorexia Nervosa in Gwen (Levine & Harrison, 2004). The eating disorder provided an unconsciously suitable distraction from the underlying issues of loss and a mechanism for taking control of something tangible when life was spinning out of control. Gwen's significant weight loss had consequences that impacted both her physical safety and her learning. Eating disorders may manifest as an inability to attend or concentrate, as lethargy, depression, and non-engagement in class discussions and with peers in work groups, or through the inability to complete assignments because of fatigue or compulsivity (De Barbieri & Kendall, 2007). Until her weight was stabilized Gwen was not able to concentrate on math or other subjects. Math, sequentially organized, became an increasing school problem as Gwen began to lose the solid foundation of mathematics necessary to grasp and build on the new concepts introduced. For at-risk students, having the ability and being able to act on their ability are very different skills.

In Gwen's case, before school success could begin, her physiological illness needed to be professionally addressed and stabilized. While behavior management strategies could not cure or even arrest Gwen's eating disorder, behavior management strategies, practiced effectively in school, could have supported her focused attention during math. This focused attention could have promoted her math success. We hypothesize that experiencing success

could begin to positively impact self-esteem in a student such as Gwen as she takes control of her learning.

SCAFFOLDING AND SUPPORT: THE CASE OF CHELSEA

School scaffolding is essential as family cannot always be available to support children through emotional stressors that tax their developmental age, problem solving skills and internal resources. The trauma and family dynamics of a child's problem may be concurrently impacting adults in a child's household rendering him or her less available. Severe problems may then prevent the adults in a household from addressing a child's need when it arises because the adult's attention is consciously or unconsciously focused elsewhere. Consider this example: 8 year-old "Chelsea" appeared inconsolable during school following the recent death of her maternal grandmother. Chelsea's grandmother had been her primary care-giver and had resided with her family throughout this child's life. Chelsea's mother, concurrently grieving the loss of her own parent, was unable to reach out to console her daughter as she was shrouded for a time in her own grief. Thus, as with this example, a child may become disengaged in school and in learning following a traumatic event. Adult family members may be emotionally unavailable to this high need, increasingly at-risk student. A compliant and achieving child suffering trauma may begin to struggle with school failure and lack the emotional energy or skill to reach out and request support. The astute and trained professional such as a school psychologist, behavior specialist, counselor, family therapy practitioner or social worker would take steps to ensure that Chelsea's emotional needs are met through a scaffolding and supportive behavior management planning process. As a foundation of success builds, students can feel more willing to take risks and grow in their school learning environment. Therefore it is imperative that through strategies such as behavior management we build consistent foundations of success for at-risk learners. It is through this steady process that students may feel safe to take the risks that will allow them to move forward.

This is where a strong connectedness network can scaffold children's psychologically and boost their academic performance. Where children have their emotional energy taken up with issues related to chronic loss, they are less likely to be able to attend, focus and sustain the necessary concentration required for learning. As educators, a real danger is in not recognizing the emotional threats that may impede children's learning. With problem recognition, through behavioral analysis and cognitive behavior management assessment and treatment techniques, solutions can be created that support

school connectedness and promote other positive strategies that may increase school learning. The authors suggest that a positive and welcoming school environment that can facilitate connectedness and belonging (Brooks, 1991) coupled with behavior management strategies that stimulate higher levels of school achievement can be effective tools for increasing learning and pro-social behaviors in schools.

For many children, school is the most stable and consistent environment in a world they perceive to be riddled with turmoil. In school, a schedule is predictable, as are the behaviors of the adults in their learning environment. That consistency and structure are a comfort for many. In fact, it has been found that routine and safety are two factors that contribute to recovery from an eating disorder (Bunnell, 2011; De Barbieri, 2005). A school day starts on time, moves through a consistent sequence, and there are clear expectations for behavior. While this can feel secure for some, others may benefit from significantly increased layers of structure beyond what is typically in place. These more advanced layers of structure provide at-risk students with greater and more immediate feedback increasing their opportunities to achieve success. As we have established, it is that foundation of success that is critical for student growth.

Shaping the school environment to support recovery is highly beneficial for students suffering from eating disorders or other serious illnesses. Shaping the school environment to support learning is equally beneficial for both students' recovery as well as for their success. A number of issues to consider when shaping the school environment to support learning are: involving key people, determining available resources, selecting behavioral objectives collaboratively and analyzing the function of current contingencies (Mayer et. al., 2012). School psychologists and school counselors are among school professionals working to support student social and emotional health in ways that positively impact student learning. These are the professionals who, along with teachers, and possibly the school nurse, school social worker and school marriage and family therapist will make up the multidisciplinary team working with any at-risk student.

THE SUPPORT TEAM

The number of pupil personnel professionals in a school system differs, as do their roles. Many of the services offered by these professionals may appear to overlap, yet, in all situations, these support staff address issues that impact student learning. Making a case for the impact an eating disorder or other illness or trauma has on student learning is key to shaping the academic

environment (De Barbieri & Kendall, 2007). Schools are responsible for and must respond to issues that impact student learning. Eating disorders and other disorders stemming from chronic loss do not fit the typical definition of a special education disability, so schools may not be automatically motivated to develop a treatment plan. These disorders may not seem to disable a student academically, but school psychologists and school counselors need to collaborate with other school staff to establish how the disorder negatively impacts learning for the student (De Barbieri & Kendall, 2007). Uncovering the layers of impact on school learning is necessary in order to identify supports to counteract the negative impact. This is where behavior management strategies can be most helpful. Teachers can benefit from guidance regarding which in-school interventions are likely to support the student's efforts toward recovery. Further, communication from the team to the teachers about the behaviors and potential learning impact of the disorder can guide instructional strategy. School psychologists, school counselors, school social workers and others can be instrumental in the development of a specialized educational plan that reflects the current status of a student's cognitive and emotional functioning.

CLIENT PARTICIPATION IN DESIGNING THE BEHAVIOR MANAGEMENT PLAN

There are a number of areas where school psychologists, school counselors, social workers and other support personnel can impact school services for students through behavior management. These areas include social emotional skill development, stress management and coping skills building and behavior management and self-control. With regard specifically to eating disorders, coping strategies to promote social and emotional learning, enhance resiliency, improve self-esteem and help girls resist the cultural forces that encourage maladaptive body preoccupation, unhealthful eating and dieting can be very effective. It is advisable to involve students in the establishment of the behavior management intervention whenever possible. Evidence suggests that students often prefer techniques that they help design or implement (Kazdin, 1994). Additionally, students seem to "perform better when they dictate the criteria for reinforcement or administer the rewards than when others administer the contingencies" (Kazdin, 1994, p. 285; Dickerson & Creedon, 1981). Other advantages of involving clients in their behavior management planning is that the gains achieved seem to extend to other areas of a student's life and are maintained better over time (Kazdin, 1994). Involving the individual collaboratively in the design of the intervention promotes ownership.

We emphasize this point, as in our experience this necessary collaborative component is often omitted. Indeed, we observe, that students in schools are frequently left out of the process and handed behavior management plans that they are directed to follow. We find that lack of involvement extends across grades from elementary through high school. With no input into a rewards system, there is little motivation to comply.

Design collaboration is extremely pertinent for a student affected by an eating disorder where the desire is for the student to move the locus of control from managing their eating disorder to managing their recovery (De Barbieri, 2005). Self-control techniques such as self re-enforcement and self-punishment can be useful in addition to students being involved in selecting the problem focused on and having some role in implementing the techniques or strategies themselves. We suggest that such a collaborative model may be equally as valued by other at-risk students who struggle with a variety of diverse challenges such as: those who engage in cutting behaviors, substance abuse, truancy, and anger management. Obviously, the amount of control that can be delegated to the student "is related to such variables as student age, the type of problem focused on and the setting" (Kazdin, 1994) in which the strategy is conducted.

CONCLUSION

There are a number of areas where school psychologists, school counselors and other school-based support personnel can impact school services for students through behavior management. Behavior management has evolved as a concept and in its implementation to include a more holistic and comprehensive view of behavior. The traditional approaches to behavior management, while still germane and in fact continuing to form the backbone of behavior management have been broadened and expanded to allow for more alternative approaches to treating more complex issues facing children and youth in schools today. These areas include social emotional skill development, stress management and coping skills building and behavior management and self-control.

With regard specifically to eating disorders coping strategies to promote social and emotional learning, enhance resiliency, improve self-esteem and help girls resist the cultural forces that encourage maladaptive body preoccupation, unhealthful eating and dieting can be very effective. It is advisable to involve students in the establishment of the behavior management interventions whenever possible for this and other high risk disorders. Since the primary focus for teachers is on the academic curriculum, it is the role of school

psychologists, school counselors, social workers and other support staff to focus on the social emotional curriculum that supports learning. Chronic loss and or trauma can compromise a child's development. Schools can help combat compromised development due to chronic loss by working collaboratively within their teams, with families and with community professionals. Behavior management provides an effective framework for addressing the observable behavioral effects of chronic loss in schools so students are safe to take risks and move forward in their learning.

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Chapter Ten

Systemic Personalized and Developmentally Appropriate Behavior Management

Norris M. Haynes

Early developmental experiences and the contexts in which children develop and learn affect their overall development including their behavior and academic achievement. Early life experiences during formative years help to shape children's views of themselves, their perceptions of others, their feelings about their capacities to influence events that affect them and their responses to these events. Behavior management, therefore, is perhaps best understood and addressed from a developmentally and ecologically informed perspective, including an understanding of and sensitivity to children's socio-cultural and developmental experiences. The enduring effectiveness of all of the approaches to behavior management discussed in the previous chapters in this book can perhaps be enhanced if implemented in a school or classroom context that addresses students' needs holistically, in a highly developmentally sensitive and personalized way. Behavior management then is not viewed as "fixing the student" but as strengthening the system to better support each student's development.

Effective behavior management that achieves long-term sustained effects can be achieved through a truly personalized approach. Personalization is defined here as "supporting each student's holistic development through individualized, developmentally appropriate and culturally responsive attention to each student's social, emotional and academic learning needs." This requires a school climate and learning environment in schools that are supportive of children's total development and that are responsive to their developmental and learning needs. Personalization can be used to help inform positive relationships among and between students and staff, allow schools to function well, promote positive behaviors among students and increase student achievement.

The Yale University School Development Program's (SDP) many years of work with schools, coupled with findings from research and evaluation studies, indicate that the establishment of mechanisms in schools which foster sensitivity and caring, and provide preventive strategies for addressing academic and psychosocial concerns, help to build resilience among children and youth and give them the social and cognitive skills to address the many challenges which they confront on a daily basis. In short, a truly personalized learning environment helps children develop well and the SDP helps schools achieve a more personalized learning community that results in the prevention of and reductions in behavior problems (Haynes, 1994; Comer & Emmons, 2006; Emmons & Comer, 2009).

Unfortunately, the goal of creating personalized school communities is often illusive. What is often missing from schools is an emphasis on the role of healthy positive relationships among and between students and adults in establishing and maintaining achievement-facilitative behaviors among students. Meeting the goal of higher student achievement is less likely to consistently occur without first establishing the kinds of relationships and in-school structures that will support and promote positive child and adolescent development. Greater school efforts at personalization can help to bring out the best in a large numbers of students, across a variety of developmental pathways. Teachers who create a personalized supportive climate in their classrooms are better able to manage student behavior and increase student engagement in that classroom (Comer, Haynes, Joyner & Ben-Avie, 1999). The positive climate that results from personalization can serve as a foundation for student engagement, high achievement motivation and positive learning outcomes.

HOW SCHOOLS CAN ACHIEVE PERSONALIZATION

Schools achieve personalization through the development of structured opportunities for meaningful, helpful, developmentally enriching interactions among and between students and adults. Positive interactions among and between students and adults contribute to student development across multiple developmental pathways: Physical; Speech/ Language; Moral; Social/Interactive; Psychological/Emotional; and Cognitive/Academic (Comer, Haynes, Joyner & Ben-Avie, 1999). The SDP approach to personalization has seven basic premises that are articulated by Haynes et al (1993):

1. A child's overall development is influenced by his or her interactions with significant adults.

2. The transition from family to school is influenced by the ability and willingness of educators and parents to manage the challenges that emerge when there is divergence between the culture of the school and the culture of the home.
3. The ability of parents and educators to facilitate academic learning rests on a relationship between adults and children, that is characterized by trust, support, positive regard, high expectations, affiliation and bonding.
4. Adults and children are able to best meet their responsibilities in a supportive climate that emphasizes a no fault approach to identifying and solving problems, decision making processes that generate consensus, and structures that promote collaborative working relationships.
5. The best decisions about programs and strategies, including curricula are made based on the careful analysis of qualitative data about the characteristics and needs of students.
6. The welfare of the child becomes the concern of all significant adults in the child's life and programs and activities are planned, implemented, and evaluated on the basis of their benefit to children.
7. Adult decision makers choose programs that fit students rather than conclude that there is something inherently wrong with students when children do not benefit from programs.

These premises suggest that effective and personalized behavior management and education require that educators and other adults who influence children's behavior and development should understand child development issues and be able to have this understanding reflected in the school's curriculum, pedagogy, social activities and in their approaches to behavior management.

A PERSONALIZED SCHOOL COMMUNITY: WILSON HIGH

Entering the lobby of Wilson High is a pleasant experience—there is a large, colorful mural of Martin Luther King and Malcolm X shaking hands to welcome you. Mr. Rollins, the principal, greets school visitors at the door. From his small, picture filled office he offered the following comments about his work:

> I've been working in this district for twenty-three years and I've always tried hard to get to know my students. Some of these kids need personal attention as much as they do book knowledge . . . Creating unity at our school is an ongoing effort because most of our people don't initially know each other well. As a matter of fact, I don't think most of them at first even *liked* each other . . .

> With those kinds of separations (among stakeholders), in order to achieve any real understanding . . . programmed opportunities for interaction are necessary. I constantly try to remind my teachers to be more human with our children—accept them for where they are. I've seen a number of our kids respond well to teachers who treat them like real people and not just another face in the class. Our best teachers have good relationships with their kids and give them respect in the classroom. That's what our SPMT helped to create . . . we needed to include collaboration as part of our overall school vision.

Mr. Rollins discussed his efforts to personalize his school's environment so that it would reflect and project the backgrounds and interests of his students, parents, and the local community. The use of murals around the school and artwork in the classrooms helps to brighten up the school and also to project the culture and interests of the local school stakeholders. These steps helped to place both the students and their parents in a school climate that is comfortable and supportive of their growth. The School Development Program is an extension of this positive climate perspective. The SDP's approach to personalized schooling is one that attends to the total development of children. It is the SDP's proposition that children learn best when their basic needs are met, and when the significant adults in their lives work collaboratively to encourage, support and nurture them. This proposition has significant implications for the manner in which schools are organized, and how children are taught. The context and content of schooling should reflect sensitivity and responsiveness to the developmental needs of children, and to the varied social and cultural experiences that children bring to the schooling enterprise.

THE SDP PROCESS

The School Development Program uses a systems approach that addresses all aspects of school life including the academic and social climate and school organization. It is a process that focuses on the total development of students in a climate of sensitivity, caring and challenge. It seeks to develop creative ways of dealing with problems, and to implement these ways using the collective good judgment (based on social and behavioral science knowledge) of school staff, parents, and the community.

There are three program components or mechanisms and three major program operations. The key program component is the building level representative governance and management body commonly referred to as the *School Planning and Management Team (SPMT*). The *Student Staff Support Team (SSST)* provides child development and relationship knowledge and

skill to addressing the needs of students and staff. Parents support the program through participation on the governance and management body, active participation in daily school activities and general school support.

The three operations are: (1) *A Comprehensive School Plan* which outlines goals, objectives and strategies and is developed by the SPMT. The plan addresses two areas—social climate, and academic—the activities in these areas are based on perceived needs, research and analysis of school functioning, and student achievement. (2) *The Staff Development Program* is based on training needs that arise from the school plan. Central office supervisory personnel provides support for staff development activities initiated at the building level, and (3) *Monitoring and Assessment* that generates useful data on program processes and outcomes and recycle information to inform program modification where necessary and establish new goals and objectives. These key operations are carried out or supervised by the School Planning and Management Team. These components and operations will be described in greater detail.

In order to sustain a learning and caring school community in which all adults feel respected and all children feel valued and motivated to learn and achieve, the mechanisms and operations of the SDP are driven by three guiding principles that nurture a positive climate: (1) a no-fault approach to problem solving in which "fingers of blame" are not pointed at others, but everyone accepts equal responsibility for change; (2) decision by consensus where voting on issues is discouraged because voting results in losers who may feel that they have no stake in the decision that is made while consensus allows for brainstorming, in-depth discussion, cross-fertilization of ideas, and a plan for trying different solutions in some sequence; and collaboration and no paralysis of the principal or any other individual. This requires respect for other points of view and a willingness to work cooperatively as part of a team (Haynes, 1993).

School Planning and Management Team (SPMT)

This component/mechanism is the central organizing body in the school. It is led by the building principal and includes teacher and parent representatives. Its major function is to develop and monitor a Comprehensive School Plan which includes academic, social, and staff development goals. These goals address the perceived socio-educational needs of all students and adults in the school. Specific programs are developed and/or selected to accomplish these goals. All school activities are coordinated by the SPMT. The presence of parents and teachers on this decision-making body provides for balanced representation and input. The decision-making process that characterizes an

effective SPMT is one of collaboration and consensus, as opposed to autocracy or plurality.

The Comprehensive School Plan gives direction and focus to the school improvement process. It provides a structured set of activities in the areas of academics, social climate, staff development, and public relations that enables the governance body to establish priorities, and to approach school improvement in a well coordinated and systematic fashion. It utilizes data (student achievement and behavior, attendance, and the "felt" needs of educators and parents) collected at the school site in order to generate goals and objectives (Joyner, Haynes, Comer, 1994).

Staff Development activities are based on training needs that stem from the school plan. Decisions about staff development are made by the governance and management body with support from central office personnel.

This program:

- organizes periodic workshops (for teachers and parents) based on identified needs and program objectives at the building level;
- creates workshops to provide teachers with those skills proven to be most effective in working with underdeveloped student populations;
- allows the staff to integrate academic, arts, social, and extra-curricular activities into a unified curriculum; and
- encourages teachers to develop special curriculum units in the skill areas most needed in an underdeveloped student population, (government, business, health and nutrition, and leisure/spiritual time activities are examples of such units) (Joyner, Haynes, Comer, 1994).

The Student Staff Support Team (SST)

This component/mechanism of the SDP was formerly referred to as the Mental Health Team (MHT). This team is led by the principal or assistant principal, and includes staff with child development and mental health knowledge and experience. These staff members often include: (1) school psychologist, (2) guidance counselor, (3) school nurse, (4) special education teacher, (5) attendance officer, (6) pupil personnel workers, and any other appropriate staff persons. The function of the SSST is to address school-wide climate and psychosocial issues that are likely to have an impact on the students' adjustment and life path choices. The SSST also deals with individual student issues that are referred to it by teachers and staff. The SSST is intended to act in a preventive, preemptive way rather than in a reactive, treatment fashion. It works in this fashion in providing on-going consultation to teachers and the

SPMT in matters that pertain to child development and behavior. It meets on a weekly basis to:

- apply, through its representative on the SPMT, child development and relationship knowledge and skills to the social climate, academic, and staff development programs developed by the governance and management body;
- facilitate the many interactions between parents and school staff;
- consult with classroom teachers to assist them in responding to students in a manner promoting growth and development;
- assist classroom teachers in developing strategies that prevent minor problems from becoming major ones;
- set up individualized programs for children with special needs which may involve the utilization of services outside of the school when necessary and possible;
- assist all staff members in bridging the gap between special education and regular classroom activities;
- provide consultation and training workshops to staff and parents on child development, human relations, and other mental health issues, and;
- make recommendations for building level policy changes designed to prevent problems (Joyner, Haynes, Comer, 1994).

Parents Program

This component/mechanism of the SDP is intended to involve parents at all levels of school life. The majority of parents serve at the first level, which involves general support activities, including attendance at PTA, PTO or PTSA meetings, social events and other school activities. At the second level, some parents serve in the building, as volunteer aides or assistants, in the library, cafeteria or in classrooms. Level three involves parents who are selected by the larger parent group to represent them on the SPMT. As members of the SPMT, parents serve as vehicles for transmitting the views and opinions of the general parent body on issues related to academic, social and staff development needs of the school. In these ways, the Parent Program helps to bridge the gap between home and school. It reduces the dissonance that disadvantaged students can experience as they attempt to make adjustments from one environment to the other. By empowering parents, schools provide continuity in the socio-educational lives of children. This can also serve to strengthen families and help them build resilience in support of their children's academic and social development. The School Development Program views parental involvement as the cornerstone for success in developing

a school environment that stimulates the total development of its students. Parents are expected to:

- select their representative to serve on the governance and management team;
- review the school plan developed by the governance and management group (SPMT);
- work with staff in developing and carrying out activities of the parent-teacher general membership group (PTA, PTO) in line with the overall school plan; and
- support the efforts of the school to assist students in their overall development (Joyner, Haynes, Comer, 1994).

The three SDP components/mechanisms come together to create a good school climate. The school becomes a well functioning social system where the developmental needs of students can be addressed. All children need to develop a sense of adequacy and efficacy to be successful. Their search for an identity intensifies as they mature and their aggressive energies need to be channeled into constructive and wholesome activities. They benefit from cooperative and collaborative activities such as participating in community based projects. Such involvement increases resistance to negative and destructive influences in their proximal social environment. The SDP, because of its emphasis on social development and positive relationships, is seen as an effective socio-educational intervention for empowering schools to positively influence the life paths of students.

RELATIONSHIPS MATTER: WILSON HIGH

Mrs. Burns, a social studies teacher, enthusiastically welcomes visitors into her classroom. Her teaching style is active—moving up, down, and across the room—including everyone in the day's discussion. "Try and stay with me, group . . . We're with you, Mrs. B!" There was little of the "sage on stage" lecturing style and no signs of student boredom. After the class ended, Mrs. Burns spoke about her work:

> I'm extremely proud of my students. I've been teaching here for 20 years and . . . the kids are basically the same. We have a good group here and I'm still enjoying myself . . . We're a smaller school—I think that makes for a closer group of people. I try to utilize the room, you know, to make it more interesting for the students. If I stood up front and just lectured I don't think they would be interested in looking at me . . . so I try to get them thinking by making what

> we do fit with issues that they're already interested in. I try to make my class a place where kids feel it's worth coming to learn something—otherwise they won't. These kids need that positive attention whether it comes from their Mom or Dad, our mentoring program, or me.

It is through this kind of "whole village" approach that the SDP personalizes the schooling process towards meeting the individual and collective psycho-educational needs of all children. It is our proposition that schools alone cannot and should not be expected to address all of a child's developmental needs. The meaningful involvement of parents, and support from the wider community are essential to school's ability to educate children well. When parents and the wider community become full partners in children's education and development, a more holistic educational approach is possible, because many of the significant adult stakeholders in children's development become engaged in providing essential services to children and families. In our approach schools are organized to allow for the full involvement and participation of all staff, parents and students in the life of the school. Members of the wider community are also involved in the process of developing and nurturing children through the schooling process. The positive climate established at school-wide levels can be built upon by teachers in the classroom for positive learning outcomes.

At the heart of the SDP process for helping schools to become more personalized, and to respond more effectively to behavior challenges among students are the respectful and mutually supportive relationships among and between students and adults in schools, including staff, parents and other adults from the community. Children learn from observing how the significant adults in their lives interact with one another and with children; how decisions are made and executed; and how problems are solved. They also learn from how adults treat them as children, and how much effort is given to ensure that their psychosocial and academic needs are totally met. The emphasis on the school being an interactive community helps to legitimize the teacher (and other adults) as sources of knowledge in the classroom. Additionally, the inclusion of students as sources of knowledge in their own right helps to personalize the flow of information between teacher and student. This kind of flexibility in both the school and classroom environments can yield positive achievement-facilitative behaviors and learning gains for students.

The most effective relationships are those which are based on feelings of mutual empowerment and a keen sense of individual and collective efficacy. School staff, parents, and members of the wider community are seen as equal partners in the process of school improvement. The relationships among students themselves are very important sources of motivation and affirmation. Children who feel socially connected to school, and who derive positive

self-affirmation from interactions with peers are more likely to be motivated and to want to attend school. If the peer culture is one that values pro-social behavior, academic learning, and achievement, the connected student would be more likely to want to be an achiever. The school culture, however, must send positive messages about what it means to be a student, teacher or parent at that school in order to both promote and realize significantly positive psychosocial and academic growth. (Pallas, 1988).

THE HOME-SCHOOL PARTNERSHIP

An essential element in student development and behavior management through personalization is recognition and reinforcement of the home-school partnership. When children observe that home and school are engaged in a respectful partnership for their benefit, children are likely to develop more positive attitudes toward school and to do much better school work compared to situations in which school and home are seen as being "worlds apart." Although several impediments to meaningful parent involvement in the educational process are often cited, our experience is that significant and meaningful parent involvement is possible, desirable and valuable in improving student growth and performance. Essential to educational empowerment and school-based decision-making is the recognition that parents have much to offer if provided the opportunities to do so.

In SDP schools, parents are involved in many ways. They are encouraged to provide broad-based support for their children's education. This support can be in the form of encouraging children to complete homework assignments, attending parent-teacher conferences, and being actively involved in their school's parent-teacher association or organization. Parents are also directly involved in the daily life of the school by volunteering and serving as teacher aides, lunchroom monitors, library assistants, and office assistants. This level of involvement advances the personalization process by bringing parents in direct contact with staff and students in respectful, constructive and supportive ways. Children observe and learn from parents and staff working together as collaborators and partners for their benefit. Studies indicate that students benefit academically and psychosocially from this kind of parent participation. The connection between home and school is strengthened when parents are involved in helping to make decisions about school policies and procedures, together with school administrators and staff, through their representatives on the School Planning and Management Team (SPMT). This process allows parents to bring knowledge about their children's develop-

mental and educational needs to the planning and designing of school and classroom activities.

THE ROLE OF THE WIDER COMMUNITY

The wider community, including businesses, social agencies, the media, local universities and colleges, health centers and hospitals, and community service organizations, should be part of a service network to schools and families to strengthen their capacity to meet the total developmental needs of children. Even with strong school planning and management teams, and helpful psychosocial support teams, many schools recognize the need for and importance of establishing linkages with community agencies and groups to enhance their effectiveness. Education, increasingly, is being regarded as a community enterprise with vital services coalesced into a support network that is available to children and families either directly or through the schools. This is a pivotal service due to parents' natural tendency to turn to schools for help or guidance on matters affecting their children. In addition, the multifaceted nature of education warrants that schools should have access to services which promote positive pro-social behaviors among students, by enhancing the educational process and reinforcing the ability of students to behave appropriately and to learn well. For example, service learning projects can be instituted, mentoring programs can be implemented and businesses can offer internships and provide material resources to enhance a school's capacity to meet the multifaceted needs of its students.

Social and community agencies may also assist by providing counseling and other social support to families or by contributing expertise to a school's psychosocial support team. Local universities and colleges can contribute in many ways including providing pre- and in-service adult development training to teachers, counselors, psychologists, administrators and social workers, to prepare and assist them in understanding and addressing the socio-cultural and psychosocial needs of children and their families.

SUMMARY

Behavior management strategies in schools are best implemented in school contexts that promote and support holistic child and adolescent development through the creation of systemic personalized learning communities. Personalization is a means of adapting the school environment to the needs, perspec-

tives, and concerns of the students being taught. In personalizing teaching and learning, the Yale University Comer School Development Program builds and strengthens the capacity within schools to address the total development of all children. In doing so it addresses behavioral as well as academic concerns. This is accomplished through a process of empowerment that establishes true collaboration and mutual respect among all the significant adults in children's lives, including school staff, parents, other members of children's families, and significant others in their communities. Children themselves are respected and taught to respect others, their peers and the adults in their lives. They learn and practice pro-social, constructive and achievement-facilitative behaviors.

Essential services to children and their families are structured, coordinated and made more accessible, with schools playing a pivotal role. Schools alone cannot completely educate children, neither can families alone. But working together we can prepare our children well to face the future effectively and successfully.

The participation of school, parent and community stakeholders in an ongoing collaboration is an important component for student behavior management and school success. Increased appreciation by all school stakeholders of the perspectives, values, and viewpoints across their school community can lead to more effective, authentic, and relevant classroom pedagogy and higher levels of student engagement. Parents can become engaged in the educational enterprise in meaningful ways which empower them to be a more powerful and positive force in shaping their children's development and behavior. Homes, schools and communities become connected together in a support network that is designed to personalize the educational process and help children to develop holistically.

It is evident that behavior management can be effective in promoting achievement-facilitative behaviors among students. The various approaches discussed in this book have the potential to have significant positive impact on children's behavior and learning. The traditional approaches to behavior management provide basic and important concrete steps that can be used to influence students' behaviors. The alternative approaches suggest that a more inclusive approach to behavior management that considers cognitive processes, as well as contextual and cultural factors, may have more sustained and enduring impact. The approach discussed in this chapter focuses on addressing the holistic development of students, along multiple pathways, by creating personalized learning communities, using the Yale University Comer School Development Program. This approach allows for the inclusion and combined use of any or all of the approaches discussed. In this way, evidenced-based best practices are integrated in a systemic school empower-

ment process that prevents and addresses behavior challenges in a holistic and developmentally appropriate way.

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