Chapter 2: Review of the Related Literature

Coping Strategies

Survey of Strategies

A 1990 survey conducted by Wolfe of 193 performing musicians, both amateur and professional asked them to describe strategies they had found effective in coping with performance anxiety. Those who reported greater confidence and competence utilized the following:

Strategies	Frequency
1. Deep breathing/relaxation/physical activity	74
2. Immersion/concentration on music	48
3. Minimizing the importance of the performance	43
4. Positive self-talk/self-acceptance	39
5. Prayer/meditation/imagery/visualization	35
6. Communication with audience/giving gift to audience	27
7. Seeking/giving support within the ensemble	15
8. Using drugs/alcohol before performance	11
9. Engaging in distracting activity before performance	9

"It is possible that learning to keep one's emotions under control before and during a musical performance makes the crucial difference between success and failure" (Wolfe, 1990, p.35). Note that the strategies listed above and used successfully most frequently are behavioral, cognitive, social, or spiritual coping strategies.

Another 1990 survey of 162 performing musicians conducted by Wolfe supported the concept of musical performance anxiety as a multidimensional cluster of traits: physiologic, behavioral, and cognitive variables. Musicians reporting high levels of arousal, intensity, confidence, and competence used a wide variety of performance anxiety coping strategies; whereas, musicians reporting high levels of nervousness and apprehension related to performing avoided using coping strategies that might relieve those symptoms. The wide variety of coping strategies seems to be the key to effectively coping with a multidimensional anxiety. My study tests the viability of a holistic model of instruction utilizing some of the cognitive and behavioral strategies discussed as follows, with an added spiritual component.

Drug therapy

Some musicians find that a sedative such as diazepam (Valium) helps get them through a performance, but seems to interfere with musical performance (Lehrer, 1987). A survey of 65 professional orchestra musicians indicated that 21% of them used sedatives to help them cope with performance anxiety, and 51% of them used alcohol for the same reason before a performance (Steptoe & Fidler, 1987).

Drug therapy typically involves tranquilizers such as benzodiazepines or buspirone for situational anxiety, and the use of beta blocking drugs for test anxiety or stage fright where physiological symptoms predominate. Beta blocking drugs eliminate the physiological symptoms of stage fright without sedation. Beta blocking drugs include: lopressor (cardio selective drug), propranolol (Inderal) or oxprenolol, nadolol, or pindolol (non-selective drugs). Drug therapy is controversial because of its dependency potential and side effects (Walley, 1994).

A study by Brantigan, Brantigan, and Joseph (1982) involving 29 music students at Julliard and the University of Nebraska, supported the use of propanolol, a beta-blocking drug to eliminate the physical impediments to performance caused by stage fright. Musical quality was improved and dry mouth eliminated. A selective beta-blocker such as lopressor that acts predominantly on the heart has been recommended for wind players and singers who must rely on maximum breath capacity. Non-selective beta-blockers such as Inderal (propranolol) have side effects such as bronchoconstriction, or airway resistance that might hamper performance (Troutman, 1986).

A study by James, Burgoyne, and Savage (1983) using the beta blocking drug pindolol showed a reduction in the adverse effects of stress on professional orchestra musicians and pianists. The authors agree that only performers who are so incapacitated by anxiety that their livelihood is in jeopardy should use beta blocking drugs, and then only with medical supervision.

Another study by James and Savage (1984) compared the effects of nadolol and diazepam on the anxiety and performances of college string musicians. Diazepam is a tranquilizer that relaxes muscles; nadolol is a beta-blocker that reduces blood pressure and pulse rate. The bowing scores were significantly better after nadolol than after placebo. No such difference was seen after diazepam vs. placebo. Left hand technique showed improvement with nadolol, but not enough for statistical significance. Diazepam had no effect on left-hand technique. Intonation tended to be better after nadolol, but worse after diazepam. Rhythmic control lessened after both drugs. Dynamics tended to be more monotonous after nadolol, but better after diazepam.

A review of the benefits and side effects of beta blocking drugs by Nies (1986) indicates that they are safe for occasional use with medical supervision except for persons with heart problems, diabetes, asthma or other bronchospastic diseases, or disease of the cardiac conducting system. Other possible adverse effects include sleep disturbances, hallucinations, fatigue, cold hands, cold feet, and depression. Cold hands certainly could be a problem for pianists and other instrumentalists.

According to Wilson (1986), the question of whether they should be used still remains unanswered, due to possible long-term dependency and serious short-term complications. Lowered blood pressure can cause fainting, asthmatic attacks, interfere with normal heart rhythm, depression, complicate the management of diabetes, and even cause death. His advice was that they should only be taken with medical supervision and additional cognitive and behavioral therapy to prevent drug dependency. Unfortunately, a lot of performers are taking them like a street drug that they get from friends, with no medical supervision.

More recent is Nube's review of the extensive literature on beta-blockers with the warning that "it appears that cognitive, perceptual, and psychomotor

skills may be negatively affected by beta-blockers... there may be negative side effects that should not be ignored by performing musicians" (Nube, 1991, p. 61). Even more recent is the warning, "Drugs are very much a desperation measure and should be used only as a 'stop-gap' until psychological coping methods can be learned… the use of drugs often sets back the development of self-mastery" (Wilson, 1994, p. 202-203).

Cognitive therapies

One of the prime developers of cognitive therapy, Dr. David Burns (1980), author of Feeling Good and Professor of Psychiatry at the University of Pennsylvania, identifies "cognitive distortions" that form the basis for many conditions of depression. These same irrational thoughts have been evident in many anxiety disorders:

1. All or nothing thinking. "I blew it! I am a complete failure."
2. Overgeneralization. A single negative experience is seen as a never-ending pattern of defeat. One memory lapse or one mistake means total failure.
3. Mental filter. A single negative detail is dwelt on exclusively, coloring the whole situation as negative. One's vision of reality is blurred by a single detail.
4. Disqualifying the positive. One rejects positive feedback and maintains a negative belief.
5. Jumping to conclusions. Even though there are no facts to support it, a negative conclusion is assumed.
6. Magnification or minimization. Negatives are blown out of proportion, and positives minimized.
7. Emotional reasoning. Feelings are allowed to distort one's thoughts.
8. Should statements. Unrealistic expectations produce fear and guilt.
9. Labeling and mislabeling. Irrational labels result in a negative self-image.

(Karp, 1988, p. 17-18)

Rational Emotive Therapy (RET), developed in 1962 by A. Ellis, is based on the assumption that feelings are determined by thoughts (Tobacyk, 1986). RET analysis involves determining the situation of the individual, his thoughts about the situation, his goals in the situation, and his efforts to dispel irrational thoughts (Hartgers, 1989). Mitchell Robin (1993) advocates the use of rational-emotive therapy with actors, artists, and other performers to overcome performance anxiety. He theorizes that at the core of this anxiety are specific irrational beliefs regarding the familiarity and difficulty of the situation, the level of stress expected within the situation, the expected level of ability to be adequate to the situation, and one's self-worth to be "on the line."

Julie Nagel, Coordinator of the Performance Anxiety Program at the University of Michigan, presented a paper at the First International Conference on Tension in Performance, 1981, at Kingston Polytechnic, London, on a cognitive behavioral approach to controlling performance butterflies. She used cognitive restructuring, relabeling, positive dialogue, systematic desensitization, biofeedback, and weekly intervention sessions in her program (Nagel, Himle, & Papsdorf, 1989).

Jackson and Latane's two studies at Ohio State (1981) show that much stage fright is a result of one's perception of their own ability and the size and status of the audience:

1. People who saw themselves as low-ability singers reported more nervousness and tension than those who saw themselves as high in ability.

2. Large groups of listeners tended to arouse more nervousness and tension than small groups.
3. High status audiences elicited more nervousness and tension than did low status groups. This effect was the single most potent variable.
4. Performing in groups produced less nervousness and tension than when alone.
5. Co-performer ability did not significantly affect perceived nervousness and tension.
6. The number of performers was a greater factor on nervousness than audience size.
7. As the number of co-performers increased, nervousness and tension decreased.

Dr. Andrew Steptoe, from the Department of Psychology at St. George's Hospital Medical School, University of London, advised performers at the First International Conference on Tension in Performance to imagine the audience is not there, minimize the importance of the performance, and to tell oneself "I know I'm good" (Kessler,1983, p. 48). Professional musicians in London with high performance anxiety used catastrophic self-statements more frequently than subjects with low performance anxiety. Subjects with medium levels of performance anxiety endorsed realistic self-statements more frequently than those with either high or low performance anxiety (Steptoe & Fidler, 1987).

Barry Green, in his 1986 book The Inner Game of Music, based upon the concepts of W. Timothy Gallwey, suggests that performers visualize and mentally rehearse a successful performance; how it feels, sounds, and looks. Techniques to help people cope with the mental obstacles that inhibit their best performance are taught, minimizing self-doubt and distraction and maximizing their ability and enjoyment. The story is told of a cello soloist, who performed much below her ability due to stage fright. After her performance she was told to imagine herself actually being her favorite professional cellist. She was sent back out on stage to look and play with the poise of her role model, and not worry how she sounded. According to his story her performance was amazingly wonderful.

The Barrell, Medeiros, Barrell, & Price field study (1985) cited five causal elements present in the performance anxiety experiences of three males and three females in a study group at West Georgia College:

1. the perceived presence of significant others.
2. consideration of the possibility of visible failure.
3. the felt need to avoid failure.
4. the uncertainty of the outcome.
5. the focus on self.

This same study suggests that effective strategies for reducing performance anxiety deal directly with the above common elements of the phenomenon as follows:

1. Reduce the significance of other persons.
   a. Increase your sense of power by assuming a position of making judgment calls and demands, or by caring for your audience's welfare.
   b. View the other persons as vulnerable human beings like yourself with their own imperfections.

c. Accept yourself as you are, and you give yourself inner strength and confidence that whatever happens is all right.

2. Eliminate the possibility of future failure:
   a. Focus on the moment of experience rather than the future.
   b. Visualize a smooth, error-free performance
3. Focus on the process rather than results.
   a. Minimize the importance of the results, viewing the outcome as insignificant in relation to the totality of one's life.
   b. Focus on your desire to provide others with pleasure.
   c. Enjoy the process yourself.
4. Practice and rehearse to decrease the uncertainty of outcome, thus increasing your expectations for success.
5. Replace self-consciousness with an increased awareness of others, not viewing them as judges, but as human beings just like you, with needs just like yours.

Tobacyk's 1986 survey of 33 Louisiana Tech University music majors supports Kelly's (1955) personal construct theory and his notion that a person's behaviors are determined by how he understands the world. The study also supports the Ellis (1962) rational emotive therapy, which contends that anxiety is the product of rigidly and persistently holding certain over-generalized irrational beliefs. Tobacyk's findings suggest that cognitive therapies that involve changing one's understanding of self and performance might be effective in reducing performance anxiety in musicians.

Three studies conducted at Washington State University with 600-744 students in basic public speaking classes support the theory that stage fright is related to one's perception of his ability and the audience's expectations. The fear arises out of the feeling that they are unable to meet audience expectations. When student subjects found out the audience was not as difficult to please as they had thought, their fear subsided (Ayers, 1986).

Thirty-four musicians who fulfilled criteria for social phobia according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R), including 15 full-time professional musicians, received one of four treatment conditions: 1) 6 weeks of buspirone, 2) 6 weeks of placebo, 3) a five-session, group cognitive-behavior therapy program with the sedative buspirone, or 4) the cognitive-behavior therapy program with placebo. Cognitive-behavior therapy resulted in statistically significant reductions in subjective anxiety, improved quality of musical performance, and improved performance confidence. Buspirone was not an effective treatment. The cognitive-behavior therapy included analysis and techniques for modifying self-statements and applied relaxation training (Clark & Agras, 1991).

According to Wilson (1994, p. 203), "The most effective cognitive strategies seem to be those that: (a) prepare the performer to accept a degree of tension and minor mishaps as par for the course; (b) focus on the process and personal enjoyment of the performance rather than audience evaluation of it; and (c) use positive, optimistic self-talk and visual imagery rather than self-doubt or catastrophizing."

An experimental study involving 53 pianists at the University of British Columbia demonstrated that both the cognitive and the behavioral therapies conducted over a 3-week period were effective in reducing musical-performance anxiety in pianists. The

cognitive therapy was superior to the behavioral therapy in reducing visual signs of anxiety and in enhancing expectations of personal efficacy (Kendrick, Craig, Lawson, & Davidson, 1982). The design of my study was similar to Kendrick's experimental control-group design. Kendrick employed group seminars to teach the constructive skills, to help subjects become aware of negative irrational thoughts, and substitute positive task-oriented self-statements. Finding that high-anxious performers were more self-preoccupied and self-deprecating than low-anxious performers, he urged the development of additional cognitively based techniques. My study was one such attempt.

Treatments that deal only with the physiological symptoms (beta blocking drugs, tranquilizers, and alcohol) have clear limitations and harmful side effects (Clark & Agras, 1991; Lehrer, 1987). One's perceptions seem to be the root cause of maladaptive performance anxiety, and therefore, a key part of the solution. Cognitive strategies that help one to fully accept himself, minimize the importance of significant others, minimize the importance of the situation, and sincerely seek the welfare of others, should get to the root of the problem and provide needed relief from the debilitating effects of performance anxiety. Buss's theory of audience anxiety correlates audience anxiety with feelings of self-consciousness (Ortiz, 1988). In his survey of student performers, Fogle (1982) found that musical performance anxiety was reduced and performance quality improved considerably when students were given permission to make mistakes and when they were allowed to lower the demands that they make on themselves, thus reducing the "trying-too-hard" syndrome (Dews, 1989). The root cause of performance anxiety could be summarized as debilitating irrational thinking which results in low self-esteem (Ayers, 1986; Barrell, Medeiros, & Barrell, 1985; Burns, 1981; Dodge, 1982; Ely, 1991; Hartgers, 1989; Steptoe & Fidler, 1987). "If people can learn how they contribute to their own performance anxiety, they may discover how to let it go and return to a more optimal level of functioning" (Barrell, Medeiros, & Barrell, 1985, p. 109).

Behavioral Therapies

Systematic desensitization has been successfully used since the 50's in alleviating extreme feelings of anxiety. Clients are taught to totally relax their muscles using biofeedback, hypnosis, or progressive relaxation techniques. They are helped to identify their fears and place them in hierarchical order, confront their anxieties, beginning with the least fearful and progressing to the most fearful, while applying their relaxation technique (Gerow, 1986).

Brass instrumentalists at Florida State University Summer School and Music Camp were used to test the effectiveness of two relaxation therapies, systematic desensitization and insight-relaxation. Performance anxiety was measured by heart rate and behavioral observation before and after treatment while sight-reading music. Both therapies were effective in reducing anxiety in musical performance (Wardle, 1969).

Solo piano performance anxiety was more effectively reduced by systematic desensitization than musical analysis with performance rehearsal at Columbia University (Appel, 1976). Two treatments, in the form of read-it-yourself handouts, systematic desensitization and 16 tips for combating stage fright, were compared in their effectiveness in reducing public speaking anxiety. Student clients rated the latter treatment as more successful and easier to follow (Auerbach, 1981).

Training in deep muscular relaxation is common to most behavioral treatments for anxiety and tension-related disorders. Measurement of muscle tension by electromyography (EMG) is preferable to self-rated measures in assessing relaxation procedures (Taylor, 1991).

A relaxation program combining deep-breathing exercises, progressive muscular relaxation exercises, resisted shoulder elevation exercises, and EMG monitoring during upper extremity tasks, was successful in assisting a patient eliminate tension headaches (King, 1991).

Forty-five patients with generalized anxiety showed significant reductions in STAI-Trait Anxiety and psychophysiologic symptoms following one of three biofeedback treatments: frontal EMG biofeedback, biofeedback to increase EEG alpha, or biofeedback to decrease EEG alpha (Rice, 1993).

Autogenic training, pioneered by Schultz in 1932, is a stress management technique where the patient learns a set of six formulas that are sub vocally repeated:

1) "My arm is very heavy" (muscular relaxation),
2) "My arm is very warm" (vascular dilation)
3) "My heart beat is very regular" (stable heart rate)
4) "It breathes me" (regulation of breathing)
5) "Warmth is radiating over my stomach" (regulation of visceral organs)
6) "There is a cool breeze across my forehead" (regulation of blood flow in the head).

(Linden, 1994, p. 228).

Biofeedback is effective in reducing muscle tension in musical performers and enhancing their performance. Applied string, percussion, and clarinet students at Montana State University were taught muscle relaxation using a biofeedback monitor, Electromyography (EMG), an instrument that amplifies the current and converts it into an aural feedback signal of "blips" at high frequency and rapidity during tension, ranging down to none at desired relaxation. The experiment resulted in improved dexterity and control, and a decrease in muscle fatigue (Reynolds, 1984).

Combined Cognitive and Behavioral Approach

"Anxiety and phobias tend to be most effectively treated by methods with both strong cognitive and behavioral components" (Lehrer, 1994, p. 354). Three different kinds of anxiety symptoms (somatic, behavioral, and cognitive) tend to respond best to modality-specific forms of treatment. Somatic (physical) symptoms tend to respond best to somatic therapies (beta blocking drugs, biofeedback, muscle relaxation, breathing exercises, etc.) Cognitive symptoms tend to respond best to cognitive therapies (psychoanalysis, rational-emotive therapy, etc.). Behavioral symptoms tend to respond best to behavioral therapies (desensitization, learning to deal with memory slips, distractions, and performing techniques). Lehrer earlier suggested (1987) that severe cases may require the combination of several strategies to be effective. My study utilized all four of Lehrer's (1985) recommendations for training professional musicians:

1. Instruction in stress management
2. Opportunities for practice performance
3. Course work in recognizing problems of tension and anxiety, and

4. Instruction in progressive relaxation

The effectiveness of progressive muscle relaxation techniques is greater and longer lasting when used in combination with some form of cognitive therapy (Lund, 1972; Sweeney & Horan, 1982). A survey of 162 amateur and professional musicians supported the concept of musical performance anxiety as a multidimensional cluster of traits: physiologic, behavioral, and cognitive variables. Musicians in that study showing high levels of confidence and competence, used a wide variety of performance anxiety coping strategies, whereas, musicians reporting high levels of nervousness and apprehension, did not use the very coping strategies that might relieve those symptoms (Wolfe, 1990).

Treatments that deal only with the physiological symptoms (beta blocking drugs, tranquilizers, and alcohol) have clear limitations and some harmful side effects (Clark & Agras, 1991; Lehrer, 1987). Many studies indicate that performance anxiety is often related to low self-esteem and irrational thinking (Ayers, 1986; Barrell, Medeiros, Barrell, & Price, 1985; Burns, 1981; Ely, 1991; Hartgers & Jacobs, 1989; Steptoe & Fidler, 1987; Ortiz, 1988). Muscle relaxation, therefore, may not be enough. The treatment of performance anxiety must deal with what seems to be the root cause, irrational thinking. Wilson (1994) advised the following:

> The most effective strategies seem to be those that: (a) prepare the performer to accept a degree of tension and minor mishaps as par for the course; (b) focus on the process and personal enjoyment of the performance rather that audience evaluation of it; and (c) use positive, optimistic self-talk and visual imagery rather than self-doubt or catastrophizing. (p. 203)

It seems the appropriate strategy depends upon the individual performer and the nature of his problem. Persons with trait anxiety, who are generally over-reactive to stress, according to Wilson (1994) may need:

> all-purpose relaxation techniques such as biofeedback, meditation, autogenic training, hypnosis, aerobics and progressive muscular relaxation… Ultimately, however, it will probably be necessary to confront the performance situation itself with methods such as desensitization, flooding, stress inoculation, positive self-talk, and goal imaging. Any of these can be undertaken either through self-study or with the help of a professional counselor. (p. 203)

Separate and Combined Effects of Cue-Controlled Relaxation and Cognitive Restructuring in the Treatment of Musical Performance Anxiety proved equally effective in reducing performance anxiety in pianists at Penn State. Subjects were trained in six sessions of progressive muscle relaxation using the cue word “calm”, or six sessions of cognitive restructuring, replacing negative self-statements with coping statements. Both treatments were effective separately as reflected by pulse rate and self-report. Cognitive restructuring and the combined treatments were uniquely effective on a behavioral anxiety index (Sweeney & Horan, 1982).

A five-week stress management program for 40 nursing students included training sessions using cognitive modification, Stroebel's Quieting Response, and biofeedback techniques for self-relaxation. The experimental groups reported a significant reduction of state anxiety, while the control groups remained relatively unchanged (Heaman, 1995).

A program combining relaxation techniques and a cognitive treatment using self-efficacy enhancement and perceptions of control was superior to a relaxation only program in lowering anxiety and distress in oral surgery patients (Litt, Nye, & Shafer, 1993).

45% of schoolchildren with migraine headaches, treated with a combination therapy of relaxation training, temperature biofeedback, and cognitive training, were clinically improved at the end of the treatment. It appears that a decrease in their state anxiety and an increase in their ability to relax contributed to their headache improvement (Osterhaus, Passchier, VanderHelm, DeJong, Orlebeke, DeGrauw, & Dekker, 1993).

The following additional studies combined behavioral and cognitive therapies for the treatment of performance anxiety: Clark and Agras, 1991; Fremouw and Zitter, 1978; Nagel, Himle, Papsdort, and James, 1989. Given the evidence of the above studies, the need for a cognitive and behavioral treatment should be apparent.

Classroom and Group Therapies

Clinical therapy may not be necessary in many cases of performance anxiety; the teaching of cognitive coping skills has been demonstrated to be beneficial in the conventional classroom setting (Carnahan, 1981). "Although 36% of performance anxiety may require lengthy and complex treatment, 64% may be amenable to treatment by specific behavioral and pedagogic techniques. The latter may be as easily carried out by the music teacher as by the psychotherapist – perhaps even better so by the teacher, because many of these techniques require working at the instrument" (Lehrer, 1987, p. 40).

In regard to public speaking anxiety, Bozik reported (1982) that the University of Illinois created stage fright sections within their basic speech course, which students could elect instead of the normal speech course. Ortiz (1988) proposed an instructional approach for minimizing stage fright, based on insights from Buss's theory of audience anxiety: that audience anxiety correlates with feelings of self-consciousness, characteristics of the audience, and the novelty of the speaking role. Ayers (1986) conducted three extensive studies with college students in basic public speaking classes. The third study included a cognitive modification treatment, which was effective in lowering speaker's stage fright levels. Auerbach used two treatments, in the form of read-it-yourself handouts, systematic desensitization and 16 tips for combating stage fright, and compared their effectiveness in reducing public speaking anxiety. Student subjects rated the 16 tips as more successful and easier to follow (Auerbach, 1981). Another study investigating speech anxiety in the basic college speech course indicated that students felt there should be a unit on stage fright and that discussion about it was helpful (Mandeville, 1991).

Questionnaires filled out by 201 college music students at three schools (Southwest Texas State University, University of Miami, and the Manhattan School of Music) regarding musician stresses and coping patterns, revealed that the students sought help from first from their friends, second from their teachers, and then a family member. Professional help (psychiatrist, social worker, psychologist) was sought least frequently for aid with problems related to their music. Among the top ten sources of stress were music progress impatience, pre-performance nervousness, stage fright, and concentration

(Dews, 1989). My study offered an educational approach in the form of a seminar to help students develop their own anxiety coping strategy and skills.

Wolfe's (1990) survey of 193 performing musicians, amateur and professional, revealed that 162 of them used at least one coping strategy. The importance of learning to keep one's emotions under control before and during a musical performance was supported by the fact that the total number of emotion-focused coping strategies reported was nearly twice the number of problem-focused strategies. Those employing the emotion-focused coping strategies reported feeling greater confidence and competence than the others. The results of this study suggest that music teachers should add basic stress-reduction techniques to their teaching routines. Pruett (1988, p. 74) suggested that educators must "arm them (student performers) with the skills, both psychological and behavioral, to render them more durable in the crucible of public performance." He further stated that we must help them to become whole people, not just performers. "No More Stage Fright!" is a two-day weekend course taught by Janet E. Esposito to groups of 8-12 people in Southbury, Connecticut, for a fee of $275. It seeks to reduce performance anxiety associated with public speaking and public performance situations using relaxation techniques and cognitive restructuring to change perceptions of self and audience (Esposito, 1999).

Summary statements

Purpose and Rationale

Is there a need to teach coping skills for reducing musical performance anxiety? Not everyone will seek the help of a psychologist or travel to Connecticut for a two-day class. The above-cited surveys show that we need to do more at the educational level to nurture coping strategies to survive the pitfalls of public performance. My study is one such endeavor. The purpose of my study was to evaluate the effectiveness of a Performance Anxiety Coping Skills Seminar. Did the seminar help reduce maladaptive performance anxiety and enhance musical performance?

Design and Variables

A pretest-posttest experimental design was used for this research. Two dependent variables were measured using questionnaires completed by the student performer and his instructor: 1) musical performance anxiety and 2) musical performance quality. The independent variable was the treatment: 1) informal practice performance class, or 2) a performance anxiety coping skills seminar. Other extraneous variables reported by student performers included: stress, health or physical conditions, diet, chemicals, and other related problems. The treatment groups were given equal attention and time.

Hypotheses

Hypothesis #1: The posttest performance ANXIETY of Group I (Practice Performance) will be significantly less than the pretest.

I expected informal practice performance to be effective in reducing performance jitters. Practice performance is generally believed by music educators to be effective in building confidence in performance. A study by Foa, Jameson, Turner, and Payne, (1980)

compared massed versus spaced exposure sessions in the treatment of agoraphobia, the avoidance of anxiety causing things. Massed exposure in 10 daily sessions generated more improvement than 10 sessions spread out over 10 weeks. Informal musical practice performance utilizes the technique of exposure to fear eliciting stimuli as a treatment to extinguish phobia. Lehrer's (1985) recommendations for training professional musicians included opportunities for practice performance.

Hypothesis #2: The posttest performance QUALITY of Group I (Practice Performance) will be significantly greater than the pretest.

Even though the students in the informal practice performance sessions weren't performing recital pieces, but warm-up exercises, scales, and etudes, I still expected their performance *quality* to improve as a result of the treatment being effective in reducing the level of maladaptive performance anxiety. The goal of the informal practice performance was to help student performers "Get the fire under control and use it to their advantage in performance." Hamann's studies (1982 and 1983) indicated that anxiety could facilitate the performance of better-trained musicians.

Hypothesis #3: The posttest performance ANXIETY of Group II (Coping Skills Seminar) will be significantly less than the pretest.

I expected the coping skills to enable students to reduce their maladaptive performance anxiety. Musicians showing high levels of confidence and competence, used a wide variety of performance anxiety coping strategies, whereas, musicians reporting high levels of nervousness and apprehension did not use the very coping strategies that might relieve those symptoms (Wolfe, 1990). Cognitive-behavior therapy resulted in statistically significant reductions in subjective anxiety and improved performance confidence (Clark & Agras, 1991).

Hypothesis #4: The posttest performance QUALITY of Group II (Coping Skills Seminar) will be significantly greater than the pretest.

Maladaptive performance anxiety is debilitating to performance (Wolfe, 1989). I expected the seminar to be effective in helping students to get it under control, and thus, improve musical performance quality. A questionnaire completed by 178 musicians suggests that planning for coping with various stress-related performance problems may render stage fright facilitative to musical performance quality (Lehrer, Goldman, & Strommen, 1990). Cognitive-behavior therapy resulted in statistically improved quality of musical performance (Clark & Agras, 1991).

Hypothesis #5: Group II seminar students will have significantly less performance ANXIETY after treatment than Group I practice performance students.

I expected the coping skills seminar to be more effective in reducing performance anxiety than the practice performance sessions. Psychotherapeutic interventions for music performance anxiety appear to be successful to the degree that they address specific components (cognitive, physiological, behavioral) of the overall profile of anxiety (Salmon, 1990, p. 3-4, 6, 8). A questionnaire completed by 178 musicians suggested that

planning for coping with various stress-related performance problems might render stage fright facilitative (Lehrer, Goldman, & Strommen, 1990).

Hypothesis #6: Group II seminar students will have significantly greater performance QUALITY after treatment than Group I practice performance students.

I expected the coping skills seminar subjects to have better performance quality than the practice performance subjects. I expected that the coping skills gained in the seminar would do better at enabling students to "get the fire under control" than the practice performance sessions, and thus, enhance their musical performance quality. Solo piano performance anxiety was more effectively reduced with systematic desensitization than with musical analysis and performance rehearsal at Columbia University (Appel, 1976).