

CHAPTER 34

Interventions for Fears and Anxiety Problems

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INTRODUCTION

Fear- and anxiety-provoking stimuli and manifestations of fears and anxiety change throughout childhood as a result of cognitive development and abilities to identify and understand threat across a variety of situations (Ollendick, Yule, & Ollier, 1991). As such, fears and anxieties can serve an adaptive function as they elicit protective responses to stimuli that may be threatening or harmful. However, when fear and anxiety persist, increase in intensity, and become more pervasive—causing unwanted psychological distress and significant negative interference with one’s performance and adjustment—they are no longer considered adaptive (Kendall, Howard, & Epps, 1988; Kendall & Ronan, 1990).

Three popular models regarding the etiology and maintenance of fears and anxieties have been identified (Lick & Katkin, 1976). The most prominent in the behavioral assessment and treatment of fears and anxiety is the classical stimulus-response (S-R) model, which evolved from the work of Pavlov (1941), Hull (1943), and Wolpe (1958). This model assumes that maladaptive anxiety is formed by pairing a stimulus and a response. As such, previously unconditioned stimuli (i.e., stimuli that do not elicit an anxiety response) come to elicit anxious responses because of their pairing with conditioned stimuli that had previously elicited anxiety responses. For example, one of the most famous and earliest demonstrations of anxiety acquired through classical conditioning was reported in 1920 by Watson and Rayner. In this study, an 11-month-old infant boy named “Albert B” was conditioned to fear a white rat. During initial assessment, Watson and Rayner established that little Albert showed no fear of the rat (a neutral stimulus), but was startled and began to cry when a steel bar was struck against another metal object in the presence of the rat. Later on, he continued to show signs of anxiety when exposed to the rat and generalized the response to a rabbit, a dog, a fur coat, and a Santa Claus mask.

Another theory of anxiety discussed by Lick and Katkin (1976) is the response-reinforcement (R-R) model. This model holds that the consequences of anxious

responses serve to reinforce and maintain the behavior. The consequences may be either positively or negatively reinforcing and often are socially mediated. For example, young children who exhibit separation anxiety disorder often refuse to be separated from a parent (most often the mother). When anticipating separation, a child may throw a tantrum, cry, or scream until the parent acquiesces and agrees to stay with the child. In this situation, the child's behavior is negatively reinforced in that separation from the parent is avoided. Likewise, the behavior of the parent (i.e., acquiescence) is negatively reinforced through escaping and/or avoiding the tantrum behavior of the child.

While these first two models assume that anxiety results from associative learning or reinforcement in conjunction with the environment, a third approach to anxiety—the cognitive mediation model—assumes that cognitive distortions associated with external stimuli play an influential role in producing and maintaining maladaptive levels of anxiety. For example, according to Beck's cognitive theory of anxiety (Beck, 1976) the thinking of the anxious individual is dominated by themes of danger. The individual anticipates threats to self and family, and those threats may be either physical, psychological, or social in nature. In generalized forms of anxiety, the individual anticipates danger in situations where the stimuli that arouse the anxiety are unspecific in nature. Thus, the thinking of the anxious individual is characterized by repetitive thoughts about danger that take the form of continuous verbal or pictorial cognition about the occurrence of harmful events.

Cognitive distortions that are particularly common with anxious individuals include: (a) *catastrophizing*, whereby the anxious individual tends to dwell on the most extreme negative consequences conceivable, assuming that any situation in which there is a possibility of harm constitutes a highly probable danger, (b) *personalization*, whereby the anxious individual reacts as though external events are personally relevant and are indications of a potential danger to him or her, (c) *magnification and minimization*, where the anxious individual focuses on signs of danger or potential threat to the exclusion of other aspects of the situation thereby minimizing or ignoring the non-threatening or rescue factors in the situation, (d) *selective abstraction*, where the anxious individual focuses on the threatening elements of a situation and ignores the context, (e) *arbitrary inference*, where the anxious individual jumps to dire conclusions on the basis of little or no data, and (f) *overgeneralization*, whereby the anxious individual views a time-limited situation as lasting forever (e.g., "these feelings of stress will never end"), or may assume that because a particular problem occurred previously it is bound to reoccur in the future.

Finally, a more recent theory of etiology and maintenance of anxiety postulates a neuro-evolutionary approach (Stein & Bouwer, 1997). The neuro-evolutionary approach rests on the assumption that general anxiety evolved to deal with threats whose nature could not be clearly defined, while subtypes of anxious behavior evolved to deal with specific types of danger. The subtypes of anxious behavior include: (a) escape or avoidance, aggressive defense, freezing/immobility, and submission/appeasement (Marks & Nesse, 1994). Equally important here is evidence that suggests that biological predispositions exist for anxiety responses toward specific types of stimuli

(Mineka, 1987). The neuro-evolutionary theory of anxiety helps to explain normal and maladaptive levels of anxiety depending on the individual. Evolutionary adaptation usually ensures an optimum level of anxiety—which may include some false alarms. However, in a suboptimal system, there may be too few or too many false alarms, which signal maladaptive levels of anxiety. Here, individual differences in anxiety are an interaction of biological/genetic variations in the individual and his or her past experiences with threat.

Given these various theoretical foundations, it is not surprising that the majority of intervention approaches have relied heavily on behavioral and cognitive-behavioral principles for the treatment of fears and anxieties. The common link among most interventions lies in their ties to learning theory, with fundamentals of classical conditioning, operant conditioning, cognitive learning theory, and social learning theory serving as the basis for most treatment approaches. Nonetheless, while clinical descriptions and accounts of treatment protocols are extensive (e.g., case reports and single-case studies), definite conclusions regarding treatment efficacy are lacking (Francis & Beidel, 1995). Only recently has interest focused on childhood anxiety disorders (cf. March, 1995) with much of the literature focusing on classification and assessment. The balance of this chapter presents some of the most common intervention approaches used in the treatment of childhood fears and anxieties. Included are exposure-based strategies, systematic desensitization, flooding, contingency management, modeling, and cognitive-behavioral approaches. Although presented in isolation, in practice these interventions are often used in combination and share similar features across treatment methodologies.

PSYCHOTHERAPEUTIC STRATEGIES

Classical Conditioning Methods

Systematic Desensitization

Developed by Wolpe (1958, 1969), systematic desensitization involves the pairing of an incompatible response to anxiety, such as relaxation, with an anxiety-provoking stimulus. The process of systematic desensitization involves three steps: (a) relaxation training, (b) the construction of an anxiety hierarchy, and (c) the pairing of relaxation with the gradual presentation of anxiety-provoking stimuli or situations. Based on the principles of counterconditioning, the premise of this therapeutic technique rests on the assumption that if all skeletal muscles are deeply relaxed, it is impossible to experience anxiety at the same time.

For example, a child may be experiencing anxiety related to specific stimulus situations such as taking tests, interacting with other children, or performing in front of a group. Whatever the anxiety-producing situation, the first step in the process is to develop a hierarchy of mental images or scenes of the anxiety-producing situation, with mildly aversive scenes at the bottom of the hierarchy and progressively more aversive scenes at the top of the hierarchy. Second, the child is taught a deep muscle relax-

ation process. The relaxation exercises consist of successively tensing and relaxing various muscle groups beginning with the head and ending with the feet at varying intervals. For example, it is generally best to allow 5 to 10 seconds for the tensing of the muscles and 15 to 30 seconds for relaxing. Although a variety of muscle group progressions exist, a typical training sequence generally involves starting with the head and neck (e.g., pressing lips together, smiling as hard as one can, pressing head back against mat or pillow as hard as one can, turning head to right and left as far as one can); moving onto the shoulders, arms, and hands (e.g., lifting shoulders to head, clasping hands together and pushing one against the other as hard as one can, clasping fingers together and squeezing as hard as one can, and making fists in an alternating fashion as hard as one can); followed by the back, stomach, and hips (e.g., curling into a ball and holding legs with arms, pushing stomach as far out as possible, making stomach as tight as possible); and ending in the legs and feet (e.g., crossing legs at the ankles while pressing one leg against the other, lifting toes as far up as one can, curling toes tightly) (Gumaer, 1984). Finally, once the relaxation techniques are mastered, while relaxed, the child is asked to visualize the various scenes in the hierarchy. Beginning with the lowest anxiety-provoking stimulus on the hierarchy, the child is asked to visualize the scene and self-monitor any feelings of anxiety. When anxiety is felt, the child is asked to signal the therapist by raising one finger and the mental image is removed. The goal is to have the child progress through the images on the hierarchy without feeling anxiety. If during the process the child does signal anxiety, the therapist asks the child to revert back to a less anxiety-provoking scene on the hierarchy.

An example of systematic desensitization is reported by Rainwater et al. (1988), who used the technique with 25 youngsters (ages 7–20) who exhibited intense anxiety associated with the management of Type I diabetes mellitus. Each participant was treated individually and trained in the use of imaginal relaxation and deep breathing relaxation. Three separate hierarchies were developed for (a) self-injection, (b) finger sticks, and (c) blood drawing. The steps in each hierarchy ranged from nine (finger stick) to 20 (self-injection). Pre-post measures on a self-reported units of distress scale (SUDS) indicated significant decreases in levels of reported anxiety for all three hierarchies as a function of systematic desensitization. The number of systematic desensitization sessions required for beneficial change averaged around four. Follow-up data collected 1 year later indicated that 92% of the gains had been retained.

MacDonald (1975) used relaxation training and systematic desensitization to treat the intense anxiety and fear of an 11-year-old boy in response to dogs. A 37-item imaginal desensitization hierarchy was completed in 11 treatment sessions paired with relaxation training. Examples of the hierarchy included items ranging from “I’d like you to imagine that you are standing on the front porch in the late afternoon with your Dad, about ready to go inside, looking down the block and seeing a Beagle three houses away minding his own business and trotting toward you” (item 2) to “I’d like you to imagine that you are sitting in your back yard, alone with your G. I. Joe and looking up to see an unfamiliar collie running down your driveway and past the garage” (item 31). Once the boy was able to proceed through all 37 items without significant

anxiety and arousal, programmed generalization was conducted—which included dog interaction skill training, modeling, and programmed outdoor activities. In doing so, the subject was taught to interpret dog body language such as tail-wagging and bristled neck fur. A model-prompt-reinforce sequence was used to shape back-petting, head-rubbing, and ear-scratching skills with a stuffed animal. Similar procedures were used to teach command skills. This was followed by viewing a terrier first through a one-way mirror and then through a chain-link fence. Once the subject was comfortable in the presence of the dog, a series of outdoor activities were scheduled (e.g., tennis lessons, walking to the comic book store) in which dogs might be present. At the end of treatment, the child reported staying outdoors without worry and anxiety about dogs for the first time in memory. Moreover, his parents reported appropriate reactions to benign as well as threatening dog encounters. Effects of treatment were maintained at follow-up 2 years later, at which time the subject continued to regularly play outdoors both alone and with friends and evidenced no avoidance of dogs.

In another example, Taylor (1972) used systematic desensitization to treat the excessive frequency of urination of a 15-year-old girl. In particular, the subject complained of an excessive need to urinate in connection with school and school-related activities. Specifically, the urgency would begin while waiting at home for the school bus and would intensify upon her arrival at school to the point that she would frequently have to leave a class several times during a single class period. As a result of her embarrassment, the subject reported increased attempts to avoid school and was withdrawing from social relationships and extracurricular activities. Treatment was carried out over summer vacation whereby the subject was seen weekly. Muscle relaxation was taught and three hierarchies were constructed upon the following themes: (a) riding the school bus, (b) being in school buildings and classrooms, and (c) actively participating in classroom activities. Desensitization to the three hierarchies was completed in five 1-hour sessions with the final sessions occurring on the last day of summer vacation. The subject returned to school the next day and reported no urinary urgency. A follow-up contact made 4 months later suggested that the frequency of urination was normal and that avoidance of school was nonexistent.

As can be seen from these examples, systematic desensitization can be effectively used to treat a variety of fears and anxieties. By pairing an incompatible response such as relaxation with an anxiety- or fear-producing stimulus, students learn to approach and overcome their fears in a safe, supportive environment. It is important to note, however, as with any type of indirect intervention the transfer of skills needs to be explicitly programmed so that students can generalize newly learned behaviors to more natural environments.

Flooding

Also referred to as reactive or internal inhibition, flooding (Francis & Beidel, 1995; Watson, Gaid, & Marks, 1972) involves the repeated and prolonged exposure to an anxiety-provoking stimulus with the goal of extinguishing the anxiety response. Like

systematic desensitization, flooding can be presented imaginably; however, its typical usage involves in vivo exposure to the anxiety-provoking stimulus in analogue situations (Hintze, Stoner, & Bull, 2000a). As a key component of in vivo exposure, response prevention is used to extinguish avoidant or escape behaviors. That is, once placed within the situation all attempts to avoid or escape from the anxiety-provoking stimulus are suppressed or blocked by the therapist. Because of these procedures, it is absolutely essential that the child involved and guardian(s) be clear with respect to the rationale and procedures of the intervention and provide consent prior to its implementation. Once in the flooding situation, the child is asked to come in contact with the anxiety-provoking stimulus in a series of graduated steps. At each step in the graduated hierarchy, the child is asked to provide anxiety ratings and remain in the presence of the anxiety-provoking stimulus until his or her self-reported level of anxiety diminishes.

An example of in vivo flooding is presented by Houlihan, Schwartz, Miltenberger, and Heuton (1993) in the treatment of intense anxiety associated with the popping of balloons. Behavioral and self-report measures of a 21-year-old male college student suggested considerable anxiety and avoidance of all situations in which he might encounter balloons. Pretreatment behavioral assessment indicated that the subject could approach no closer than 4 feet from a balloon without experiencing intense fear and anxiety. Three sessions of flooding were conducted on 3 consecutive days, involving exposure to and participation in the popping of hundreds of balloons. Following the three flooding sessions, the subject showed no avoidance behavior and reported almost no subjective distress in the presence of balloons.

In another example, flooding was used to treat a past episode of sexual abuse in a 15-year-old girl by her father (Payne & Colletti, 1991). While being treated for chronic headaches the subject indicated persistent difficulties when interacting with her father, a reluctance to remain in close proximity to him, and feelings of irritation and disgust when touched by him. The abuse was confined to a single episode of caressing, and concluded with threats not to reveal the incident to the girl's mother. Implosive therapy was used targeting conditioned fears associated with the memory of the abuse. Implosive scenes emphasized sexual approaches by the subject's father and were presented for six sessions. Following implosive therapy, the subject reported diminished anxiety and increased feelings of control during the scenes, as well as greater comfort in actual interactions with her father. In addition, ratings of headaches also decreased substantially. Follow-up information collected nearly 2 years later indicated that the frequency of headaches continued to be low and the reduced level of discomfort was maintained regarding interactions with the girl's father. Not surprisingly the subject reported that the aspect of therapy she found most helpful was "making myself think about things I didn't want to."

While very common in the behavior therapy literature, school-based practitioners should be cautious with respect to the use of flooding in the treatment of fears and anxieties. The very nature of the technique requires the student to confront his or her fears in a manner that may be objectionable to parents and professionals. For this reason, consent should be obtained prior to implementing such techniques with children. Best

practice should probably dictate that less aversive techniques (e.g., systematic desensitization) be attempted prior to the use of procedures such as flooding.

Operant Methods

Exposure-based strategies. Exposure-based treatment techniques involve placing the child in anxiety-provoking situations while providing both self- and externally delivered coping strategies. The anxiety-provoking situations may be either naturally occurring or artificially contrived enactments or role-plays (Hintze, Stoner, & Bull, 2000b). One of the most common exposure-based strategies involves the use of the Behavioral Avoidance Test (BAT; Hamilton & King, 1991; Van Hasselt, Hersen, Bellack, Rosenblum, & Lamparski, 1979). In its most typical usage, the BAT follows one of two variations in structure. In the first variation, a situational enactment is created whereby the child is brought into close proximity or contact with the anxiety-producing stimulus. Once the child is placed in the situational enactment, *in vivo desensitization* is provided and systematic direct observational data are recorded on preestablished criteria. Unlike systematic desensitization, which uses relaxation training as the counterconditioned response, *in vivo desensitization* capitalizes on the feelings of comfort, security, and trust that the child has developed for the therapist as the counterconditioning agent. In addition to direct desensitization, a critical component of treatment involves the collection of systematic direct performance data, which serve as a system of feedback and reinforcement for the child (cf. Hintze & Shapiro, 1995). For example, the amount of time spent within the enactment may be recorded (i.e., duration), frequency of engaging in the feared behavior can be noted (e.g., petting a dog), or proximity to the anxiety-producing stimulus may be measured (Hintze et al., 2000b). Guidelines for establishing the enactments and role-play and what to observe should be based on the most salient features of the child's anxious or fearful behavior. In addition to systematic direct observation, self-report measures also can be used, whereby the child reports on his or her own self-perceived level of discomfort. This procedure is usually conducted with some type of rating scale using a Likert-type response format.

In a second variation of exposure-based strategies, the child is requested to perform each step of a graded hierarchy of observable behaviors that bring him or her closer and closer to the anxiety-producing stimulus. Steps within the hierarchy are best formulated using the process of task analysis. In doing so, the therapist breaks down the desired behavior into its component parts by carefully observing the desired behavior and specifying the procedure that is presumed to be involved in performing the behavior. Each component is stated in order of its occurrence and should set the occasion or prompt the next component or behavior in the chain. At each step in the process, *in vivo desensitization* and social reinforcement are provided and progress through the chain of target behaviors is recorded.

An example of an exposure-based treatment using a BAT role-play analogue was presented by Esveldt-Dawson, Wisner, Unis, Matson, and Kazdin (1982), who treat-

ed a 12-year-old girl for anxieties and fears related to school and unfamiliar males. Responses to treatment outcomes were assessed with the use of a series of situational analogues. Five of the role-play analogues involved interactions with unfamiliar males: (1) asking an unfamiliar man for a donation to a children's hospital, (2) asking a salesman about trying on a new pair of shoes, (3) meeting a new male therapist, (4) welcoming a peer's father to the treatment session, and (5) sitting next to an usher at a wedding reception dinner. The five school-related role-play analogues consisted of (1) picking up a graded semester report with a poor mark, (2) being excluded by peers during an art project, (3) speaking in front of the class, (4) being accused of cheating by the teacher, and (5) being sent to the principal for being late. Treatment consisted of exposure to each of the situations with in vivo desensitization, instructions, social reinforcement, and modeling.

Each of the role-plays lasted approximately 15 minutes and data were collected on measures of avoidance (e.g., stiffness of body movements, nervous mannerisms, and self-rating of anxiety) and prosocial behaviors (e.g., eye contact, quality and amount of appropriate affect, overall social skills). Results showed a rapid reduction in the frequency and rate of avoidance behaviors and a concomitant increase in prosocial behaviors during all role-plays.

In another example Osborn (1986) used in vivo desensitization to reduce the anxiety associated with warm water bathing for a 6-year-old boy who had suffered severe burns as a result of hot water scalding. The desired goal for the boy was to have him remain in 100°F water up to his chest for 3 minutes. Increasing the boy's tolerance for warmer water was gradually increased over a 25-day period. On the first day, the boy's mother cradled him in her arms while standing in 2 inches of 70°F water. In graduated steps, she lowered and withdrew the boy until he could remain seated on the bottom and bathe or play for 3 minutes. The water temperature was increased by 1°F every 3 minutes thereafter. The maximum temperature that the boy would tolerate was recorded for each session. On day 6, the depth of the water was increased to 4 inches. Gradually increasing both the temperature and depth of the water continued until day 25, at which time the subject was able to tolerate water of 100°F and 33 inches deep. Results indicated that exposure-based in vivo desensitization could be effective in treating anxiety brought upon by warm water.

Contingency management. Contingency management procedures involve the manipulation of antecedent and consequent events that influence the acquisition and maintenance of anxiety (Francis & Beidel, 1995). These procedures include positive reinforcement, shaping, and extinction. Frequently, contingency management techniques are used as an adjunct to direct therapy with the child as the procedures can be easily taught to adults who are involved in the direct care of the child (e.g., parents and teachers). The involvement of parents and teachers can prove to be vital in facilitating the generalization and maintenance of therapeutic gains outside of therapy.

Positive reinforcement is defined as any event or activity following a behavior that results in an increase of frequency in the targeted behavior. Thus, in therapeutic settings behaviors targeted for positive reinforcement are generally those that are incom-

patible with anxious or fearful behaviors. For example, Leitenberg and Callahan (1973) demonstrated the use of contingent positive reinforcement in the reduction of anxiety induced by a fear of the dark in young children. Using a situational analogue, 7 matched pairs of children were assessed on pre- and posttest measures of avoidance of the dark. Specifically, the children were asked to enter a small photographic dark room and told to stay in the room as long as they could until they felt afraid. From each matched pair, one child was randomly assigned to the experimental group and one to the control group. Subjects in the experimental group were seen for 2 sessions per week, each consisting of 5 trials. At the beginning of each session, each experimental subject was allowed to select a prize (e.g., gum, trinkets, crayons, candies) each time he or she stayed in the dark room longer than his or her previous longest time. Since the concept of time was difficult for many of the children, a visual “thermometer-like” display was used. As such, after each trial, increases in elapsed time were indicated by shading in with a pencil the increased time in seconds on the indicator. In addition to the tangible reinforcement, social praise and encouragement were delivered contingent upon improved times. At the end of treatment, all children were assessed at posttest in the same manner as the pretest. Results indicated the children who had received contingent positive reinforcement were able to remain in the dark room for significantly longer time periods than those children who had not received contingent positive reinforcement. While the children in the control group were able to stay in the room on an average of 28 seconds, experimental group children were able to remain in the room for well over 3 minutes. Results of the experiment demonstrated quite clearly that contingent positive reinforcement can be a very powerful therapeutic tool in decreasing levels of anxiety and increasing adaptive behavior.

In another example, Ayllon, Smith, and Rogers (1970) used positive reinforcement in combination with other contingency management procedures to reduce the frequency of school refusal in an 8-year-old girl. Daily positive reinforcement in the form of soda, gum, and ice cream was delivered to the child contingent upon her going to school voluntarily. Weeks during which she achieved perfect attendance were positively reinforced further with a special treat or trip on the weekend. Results indicated that the use of contingency management procedures was effective in increasing the student’s voluntary school attendance to 100% within one marking period. More specifically, prior to intervention the child voluntarily went to school on only about 20% of the school days. After intervention this increased to 100% and was maintained for four consecutive marking periods.

A second type of contingency management, shaping, involves the positive reinforcement of successive steps of desirable behaviors that are again incompatible with fearful or anxious responses. Common to the Behavioral Avoidance Tests (BAT) noted previously, shaping reinforces gradual steps toward the ultimate desired behavior. Shaping is particularly useful when performance of the desirable behavior, in its entirety, produces overwhelming anxiety to the point where the child can do little else but emit the anxious response (which is very often avoidance). Shaping was used by Luiselli (1978) in treating fears related to riding the school bus of a 7-year-old boy with

autism. On the first day of treatment, the boy's mother seated herself on the bus and the subject was brought on by the therapist. The subject, his mother, and the therapist sat on the bus for two minutes. During this time, the subject received verbal praise and edibles for "riding the bus." On the second day, the mother was again seated on the bus, but halfway through the session she left to stand outside directly beneath the subject's window. On day 3, the subject was placed on the bus by the therapist and his mother. Once he was seated, the mother left the bus and remained outside for the entire session. On day 4, the subject's mother remained in the car and he was taken on the bus by the therapist. Halfway through the session the therapist left the bus and stood outside the doorway of the bus. On the fifth treatment day, the bus went directly to the subject's house in the morning. The therapist waited in the doorway of the house with the subject while his mother seated herself on the bus. Both the subject and the therapist then walked onto the bus. The mother immediately presented the subject with an edible treat and together all three rode the bus to school. On the sixth day, the bus again picked up the subject at his house, but instead of riding the bus with him, his mother placed him on the bus with the therapist and then stood on the sidewalk as the bus drove away. The subject and the therapist then rode together to school. On the final treatment day, the subject was placed on the bus by his mother and he rode the entire distance to school alone. Several weeks after he was routinely boarding and traveling on the bus to school, treatment began for riding the bus home. Here, treatment consisted of two days of training. On day 1, the subject, his mother, and the therapist all rode the bus together. On day 2, the subject and the therapist rode on the bus. On day 3, and thereafter, the subject rode the bus home with no assistance or difficulty.

Finally, extinction involves the removal of reinforcing consequences that follow a child's anxious behavior. Extinction is particularly useful when the motivation behind a child's anxiety is social attention or escape/avoidance of an anxiety-provoking situation. In such cases, anxious responses on the part of the child are often inadvertently positively reinforced by adults involved in the child's care through such acts as affection, caressing, and other forms of positive social attention, or are negatively reinforced in that the anxious behavior leads to either removal or avoidance of the anxiety-producing stimuli. For example, a young child who is overly anxious and fearful of unfamiliar people may cling to an adult caregiver and cry in response to an adult stranger. In such a situation if the caregiver picks up the child, holds her closely, and offers soothing words of encouragement, the anxious behavior (i.e., clinging and crying) might be positively reinforced. If the caregiver took the child away from the stranger or had the stranger removed, the child's behavior might be negatively reinforced through escape or avoidance.

An example of an extinction-based intervention procedure is presented by Piersel and Kratochwill (1981) in increasing the number of words spoken by two siblings (ages 4 and 5) who were demonstrating selective mutism. Specifically, a contingency management program was developed that consisted of extinction of nonverbal communication behaviors and positive reinforcement of all verbal behavior. In doing so, the subjects' teachers were instructed not to respond to nonverbal communication and to

require verbal responses in order to access desired tangibles or activities (e.g., asking for a snack, playing games, etc.). All verbalizations were immediately reinforced (e.g., “very good,” “I like what you said,” or “Yes, you may have another cookie”). Results at 3-month follow-up indicated that the frequency of verbalizations had increased and been maintained. Furthermore, social validation was evidenced by both teachers, who reported that the frequency of verbalizations by the children generally approximated that of the typical level for other children in their respective classes. In addition, both teachers also noted that the subjects were now talking to other teachers and peers outside the class.

Modeling. Widely researched by Bandura (1969, 1977), modeling involves learning that occurs by observing others and the imitative changes in a person’s behavior that occur as a result of such observations. The modeling procedure involves an individual called a model (e.g., therapist, parent, teacher, sibling, or peer) and a person called the observer (e.g., the anxious child). As typically conducted, the observer observes the model (either live or symbolically through the use of videotape) while the model successfully and competently engages in a behavior that elicits a fearful or anxious response on the part of the observer. For modeling to be most successful the therapist should be certain that the child (a) can attend to the various salient aspects of the modeling situation, (b) can retain what has been learned from observing the modeling situation, (c) has the physical and cognitive ability to motorically reproduce what was observed in the modeling situation, and (d) when necessary has the motivation to perform the behavior that was observed (Morris & Kratochwill, 1998).

For example, Bandura and Menlove (1968) examined the effects of symbolic modeling on children’s fearfulness and anxiety produced by dogs. Forty-eight children ranging in age from 3 to 5 years were randomly assigned to one of three groups. In the first group, children observed a graduated series of films in which a model displayed progressively more nonanxious and intimate interactions with a single dog. The second group observed a similar set of graded films; in this case, however, the models interacted nonanxiously with numerous dogs of varying size and fearsomeness. The third group served as a control and watched films that did not depict animals. Results indicated that children in the first two groups demonstrated significantly more approach behaviors to a live dog in a series of graduated steps ranging from walking up to a playpen and looking down at the dog to climbing into the playpen and petting and scratching the dog’s stomach.

In another symbolic modeling study, Bray and Kehle (1998) reduced the severity of stuttering of four school-age children (ages 9 to 12) using an approach termed self-modeling. This procedure involves the repeated viewing of oneself on edited videotapes in which the desired behavior is performed. In this way, the targeted subject serves as both the model and the observer. In this particular application, the four students viewed two 5-minute edited videotapes of themselves speaking fluently (i.e., without stuttering) on 7 occasions during a period of 6 weeks. Using a multiple-baseline design, direct observations of the students in the natural school environment subsequent to intervention indicated a substantial decrease in the percentage of stuttered

words per observation as compared to baseline levels. Generalization and follow-up observations suggested that the effects generalized across a variety of school situations (e.g., academic time, lunch, recess, classroom party, field day, small group social gatherings) and time.

As with the classical conditioning methods discussed previously, operant-based strategies also should be considered in light of the range of intensity of treatment, with more mildly aversive techniques attempted prior to more restrictive or intense forms of therapy. For example, some of the exposure-based strategies may physically place a student in a situation that elicits high levels of fear or anxiety. Although effective, practitioners again may want to first consider the use of operantly based strategies that facilitate habilitation while minimizing perceived threat (e.g., contingency management, modeling).

Cognitive Strategies

Cognitive-Behavioral Interventions

Cognitive-behavioral interventions for fears and anxieties include a variety of techniques such as self-control techniques (Kanfer & Gaelick, 1986; Kanfer & Phillips, 1970), self-instructional training (Meichenbaum, 1974), problem solving (Kendall & Braswell, 1985), and rational-emotive therapy (Ellis, 1984). Although different in subtle ways, each of the techniques is based on a set of similar assumptions:

1. Human learning involves the use of cognitively mediated processes.
2. Thoughts, feelings, and behaviors are all causally interrelated.
3. Cognitive activities such as expectancy, self-statements, and attributions can predict maladaptive behavior and can be used in producing beneficial change.
4. Cognitive processes can be integrated into behavioral paradigms and be used as part of therapy.
5. Outcomes of therapy are directed at assessing distorted or deficient cognitive processes and behaviors, and designing learning activities that remediate and teach more adaptive cognitions, behaviors, and affective patterns (Kendall & Braswell, 1985).

In addition, each of the strategies typically incorporates features of modeling, exposure, and behavioral rehearsal as previously discussed. For example, a typical sequence of activities for self-instructional training would involve the following steps: (a) the therapist approaches the feared or anxiety-producing stimulus while talking aloud to himself or herself about coping, (b) the child performs the same task under the direction of the therapist, (c) the child approaches the feared or anxiety-producing stimulus by himself

or herself while talking aloud about coping, (d) the child whispers the coping statements to himself or herself while approaching the feared or anxiety-producing stimulus, and (e) the child performs the task while guiding his or her performance using inaudible or private speech or nonverbal self-instructions (Meichenbaum, 1986).

Similarly, problem-solving training involves defining the problem, exploring and choosing an approach to solve the problem, evaluating the outcome, and self-reinforcement or coping statements (Kendall & Braswell, 1985). Typically, the child is taught to ask himself or herself a series of questions in order to solve a problem. For example, a child might be taught to go through the following sequence: (a) What is the problem? (i.e., defining the problem); (b) What are all the things I could do about it? (i.e., exploring solutions); (c) What will likely happen if I do those things? (d) Which solution do I think will work best? (i.e., choosing a solution); and (e) Now that I have tried that approach, how did I do? (i.e., evaluating the solution). It is important that during the process the child be taught to monitor and challenge the types of self-statements associated with anxiety and avoidance behaviors. This self-challenging is critical in the third step of the process, in which the child contemplates what is likely to happen if any one of the possible solutions is attempted. Once identified, negative self-statements are replaced with alternative adaptive self-statements that serve to decrease anxiety, improve coping, and facilitate adaptive behavioral functioning. In addition to these specific steps, the therapeutic process, can be fortified with a variety of process related activities. The Appendix provides some brief examples of the types of cognitive activities that can be integrated into cognitive-behavioral therapy or used as an adjunct to the therapeutic process.

CONSIDERATIONS FOR SCHOOL PSYCHOLOGISTS

In addition to the direct therapeutic intervention approaches noted above, school psychologists should also consider an integrated model of consultation (Erchul & Martens, 1997) that provides both education and training to those adults involved in the primary care of the child. Using aspects from both mental health (Caplan, 1970; Caplan & Caplan, 1999) and behavioral consultation (Bergan & Kratochwill, 1990), school psychologists can help parents and teachers (a) come to a better understanding of a child's anxiety and fear, and (b) enlist the support of primary caregivers in supporting any direct therapeutic interventions, as well as actively joining them in the therapeutic process by having them provide therapeutic assistance outside the direct therapy arrangement (e.g., home, classroom, school).

Specifically, from the mental health consultation approach, client-centered case consultation can be used in helping the parent or teacher develop a plan for dealing with the difficulties that excessive fears or an anxiety disorder may present in the home or school. Here, education and skill development are critical foci of the consultative process. The emphasis is on providing usable information for the parent or teacher and helping foster an understanding of how environmental variables interact with the child's difficulties. In doing so, the consultant must assess the resources and constraints

that are operating in the child's environment, including role expectations, norms, financial and time constraints, and parent/teacher strengths and weaknesses that will affect the type of plan that is implemented. Of particular interest is the child/parent/teacher relationship and how this relationship might be strengthened or altered to improve the problem situation. Once these factors are better understood, the consultant can utilize these outside resources in an effort to promote the generalization of the types of skills being addressed in individual therapy and foster a systems-level focus to treatment.

Similarly, from a behavioral consultative approach, the school psychologist can extend many of the operantly based interventions used in individual therapy to other environments in which the child interacts (e.g., home, school). Using a four-step approach, the consultant would first identify the specific problems in the home or school that continue to be cause for concern as a result of the child's fear or anxiety. It is important that these concerns be defined in clear operational terms including the specification of the outcomes (i.e., changes) in measurable terms; the establishment of objective current levels of performance (i.e., baseline); and the identification of where, when, and with whom the outcome is expected to occur. For instance, while various forms of test anxiety might be able to be treated using many of the techniques noted above, eventually the child must be able to employ newly learned skills at the point of performance—notably, an actual test situation. Using a behavioral consultative approach, the consultant could help the child's teacher in identifying exactly what the test-anxious behavior looks like in the classroom. Once operationally defined, baseline-level measures of test-anxious behavior would be gathered, with a particular interest in specifying the conditions under which the behavior is noted. For example, does the behavior occur with all subject matters or with some but not others? Does the type of test (e.g., closed versus open-ended responses) seem to have some effect on behavior? And so on.

Once the problem and the conditions under which it occurs are specified, the second step of the behavioral consultative model would be an in-depth analysis of the problem situation with a particular focus on the identification of alterable variables and the generation of possible solutions that increase the likelihood of problem resolution. In the current example, plans for the generalization of direct therapeutic gains would be addressed, which might include teacher support (e.g., a brief enumeration of the skills learned in therapy and how they can be used in the current situation); self-monitoring (e.g., a "test taking" checklist, which might highlight key features of the process); or test modifications (e.g., change of testing format, extended time).

Once the problem has been completely analyzed, the third step of the model involves the systematic implementation of the intervention designed to deal with the problem. At this step, clear objectives and strategies must be established (i.e., exactly how the intervention is going to be delivered) with an eye toward a consideration for the practical constraints that might affect the utilization of the specific strategies, and how continued formative assessment information will be secured. Or more simply, what exactly is going to be done, how what is going to be done is to be implemented with a high degree of integrity, and what types of assessment data will be gathered that will inform those involved as to whether adequate changes in behavior are being observed.

Once the intervention is implemented, step four of the process consists of a series of meetings between the consultant and parent/teacher to determine (a) whether the goals established for the child have been attained, (b) the overall effectiveness of the plan that was established to attain the goals, and (c) whether the indirect form of treatment should be continued or terminated. Data to inform these decisions come primarily from systematic observations that began during the first step of the process (i.e., problem identification stage) and continue on throughout the consultation. If the goals and objectives of consultation have been met, plans for continued generalization and transfer should be made, which might include the fading of the intervention so that changes in the child's behavior will not regress to baseline levels of performance. On the other hand, the data might suggest the intervention was unsuccessful in effecting change in the child's behavior, at which time a new plan should be considered.

SUMMARY

This chapter has attempted to familiarize the practitioner with the various approaches commonly used in the amelioration of fears and anxieties commonly evidenced in children and youth. It should be evident from the review that the most common psychotherapeutic techniques have relied on either operant-based or cognitive-behavioral approaches to symptom reduction. Specifically, with respect to fear reduction, systematic desensitization and modeling approaches appear to be most efficacious, while anxiety disorders appear to profit most from a more cognitive-behavioral approach.

Nonetheless, practitioners must be cautioned that because of limited empirical data, few conclusions other than declaring that these strategies have substantial potential can be established at this time. Most notably, the current literature has failed to fully explore the conditions under which positive therapeutic changes have occurred and whether such changes could be expected across differing participants, behaviors, settings, times, or therapeutic change agents. Moreover, much of the literature has focused on case studies in which the fear or anxiety was mono-operative. That is, the fear or anxiety was fairly confined to one or a small series of interrelated stimulus events or activities. While this might be the case for specific fears, whether or not the approaches would be beneficial to more generalized types of fears or anxieties is not well understood. Although a single approach to treatment might make sense for those fears or anxieties that share a common functionality, more often than not multiple stimulus events serve as the source of discomfort and atypical response patterns.

Similarly, the extant literature has failed to fully explore changes in the participants from a variety of outcome perspectives. While the most common approach to outcome evaluation has been the gathering of systematic direct observation, few if any studies have included other measures that adequately assess cognitive/affective or physiologic correlates of fear and anxiety. A mono-method approach to data collection may obfuscate outcome findings, and at worst suggest that a clinical regimen is effective in the treatment of the disorder when in fact very little has been done to change cognitive/affective or physiologic features of the disorder. For example, while a flooding approach

might be effective in changing the observable behavior of a child exhibiting social anxiety, the approach might be ineffective in reducing the cognitive/affective and physiological features of the problem. So, while the child might enter into and interact in what appears to be a socially appropriate manner, he or she might be doing so with continued high levels of cognitive/affective anxiety, sweating, and a rapid pulse.

Clearly, more research is needed in the treatment of such problems with children and youth. However, with proper caution and a hypothesis testing approach to problem solving, practitioners have a number of techniques derived from solid theoretical foundations that have been demonstrated effective in a wide variety of behavior change literature.

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APPENDIX

Related Cognitive–Behavioral Activities

I.B.E.T.E.T.

A problem-solving technique that students can use to fine tune their problem-solving and decision-making skills. The acronym I.B.E.T.E.T. follows the following steps: (a) *Identify* the problem, (b) *Brainstorm* options, (c) *Evaluate* options, (d) *Test* one option, (e) *Evaluate* again, and (f) *Test* another. As with other forms of cognitive-behavioral therapies, the therapist facilitates the child through the steps while teaching the use of appropriate self-statement and coping strategies.

Control/No Control Brainstorm

Start by discussing how worries can affect the way we feel (including emotionally and physically) and how they can affect our behavior. Then brainstorm all the worries the child (or the group or class) typically has. As the children share these, discuss each and list them in two columns. One column is for those that we have control over and can do something about and the other column is for those over which we have no control. Following this, discuss where the children should logically direct their limited energy.

Worry Cans

After writing the student's various worries on separate pieces of paper, place them into two cans or jars marked as those belonging to them and those belonging to others. If possible, it helps for the child to distribute the "other" worries to those responsible for resolution.

S.T.O.P.

Another mnemonic that stands for Stop, breathe, Think, Options, and Plan.

Light Bulb/Thought Bubble

Draw a large bulb into which a child can write his or her worries, fears, or anxieties. Then draw an arrow to a blank oval face. Let the child complete the face with the feeling that he or she would have by having that thought. Then repeat the activity using a positive thought and the subsequent face/feeling. This same activity can also be done with a thought bubble.

Benefits/Cost

Identify a choice or decision about which the child is worried. List one choice in the left column. In the next column list the benefits of selecting the choice. In the last column list the costs of making that choice. Below the first choice list another, then the benefits of that one, the costs, and so on. Continue until all choices have been explored.

INTERVENTIONS

for Academic and Behavior Problems II: Preventive and Remedial Approaches
