PSYCHOLOGICAL TREATMENT OF MUSICAL PERFORMANCE ANXIETY: CURRENT STATUS AND FUTURE DIRECTIONS

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A comprehensive review of research evaluating psychological treatments of musical performance anxiety is provided. Studies were evaluated against key methodological criteria for psychotherapy outcome research. Available literature points to the utility of exposure and cognitive therapies, although there is no clear-cut evidence suggesting the superiority of one approach or benefits of combining the two. Past research is characterized by recurring methodological limitations, particularly overreliance on self-report outcome measures. Future investigations should consider screening out individuals who do not evidence marked dysfunction and whose anxiety results from weak technical ability, as well as including treatment manuals, multiple therapists, multichannel outcome measures, and follow-up data. Clinicians working with musicians experiencing performance anxiety may wish to incorporate exposure and cognitive restructuring in treatment.

Keywords: musical performance anxiety, psychotherapy, methodology

Musical performance anxiety is a serious problem that adversely affects many musicians of all ages and performance abilities (Fishbein & Middlestadt, 1988; Wesner, Noyes, & Davis, 1990). For some musicians, performing inspires tremendous exhilaration and great joy. For others, performance engenders feelings of terrible dread or acute terror. Even such highly acclaimed performers as Luciano Pavarotti, Pablo Casals, and Artur Rubenstein are said to have experienced extreme anxiety while performing in public (Salmon, 1990). In some instances, the anxiety is so severe that it noticeably disrupts performance or even ends careers.

The anxiety disorders are the most prevalent of the emotional disturbances, affecting between 13% and 19% of the population (Regier & Narrow, 2002). Performance anxiety is stimulated by performing or behaving in front of other people and by anticipating the negative evaluation that may result (Hopko, McNeil, Zvolensky, & Eifert, 2001). There have been many studies of the effectiveness of treatments for various performance anxieties, including public speaking anxiety (reviewed in Allen, 1989; Kelly & Keaten, 2000), sports performance anxiety (reviewed in Burton, 1990; Martin, Moritz, & Hall, 1999), and test anxiety (reviewed in Ergene, 2003; Jones & Petruzzi, 1995). There has been far less research evaluating treatments for musical performance anxiety.

However, interest in musical performance anxiety seems to have grown through the years, as evidenced by the publication of four important general reviews of this problem (see Clark, 1989; Salmon, 1990; Steptoe, 2001; Wilson, 1997). These four papers each include a selective review of research on treating musical performance anxiety. In contrast, this article provides a comprehensive review of empirical research evaluating
the effectiveness of psychologically oriented treatments for musical performance anxiety. Our review begins with a summary of the problem of musical performance anxiety. Thereafter, we appraise the findings of controlled outcome studies of psychological treatments for this problem. Next, we assess the methodological strengths and weaknesses of this literature and offer suggestions for future research in this area. We conclude by exploring the clinical implications of our review.

Overview of Musical Performance Anxiety

Salmon (1990) defines musical performance anxiety as “the experience of persisting, distressful apprehension about and/or actual impairment of, performance skills in a public context, to a degree unwarranted given the individual’s aptitude, training, and level of preparation” (p. 3). Performance anxiety is a serious and widespread problem among musicians. For example, Wesner, Noyes, and Davis (1990) studied 301 students and faculty at the University of Iowa School of Music. Twenty-one percent of respondents reported marked distress while performing, and 16% indicated that performance anxiety had damaged their careers. Some studies show that performance anxiety is significantly higher among students than among professional musicians (Steptoe & Fidler, 1987). Other studies find that performance anxiety affects large numbers of musicians of all ages and ability levels (van Kemnade, van Son, & van Heesch, 1995). A very large survey of 2,200 professional musicians from 48 orchestras indicated that musical performance anxiety was a debilitating problem for 19% of female and 14% of male performers (Fishbein & Middlestadt, 1988). Overall, prevalence research suggests that about 15% to 25% of musicians suffer from musical performance anxiety (Steptoe, 2001).

Musical performance anxiety shares many features with a Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnosis of social phobia (Osborne & Franklin, 2002). According to DSM–IV (American Psychiatric Association, 2000), the core criteria of social phobia can be summarized as follows: (a) the individual experiences a marked fear of social or performance situations in which he or she might be embarrassed or humiliated; (b) anxiety is inevitably produced by anticipated or actual performance; (c) the affected individual recognizes that his or her fear is excessive; and (d) the person avoids the feared situation or endures it with extreme distress. A distinctive characteristic of musicians suffering from performance anxiety and of people diagnosed with social phobia is that they are extremely sensitive to evaluation apprehension, or the fear of negative evaluation by others (Curtis, Kimball, & Stroup, 2004).

In DSM–IV, there is a specifier for social phobia. In a generalized social phobia, distress is caused by a wide variety of everyday social situations, such as speaking at a meeting, eating at a restaurant, or signing a credit card receipt in front of a store clerk. Because people suffering from musical performance anxiety fear a single performance situation, some of these individuals might possibly be diagnosed with social phobia, but they probably would not be assigned the generalized specifier. Heinberg, Holt, Schneier, Spitzer, and Liebowitz (1993) have conceptualized three types of social phobia: generalized, nongeneralized, and circumscribed. People with nongeneralized social phobia function in at least one broad social domain without anxiety, and those with circumscribed social phobia experience anxiety in only one or two discrete situations. According to this paradigm, musical performance anxiety might represent a circumscribed type of social phobia.

Little research has examined the comorbidity of musical performance anxiety and social phobia. Osborne and Franklin (2002) reported that only 27% of individuals endorsing high levels of musical performance anxiety also met DSM–IV criteria for social phobia as determined by structured interview. Similarly, in a study evaluating cognitive–behavioral and pharmacological treatments for musical performance anxiety, Clark and Agras (1991) required that potential participants endorse a definable subset of performance anxiety items on a structured interview measure of DSM disorders to be eligible for participation. Of note, only 2 of 50 participants met DSM criteria for generalized social phobia. Likewise, Steptoe and Fidler (1987) obtained only low correlations between musical performance anxiety and fear of social situations. Compared with nongeneralized types of social phobia, generalized social phobia is more likely to have an earlier age of onset, run in families, and involve fears of interaction rather than performance situations (Mannuzza et al., 1995) and is less likely to
involve prior traumatic conditioning experiences (Stemberger, Turner, Beidel, & Calhoun, 1995). Indeed, anecdotal evidence suggests that many individuals with musical performance anxiety are less likely than people with generalized social phobia to endorse the DSM criteria that their fear is excessive or irrational. This may, in part, be a function of the extremely high standards of training and performance to which classical music students and professional musicians are held. Unlike a person who is afraid to eat in public at a restaurant or to sign a credit card receipt in front of a store clerk, it may be contextually appropriate for musicians to be concerned about how they are perceived by others (e.g., their audience, teachers, jury members, music critics).

In sum, although musical performance anxiety and generalized social phobia share some common diagnostic features, musical performance anxiety may comprise a distinct form of social phobia that may best be described as circumscribed in nature. Consequently, it is unclear whether the findings of research evaluating the effectiveness of psychological treatments for generalized social phobia (see Antony & Swinson, 2000, and Barlow, 2002, for reviews) can be extended to the treatment of musical performance anxiety. Indeed, more research is needed to examine continuities and boundary conditions between musical performance anxiety and generalized social phobia.

Evaluation of Treatments for Musical Performance Anxiety

The aim of this article is to provide a comprehensive, methodologically informed review of empirical research evaluating psychological treatments for musical performance anxiety. To be included in our review, studies were required to use a controlled design in which a psychologically oriented treatment for musical performance anxiety was compared with at least one alternative intervention for this problem or a placebo, attention, wait-list, or no-treatment control condition. An exhaustive search of the PsycINFO and MedLine databases, as well as examination of related reviews in this area, yielded nine journal articles describing 10 treatment outcome studies satisfying these criteria. Table 1 summarizes the major characteristics of these studies, including nature and length of treatments, type and size of samples, types of outcome measures, and a summary of findings. The studies can be grouped into five areas according to the type of treatment approaches investigated: (a) behavior and cognitive therapies; (b) biofeedback; (c) hypnosis; (d) music-enhanced therapy; and (e) cognitive–behavioral therapy versus medication.

Behavior and Cognitive Therapies

The pioneering study of the psychological treatment of musical performance anxiety was conducted by Appel (1976). This study sought to reduce performance anxiety using either an exposure-based behavior therapy or traditional music analysis. Participants were 30 volunteer graduate music students who had previously experienced anxiety in solo piano performances. These participants were randomly assigned to one of three treatment conditions. The systematic desensitization treatment involved exposure to performance situations and incorporated such techniques as in vivo desensitization, progressive muscle relaxation, and counterconditioning. The music analysis treatment focused on intellectual mastery of the structural and stylistic aspects of the musical piece to be performed. Treated participants received eight 1-hr therapy sessions. These treatments were compared with a no-treatment control condition. Results showed that those receiving the systematic desensitization treatment reduced self-reported anxiety more than the other two groups. Furthermore, those in the systematic desensitization and music analysis groups reduced piano recital errors more than controls. The results of the study suggested that exposure therapy may be useful for ameliorating anxiety and technical errors during musical performance and laid the groundwork for future outcome studies of behavior and cognitive treatments for musical performance anxiety.

Negative cognitions such as catastrophizing and perfectionism have been shown to accompany musical performance anxiety (Mor, Day, Flett, & Hewitt, 1995; Osborne & Franklin, 2002; Steptoe & Fidler, 1987). Accordingly, several studies compared the effectiveness of cognitive therapies designed to modify these maladaptive thought patterns with behavior therapy emphasizing exposure procedures. For example, Kendrick, Craig, Lawson, and Davidson (1982) evaluated exposure and cognitive therapies for reducing the performance anxiety of 53 piano students. Individuals were referred by their music teacher as
<table>
<thead>
<tr>
<th>Study</th>
<th>Treatment</th>
<th>Treatment length</th>
<th>Size and nature of sample</th>
<th>Outcome measures</th>
<th>Summary of findings⁸</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appel (1976)</td>
<td>Systematic desensitization (SD), music analysis (MA), no-treatment control (C)</td>
<td>Eight 1-hr sessions</td>
<td>30 graduate music students</td>
<td>SR SD &gt; MA = C on SR. Phy SD = MA &gt; C on Per.</td>
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<tr>
<td>Kendrick et al. (1982)</td>
<td>Attentional training (AT), behavioral rehearsal (BR), wait-list control (WL)</td>
<td>Three 1.5-hr sessions</td>
<td>53 volunteer pianists</td>
<td>SR At posttime, AT = BR = WL on all measures. Phy At 5-week follow-up, AT = BR &gt; WL on SR and Per.</td>
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<tr>
<td>Sweeny &amp; Horan (1982)</td>
<td>Cue-controlled relaxation (CCR), cognitive restructuring (CR), combined (CCR + CR), musical analysis, wait-list control</td>
<td>Six 60-min sessions</td>
<td>49 undergraduate music students</td>
<td>SR CCR = CR = CCR + CR &gt; WL on SR and Phy. CCR &gt; CR on Per. CR &gt; CCR on Obs. MA = WL on all measures.</td>
<td></td>
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<tr>
<td>Niemann et al. (1993)</td>
<td>Biofeedback, breathing, relaxation, coping strategies (BF + CB), wait-list control</td>
<td>Six 35-min biofeedback sessions and six 60-min group sessions</td>
<td>18 undergraduate music students</td>
<td>SR BF = CB &gt; WL on SR.</td>
<td></td>
</tr>
<tr>
<td>Nagel et al. (1989)</td>
<td>Biofeedback, systematic desensitization, coping strategies, rational-emotive therapy (BF + CB), wait-list control</td>
<td>Six biofeedback sessions and six cognitive-behavioral sessions of unknown length</td>
<td>20 undergraduate music students</td>
<td>SR BF = CB &gt; WL on SR.</td>
<td></td>
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<tr>
<td>Stanton (1994)</td>
<td>Hypnosis (H), attention-control (AC)</td>
<td>Two 50-min sessions</td>
<td>40 music students</td>
<td>SR H &gt; AC on SR at posttime and at 6-month follow-up.</td>
<td></td>
</tr>
<tr>
<td>Montello et al. (1990), experiment 1</td>
<td>Music therapy (MT), wait-list control</td>
<td>Twelve 1.5-hr sessions</td>
<td>17 freelance musicians</td>
<td>SR MT &gt; WL on SR.</td>
<td></td>
</tr>
<tr>
<td>Montello et al. (1990), experiment 2</td>
<td>Music therapy, attention-control, wait-list control</td>
<td>Twelve 1.5-hr sessions</td>
<td>24 freelance musicians</td>
<td>SR MT &gt; AC on Obs and Per. MT &gt; AC = WL on SR.</td>
<td></td>
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<tr>
<td>Brodsky &amp; Sloboda (1997)</td>
<td>Cognitive-behavioral package (CB), CB + prerecorded music (M), CB + prerecorded music and vibrotactile sensations (V)</td>
<td>Eight 1-hr sessions</td>
<td>54 professional musicians</td>
<td>SR CB = CB + M = CB + M + V. For all groups, SR reduced at 2-month follow-up, but not at posttime.</td>
<td></td>
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<tr>
<td>Clark &amp; Agras (1991)</td>
<td>Cognitive-behavioral therapy with placebo (CB + P), cognitive-behavioral therapy with buspiron (CB + B), buspiron (B), placebo (P)</td>
<td>Five sessions of unknown length</td>
<td>34 musicians</td>
<td>SR CB + P = CB + B = B = P on Obs and Per at posttime, and SR at 1-month follow-up.</td>
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</table>

Note. SR = self-report measure of anxiety; Phy = physiological measure of arousal, Per = rating of musical performance quality; Obs = observational measure of anxiety.

⁸ Results are for posttime unless otherwise indicated.
having extreme performance anxiety, and to qualify for participation students had to endorse debilitating anxiety on at least 5 of 15 items on the Personal Report of Confidence as a Performer (PRCP), a self-report measure of musical performance anxiety. Individuals were randomly assigned to one of three treatment conditions. The first group received a cognitive therapy labeled attentional training, in which negative cognitions were identified, challenged, and replaced by positive thoughts. Individuals in the behavioral rehearsal group received an exposure therapy that involved repeated practice in front of an audience. A wait-list control group comprised the third condition. Treatments were delivered in three 1.5-hr sessions. No differences between the three groups were observed on self-report, behavioral, or physiological indicators of anxiety or ratings of performance quality at posttime. However, at a 5-week follow-up, individuals in both treatment groups reduced negative self-statements and improved quality of performance more than control participants. Furthermore, attentional training was shown to be superior to behavioral rehearsal in reducing the visual signs of anxiety, which in turn was superior to no treatment. In an attempt to identify some of the mechanisms of action of their treatments, Kendrick et al. noted that self-reported personal efficacy expectations and positive self-talk scores at posttime predicted subsequent improvements in anxiety and quality of performance at follow-up.

In a similar study, Sweeney and Horan (1982) evaluated the separate and combined effects of an exposure-based behavior therapy and cognitive restructuring as methods for reducing musical performance anxiety. Participants were undergraduate music majors recruited via advertisements distributed in their piano courses. A follow-up structured interview was used to screen out volunteers who did not appear to be suffering from debilitating performance anxiety, and those with weak technical ability whose anxiety was likely to be a consequence rather than a cause of poor performance. A group of 49 participants took part in pretest and posttest recitals. Self-report anxiety measures, pulse rate before performance, and objective measures of anxiety and performance competence were obtained during each of these recitals.

Participants were assigned to one of five treatment conditions. In the exposure-oriented cue-controlled relaxation treatment, individuals were trained in progressive muscle relaxation and given a cue word that was paired with a relaxed state such that they could prompt themselves to relax while performing. In the cognitive restructuring treatment, participants identified self-defeating thought patterns. They were taught how these negative thoughts diminish performance quality and increase performance anxiety and were given coping self-statements to replace negative thoughts. A third condition involved a combination of these two treatments. Musical analysis, the fourth treatment, involved increasing participants’ familiarity with the structure of the composition to be performed. The fifth condition was a wait-list control group. Treatments were provided in six 60-min sessions.

The results of this study indicated that both cue-controlled relaxation and cognitive restructuring were more effective than no treatment in reducing pulse rate and self-reported anxiety during the second performance. Musical performance quality improved more with cue-controlled relaxation, whereas behavioral indices of anxiety were more responsive to cognitive restructuring. The combined treatment was no more effective than either of the individual treatments.

In combination, the findings of Appel (1976), Kendrick et al. (1982), and Sweeney and Horan (1982) argue that both exposure therapy and cognitive therapy may be of benefit to musicians suffering from performance anxiety. However, the results of this research do not clearly suggest the superiority of one therapy relative to the other or an advantage to combining the treatments. However, in view of the small size of this literature, such conclusions should be considered preliminary. The findings of Kendrick et al. (1982) are noteworthy because they suggest that benefits continue to accrue after therapy has ended, thereby highlighting the importance of obtaining long-term follow-up data.

Biofeedback

Electromyographic (EMG) biofeedback involves the use of monitoring equipment that helps individuals reduce muscle tension in a body part. The electromyogram measures electrical impulses from the muscles and translates those impulses into a form that people can detect. Through association with the feedback, individuals learn to reduce muscle tension. Research had
shown that EMG biofeedback can be useful in reducing muscle tension in specific muscle groups involved in musical performance (see, e.g., LeVine & Irvine, 1984), thereby improving performance quality (Morasky, Reynolds, & Sowell, 1983). A logical extension of this work involves applying EMG biofeedback to the muscular tension that is often a symptom of musical performance anxiety.

Niemann, Pratt, and Maughan (1993) evaluated the effects of a multifaceted cognitive–behavioral treatment emphasizing EMG biofeedback training, coping strategies, and music relaxation in reducing musical performance anxiety. Participants were solicited from a large group of music majors who previously had been screened using a self-report measure of musical performance anxiety. Only students who reported the most severe anxiety on this scale were invited to participate in the main study. A total of 21 students were nonrandomly assigned to either an experimental group or a wait-list control group. The experimental group received six 35-min biofeedback sessions and six 1-hr cognitive–behavioral group meetings. The group meetings instructed participants in coping strategies for managing stress, such as muscle relaxation, breathing awareness, and performance coping imagery. Results indicated that the multifaceted treatment was more effective than no treatment in reducing anxiety as indicated by self-report measures administered immediately before stressful performance situations (i.e., music lessons and juries).

Nagel, Himle, and Papsdorf (1989) also evaluated the effectiveness of a multifaceted treatment incorporating biofeedback for reducing musical performance anxiety. Participants were undergraduate music students who had complained of debilitating performance anxiety, but this was not verified objectively. Individuals were randomly assigned to a cognitive–behavioral treatment condition that incorporated thermal biofeedback or a wait-list control condition. In thermal biofeedback, participants are taught to warm a peripheral body part, such as the hands, which produces feelings of relaxation and calm. Other elements of the multifaceted treatment included systematic desensitization, training in cognitive coping strategies, and rational-emotive therapy. Consequently, individuals assigned to this condition received a combination of biofeedback, exposure therapy, and cognitive therapy.

The biofeedback training was delivered in six sessions of unknown length, and the cognitive–behavioral procedures were provided in six separate sessions, also of unknown length. Results showed that the multifaceted treatment reduced self-reported performance anxiety and trait anxiety more than the control condition.

The findings of Niemann et al. (1993) and Nagel et al. (1989) are intriguing because they suggest that a combination of biofeedback, exposure therapy, and cognitive restructuring may be useful for treating musical performance anxiety. Of course, in the designs employed by these investigators, it is not possible to separate the effects of the biofeedback from the cognitive–behavioral components of the treatment package. However, the results introduce the possibility that biofeedback used alone or as an adjunct to cognitive–behavioral treatment may be of benefit to musicians suffering from performance anxiety. Consequently, this treatment modality would seem to be worthy of continued investigation.

Hypnosis

Various forms of performance anxiety have been shown to be amenable to treatment with hypnosis (see, e.g., Schoenberger, Kirsch, Geran, Montgomery, & Pastyrnak, 1997), although only one study has evaluated the hypnotic treatment of musical performance anxiety (Stanton, 1994). Hypnosis classically involves making direct suggestions for symptom reduction, although recent research has suggested that cognitive–behavioral therapies for a range of problems, including anxiety, can be enhanced by presenting them in a hypnotic context (see Kirsch, Montgomery, & Sapirstein, 1995). Stanton (1994) compared hypnosis with an attention-control condition in reducing the musical performance anxiety of 40 music majors studying at a conservatory. Participants were identified by their music teachers as being prone to excessive anxiety in performance situations and were randomly assigned to one of two treatment conditions. The hypnotic treatment condition consisted of a hypnotic induction plus suggestions for relaxation, competency-based imagery, and confidence. This intervention was provided in two 50-min sessions. Individuals in the attention-control condition met with a therapist for a discussion group for the same amount of time that each treated individual spent receiving hypnosis. Results showed that, at posttime, the
hynnosis group reduced self-reported anxiety more than the control group. Moreover, there was another significant reduction in self-reported anxiety at a 6-month follow-up. These findings of Stanton are interesting because they point to the promise of hypnosis as a treatment for musical performance anxiety. Furthermore, consistent with Kendrick et al. (1982), Stanton’s results highlight the importance of obtaining follow-up data to assess long-term treatment gains.

Music and Music-Enhanced Therapy

Several studies have examined the benefits of music for reducing musical performance anxiety. This approach is based on the assumption that musicians may be more receptive to a treatment that incorporates music as a therapeutic vehicle. Montello, Coons, and Kantor (1990) report the results of two studies of a music therapy intervention designed for musicians suffering from performance anxiety. In Experiment 1, these investigators compared a music therapy intervention consisting of relaxation, breathing, musical improvisation, role-playing rehearsal, and guided imagery with a wait-list control condition. Some of the elements of this intervention would seem to be similar to those contained in cognitive–behavioral treatments for performance anxiety (e.g., relaxation and exposure by means of role-playing and in improvisation sessions). Participants were 17 freelance musicians who reported debilitating anxiety during performance and who responded to an ad for group music therapy of this problem. Treatments were delivered in twelve 1.5-hr sessions by two certified music therapists. Results showed that participants receiving music therapy reduced self-reported musical performance anxiety and trait anxiety more than those in the control condition.

In Experiment 2, Montello et al. (1990) extended the basic paradigm of the first study by adding an attention-control group and observational measures of performance anxiety and performance quality. Twenty-four freelance musicians suffering from musical performance anxiety who responded to an ad for treatment served as participants. Unfortunately, wait-list controls from the first experiment were assigned to the music therapy condition in the second study. Thus, not all participants were randomly assigned to condition. Participants in the music therapy condition improved more than those assigned to the attention control condition on the observational measures of performance anxiety and quality. Furthermore, individuals receiving music therapy showed greater improvement in self-reported musical performance anxiety than those assigned to either of the control conditions. This study is noteworthy because it examined potential moderators of the effects of treatment. Participants scoring high on trait anxiety and low on narcissism at pretme were most likely to benefit from treatment. Perhaps high trait anxiety produces stronger motivation for change and low narcissism is associated with greater openness to the change process.

Brodsky and Sloboda (1997) investigated the effects of adding two kinds of music therapy interventions to a standard cognitive–behavioral treatment package for musical performance anxiety. Participants were 54 professional musicians who were not prescreened for debilitating performance anxiety. These individuals were randomly assigned to one of three treatment conditions. The traditional cognitive–behavioral treatment consisted of relaxation, imagery, and cognitive restructuring. In the music condition, participants received relaxation, imagery, and cognitive restructuring; plus, they listened to prerecorded music. Finally, in the vibrotactile sensations condition, participants were administered the same cognitive–behavioral procedures, listened to prerecorded music, and also experienced music-generated vibration sensations. Treatments were provided in eight 1-hr sessions. Results showed that there was no difference in improvement between the three conditions on self-report measures of anxiety, stress, or musical performance anxiety, thereby failing to support the contention that adding music enhances cognitive–behavioral therapy for this problem. However, an interesting effect of time was noted in the results. At posttime, all treatments produced a significant reduction on measures of trait anxiety and stress but not on measures of musical performance anxiety. However, at a 2-month follow-up, treatment produced a significant change only on the measures of musical performance anxiety. This pattern of findings may mean that some of the benefits of cognitive–behavioral therapy are not consolidated until after treatment, and that it is important to obtain follow-up data to comprehensively assess treatment gains.

Overall, the results of these three experiments suggest that music therapy may be a useful treat-
ment for reducing musical performance anxiety. It is worth noting once again that some of the techniques of music therapy are similar to those of cognitive–behavioral therapy. On the other hand, the findings do not show that adding music to cognitive–behavioral procedures produces a direct incremental benefit. However, given the social stigma associated with emotional problems and mental health services (see Hayward & Bright, 1997), it is worth considering that some musicians may be more open to treatment when the techniques are framed as musical rather than psychological in nature.

Cognitive–Behavioral Therapy and Medication

Research has consistently demonstrated that relative to a placebo, beta-blockers such as atenolol (Neftel et al., 1982), propranolol (Brantigan, Brantigan, & Joseph, 1982), pindolol (James, Burgoyne, & Savage, 1983), and nadolol (James & Savage, 1984) can inhibit heart rate and improve the technical quality of musical performance. Of note, one study showed that a low dose of a beta-blocker enhanced the quality of musical performance, whereas a high dose diminished it (Gates et al., 1985). Presumably, this pattern of findings reflects the Yerkes-Dodson law (Duffy, 1962), which posits that there is an inverted-U-shaped relationship between arousal and performance, and that a moderate level of activation is required for optimal performance. Accordingly, a high dose of a beta-blocker may lower physiological arousal to the point where performance suffers. Beta-blockers were originally developed to treat high blood pressure and other coronary problems; they work by disrupting the action of the neurotransmitters epinephrine and norepinephrine (see Deglin & Vallerand, 1999). Although beta-blockers generally have been shown to be useful in the treatment of musical performance anxiety (see Brandfonbrener, 1990, and Nube, 1991), they also have side effects, can interact with other medications, are contraindicated for certain medical conditions, and can be habit forming. Therefore, treatment with beta-blockers should always be supervised by a physician.

To our knowledge, no studies have examined the effects of combining a beta-blocker with psychological treatment for musical performance anxiety. Indeed, only one study has investigated whether adding medication enhances psychological treatment for this problem. Clark and Agras (1991) evaluated the individual and combined effects of cognitive–behavioral therapy and buspirone for reducing performance anxiety in musicians. Buspirone is an antianxiety agent that is chemically unrelated to benzodiazepines, barbiturates, or other sedative–anxiolytic medications. The mechanism of action of buspirone is unknown. This medication is said to have a limited side effect profile relative to other antianxiety agents (see Deglin & Vallerand, 1999).

In their study, Clark and Agras (1991) evaluated the effects of four treatment conditions: (a) a cognitive–behavioral treatment featuring exposure and cognitive procedures paired with 5 mg of buspirone, (b) the same cognitive–behavioral treatment combined with a placebo medication, (c) buspirone alone, and (d) placebo alone. Participants were 34 musicians recruited through the mass media who indicated that they had suffered from performance anxiety. To qualify for participation, these individuals had to achieve a score of 8 or higher on the PRCP, a self-report measure of musical performance anxiety. Furthermore, all participants endorsed a definable subset of performance anxiety items associated with a DSM–III–R diagnosis of social phobia on a structured interview measure of DSM Axis I disorders (i.e., Structured Clinical Interview for DSM). The cognitive–behavioral treatment was adapted from Kendrick et al. (1982) and consisted of five weekly sessions of unknown length. Results showed that, compared with individuals treated with only buspirone or placebo, those assigned to the cognitive–behavioral conditions showed more improvement on subjective reports of anxiety during performance, as well as on objective ratings of musical performance quality during a posttime performance. There were no differences among treatment conditions on self-reported musical performance anxiety scores at posttime. However, at a 1-month follow-up, participants assigned to the cognitive–behavioral conditions showed lower self-reported musical performance anxiety than did those assigned to the other treatment conditions, once again suggesting the possibility that some treatment gains are not realized for an extended period of time. Statistical comparisons between the cognitive–behavioral with buspirone condition and the cognitive–behavioral with placebo condition were not presented. Therefore, it is not known whether adding medication to the cognitive–behavioral treatment produced an in-
cremental benefit. However, it does not seem unreasonable to ask whether medications like buspirone or beta-blockers can enhance cognitive–behavioral treatment for some individuals. Thus, further controlled research on this question seems warranted.

**Effect Sizes of Treatments**

An effect size was generated for each active treatment in 8 of the 10 studies included in this review. Effect size was calculated as the mean difference between a treatment group and a control group divided by the pooled standard deviation. These standardized effect sizes were then corrected for small sample bias (Hedges & Olkin, 1985) because of the small samples noted in this literature. Effect sizes were not calculated for Niemann et al. (1993) because means and standard deviations were not presented. They also were not calculated for Brodsky and Sloboda (1997) because this study did not incorporate a control condition. In generating effect sizes, each of the treatments was compared with a control group of some kind. One of the studies used a no-treatment control condition (Appel, 1976), one used a placebo control condition (Clark & Agras, 1991), two used an attention control condition (Montello et al., 1990, Experiment 2; Stanton, 1994), and the remaining four used a waitlist control condition. Within each study, effect sizes for each treatment were averaged across dependent variables at posttreatment and, also, at follow-up when such data were available.

Table 2 presents treatment conditions, comparison–control conditions, sample sizes, and mean effect sizes. Eleven of the 15 treatment conditions were judged by us to be psychological in nature. Inspection of the table reveals substantial effect sizes for many of these psychological treatments. Cohen (1988) classifies effect sizes of .2 as small, .5 as medium, and .8 as large. According to this yardstick, at posttreatment, six effect sizes fell in the small range, three in the medium range, and two in the large range. Of the four psychological treatments for which follow-up data were available, one effect size would be classified as medium and three as large. When effect sizes were weighted by the size of the samples from which they were obtained, the mean weighted effect size for the psychological treatments was .56 at posttreatment and 1.36 at follow-up. This indicates that the average participant receiving some form of psychological treatment for musical performance anxiety showed more improvement than about

<table>
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<tr>
<th>Study and treatment</th>
<th>Control condition</th>
<th>n</th>
<th>d at posttreatment</th>
<th>d at follow-up</th>
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<tbody>
<tr>
<td>Appel (1976)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systematic desensitization</td>
<td>no treatment</td>
<td>19</td>
<td>.38</td>
<td>-</td>
</tr>
<tr>
<td>Music analysis</td>
<td>no treatment</td>
<td>19</td>
<td>.11</td>
<td>-</td>
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<tr>
<td>Kendrick et al. (1982)</td>
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<tr>
<td>Attentional training</td>
<td>wait list</td>
<td>32</td>
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<td>1.42</td>
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<td>32</td>
<td>.37</td>
<td>0.79</td>
</tr>
<tr>
<td>Sweeney &amp; Horan (1982)</td>
<td></td>
<td></td>
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<td>Cue-controlled relaxation (CCR)</td>
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<td>17</td>
<td>.67</td>
<td>-</td>
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<td>Cognitive restructuring (CR)</td>
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<td>20</td>
<td>.34</td>
<td>-</td>
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<td>40</td>
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<td>Music therapy</td>
<td>attention</td>
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<td></td>
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<tr>
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<td>placebo</td>
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<td>.01</td>
<td>0.27</td>
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</table>

*Note.* Exp. = experiment.
71% of controls at posttime and about 91% of controls at follow-up.

Methodological Considerations and Treatment Outcome

The methodological status of the reviewed studies should be considered before drawing conclusions about the utility of psychologically oriented treatments for musical performance anxiety. Table 3 evaluates the 10 studies against six key methodological criteria: (a) use of an objective indicator of musical performance anxiety as a subject inclusion criteria, (b) screening of individuals for technical ability in music, (c) specification of treatments via a manual or its equivalent, (d) use of multiple therapists, (e) use of full battery of multichannel outcome measures, and (f) collection of long-term follow-up data. A study was rated as having met a criteria (indicated by a Yes in Table 3) if it was obvious from the article that the criterion was likely to have been met. Otherwise, the study was given a rating of No. Because detailed presentations of research methodology are available elsewhere (Campbell & Stanley, 1966; Shadish, Cook, & Campbell, 2002), only the most frequently occurring limitations identified in the reviewed studies are mentioned here. (It should be noted that some of the featured methodological criteria, e.g., treatment manuals, are more consistent with an efficacy vs. an effectiveness approach to evaluating psychotherapy outcome.)

Objective Indicator of Debilitating Musical Performance Anxiety

Research evaluating the effectiveness of treatments for musical performance anxiety should be conducted with individuals who actually suffer from clinical levels of performance anxiety. The findings of studies utilizing samples experiencing subclinical levels of musical performance anxiety may not generalize to performers who are truly debilitated by this problem. For example, treatments that are shown to be effective with mild levels of musical performance anxiety may not be effective with more serious cases. Furthermore, verification of clinical levels of dysfunction using an objective inclusion criteria (e.g., a cut-off score on a self-report measure of musical performance anxiety) would seem to be useful because it enables other investigators to generate comparable samples by employing the same criteria in future research.

Four of 10 reviewed studies did not utilize a replicable, objective criterion of musical performance anxiety for participant inclusion. In some studies, no inclusion criteria were stated, and in other studies, participants were self-referred or identified by a music teacher as suffering from musical performance anxiety, but no objective inclusion criteria were used. In contrast, several investigations used either a published interview measure of musical performance anxiety (Sweeney & Horan, 1982) or elevated scores on a self-report measure of musical performance anxiety such as the PRCP (e.g., Kendrick et al., 1982; Montello et al., 1990, Experiments 1 and 2; Niemann et al., 1993) to screen candidates before participation. In one particularly impressive effort, Clark and Agras (1991) not only employed a cut-off score on the PRCP but also verified that all participants endorsed performance anxiety items associated with a diagnosis of social phobia on a structured interview measure of DSM Axis I disorders.

<table>
<thead>
<tr>
<th>Study</th>
<th>Objective MPA inclusion criteria</th>
<th>Screening for technical ability</th>
<th>Treatment manual</th>
<th>Multiple therapists</th>
<th>Full battery of outcome measures</th>
<th>Follow-up assessment</th>
</tr>
</thead>
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<td>no</td>
<td>no</td>
<td>no</td>
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<td>yes</td>
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<td>no</td>
<td>no</td>
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<td>no</td>
</tr>
<tr>
<td>Stanton (1994)</td>
<td>no</td>
<td>no</td>
<td>no</td>
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</tr>
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<td>no</td>
<td>no</td>
<td>yes</td>
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<tr>
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<td>no</td>
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<td>Clark &amp; Agras (1991)</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
</tr>
</tbody>
</table>
Screening for Technical Music Ability

In addition to screening potential participants for marked musical performance anxiety, it may also be important to assess their technical level of music ability. Conceivably, some musicians become fearful when facing public performance because they are aware that their technical ability is weak. Clinicians think of anxiety as an unexpected response to a situation. Consequently, samples in studies of musical performance anxiety should be composed of individuals who would seem to possess satisfactory musical ability but are nonetheless anxious about public performance. It would be necessary for somebody with musical training to assess participants’ musical ability. Unfortunately, only one study in this literature screened individuals for technical musical ability. Sweeney and Horan (1982) assessed potential participants for their musical sight-reading ability and eliminated individuals whose skills were not deemed satisfactory. Consequently, the findings of Sweeney and Horan (1982) are noteworthy because they would seem to be based on a sample of musicians for whom anxiety was clearly a cause and not a consequence of poor musical performance.

Treatment Manual

The use of a treatment manual has become essential in contemporary treatment outcome research. This practice is especially important when the treatments are complicated, as is the case with many of the therapies evaluated in the literature on musical performance anxiety. A manual makes it more likely that an intervention will be well operationalized, thus enabling therapists within a single investigative team or across investigative teams to deliver the treatment in a reliable and valid manner. Unfortunately, many of the reviewed studies were conducted before it became de rigueur to employ a manual. Only 2 of the 10 reviewed studies utilized a treatment manual (Brodsky & Sloboda, 1997; Sweeney & Horan, 1982).

Multiple Therapists

Even when a treatment protocol is relatively standardized, therapists can differ in how they deliver a treatment. When multiple therapists are not used in treatment outcome research, differences in effectiveness among treatment conditions may be misattributed to the treatments when they are actually a function of the therapist. When multiple therapists are employed, researchers are in a better position to generalize findings beyond their own investigation. Unfortunately, only 3 of the 10 reviewed studies used multiple therapists. Sweeney and Horan (1982) utilized three therapists in their evaluation of the individual and combined effects of exposure-based and cognitive treatments, and Montello et al. (1990) used two certified music therapists in their studies of music therapy. Relatedly, in at least 6 of the 10 reviewed studies, one of the principal investigators also served as a therapist who provided treatment. This practice introduces the possibility that the delivery of treatments was subtly influenced by the investigator’s hypotheses or implicit beliefs about the treatments.

Outcome Measures

Lang (1971) has conceptualized a three-systems model of fear, consisting of physiological, behavioral, and cognitive levels of functioning. The three systems are thought to be interactive, but they are also partially independent. Presumably, a treatment for musical performance anxiety would affect all three systems. Therefore, a thorough assessment of musical performance anxiety in outcome research would involve tapping the physiological, behavioral, and cognitive–affective systems. In addition, a complete assessment of the effects of a treatment should incorporate some index of performance quality. After all, the ultimate purpose of treatment is to reduce musical performance anxiety so as to improve the quality of performance. A treatment that reduces anxiety but does not enhance performance would seem to be of limited value. Therefore, a comprehensive battery of outcome measures for evaluating musical performance anxiety treatments would seem to involve the physiological, observer, and self-report channels of measurement, as well as some measure of performance quality.

Unfortunately, only 2 of the 10 reviewed studies employed a comprehensive battery of outcome measures (Kendrick et al., 1982; Sweeney & Horan, 1982). In fact, 6 of the studies utilized only self-report measures of anxiety. Such self-report measures would seem to be especially vul-
nervable to the influence of demand characteristics. The kinds of self-report measures of state, trait, and performance anxiety used in these studies are fairly transparent, and participants are readily aware of their relationship to the purpose of the study and the experimental condition to which they have been assigned. In sum, an over-reliance on the self-report channel of measurement is perhaps the chief limitation of the empirical literature evaluating the effectiveness of treatments for musical performance anxiety.

Follow-Up Data

The experimental treatments for musical performance anxiety evaluated in this literature ranged in length from 3 (Kendrick et al., 1982) to 12 (Montello et al., 1990) sessions. In view of the relatively limited duration of these treatments, studies that assessed change taking place after the end of treatment are of particular interest. In 4 of the 10 reviewed studies, long-term follow-up data were collected. Kendrick et al. (1982) reported no effects immediately after three sessions of treatment, but exposure and cognitive therapies were found to be superior to no treatment in reducing self-reported musical performance anxiety and improving quality of playing at a 5-week follow-up. Likewise, Brodsky and Sloboda (1997) observed that individuals treated with eight sessions of music-enhanced therapy showed a significant decrease in self-reported musical performance anxiety only at a 2-month follow-up but not immediately after treatment. Relatedly, Stanton (1994) found that individuals treated with two sessions of hypnosis showed a significant decrease in self-reported performance anxiety at posttime and another significant decrease at a 6-month follow-up relative to an attention-control condition. Finally, Clark and Agras (1991) noted that, relative to medication and placebo conditions, five sessions of cognitive-behavioral therapy produced a significant decrease in self-reported musical performance anxiety only at a 1-month follow-up. All in all, the results of these four studies suggest that individuals continue to make gains after the conclusion of treatment, even in studies that employed treatments of relatively longer duration (Brodsky & Sloboda, 1997), thereby highlighting the importance of obtaining follow-up data.

Current Status and Future Directions

The results of research evaluating the effectiveness of psychological treatments for musical performance anxiety, and the accompanying methodological limitations, suggest several important conclusions regarding the status of this literature. First, compared with treatment outcome research on public speaking anxiety and test anxiety, there have been relatively few published studies evaluating the effectiveness of psychological treatments for musical performance anxiety, and there have been even fewer studies satisfying contemporary prerequisites of sophisticated treatment outcome research, such as the use of multichannel outcome measures or treatment manuals. Because performance anxiety is such a debilitating problem for many musicians, a call for additional rigorous treatment outcome research would seem to be in order.

Second, much of the research in this area has evaluated the efficacy of two general approaches to reducing musical performance anxiety—behavior therapy emphasizing real or imagined exposure to feared performance situations, and cognitive therapy focusing on the restructuring of maladaptive cognitions. The findings of several studies indicate the superiority of exposure and cognitive restructuring relative to no treatment (Appel, 1976; Kendrick et al., 1982; Sweeney & Horan, 1982) and to medication or placebo (Clark & Agras, 1991). Additional supporting evidence of the utility of exposure and cognitive restructuring comes from studies of multifaceted treatments that combined these procedures with biofeedback (Nagel et al., 1989; Niemann et al., 1993) or music therapy techniques (Montello et al., 1990). However, at the present time, there is no clear-cut evidence to recommend one approach over the other (Kendrick et al., 1982; Sweeney & Horan, 1982), nor are there any data to suggest that combining exposure and cognitive therapies is more effective than either treatment by itself (Sweeney & Horan, 1982).

The lack of differences between exposure therapy and cognitive restructuring in treating musical performance anxiety is in keeping with evidence showing that the efficacy of all legitimate psychotherapies is roughly equivalent (Lambert & Ogles, 2004; Wampold et al., 1997). However, in view of the limited statistical power inherent in much of the research on treating musical performance anxiety, it would be premature to arrive at
definitive conclusions regarding the relative effectiveness of exposure and cognitive procedures or the benefits of combining them into a single treatment. Indeed, none of the 10 reviewed studies were characterized by treatment cell sizes larger than 20, and only four studies had cell sizes larger than 10 (Brodsky & Sloboda, 1997; Kendrick et al., 1982; Nagel et al., 1989; Stanton, 1994). The resulting statistical power may have been sufficient to consistently detect differences between treated and untreated individuals but not between those receiving different kinds of treatments.

Third, the findings of many studies evaluating the effectiveness of psychological treatments for musical performance anxiety would seem to be constrained by several recurring methodological limitations. Chief among these concerns is an overreliance on self-report outcome measures and a lack of long-term follow-up data, as well as the use of a single therapist to provide treatment, along with the absence of a treatment manual. Future research could benefit from the use of multichannel outcome measures tapping self-report, behavioral, and physiological systems of anxiety, as well as a measure of musical performance quality, all collected both immediately after treatment and at follow-up. Indeed, investigators may wish to incorporate both short-term (e.g., 5 weeks) and long-term (e.g., 6 months) follow-up measures in their treatment outcome studies. Additionally, it would seem desirable for treatments to be operationalized in a treatment manual and to be delivered by multiple therapists, preferably none of whom is a principal investigator. Finally, researchers may wish to consider the benefits of screening potential participants for musical performance anxiety and technical musical ability using an objective standard so as to be able to confirm that these individuals suffer from marked performance anxiety and that this anxiety is not simply the result of knowing that one’s technical musical ability is weak.

Fourth, beyond a general need for more rigorous research on treatments for musical performance anxiety, initiatives in certain content areas would seem particularly desirable. For example, there has been little if any research evaluating the specific procedures that comprise typical exposure and cognitive treatments for musical performance anxiety (e.g., progressive muscle relaxation, imagined exposure, in vivo exposure, cognitive restructuring). Conceivably, certain components contribute incrementally to the effectiveness of various psychological treatment packages and others do not.

Relatedly, studies that add interventions like biofeedback, medication, or music to cognitive–behavioral therapy should be designed to evaluate the individual and combined effects of these techniques, using samples large enough to detect differences among several potentially effective treatment conditions. Because biofeedback has been shown to reduce tension in the muscles involved in musical performance (e.g., LeVine & Irvine, 1984), thereby improving the quality of musical performance (Morasky et al., 1983), investigation of its use as a solitary treatment or as a component in a multifaceted treatment would seem to be promising. Likewise, adding hypnosis has been shown to enhance standard cognitive–behavioral treatments for a range of problems and symptoms (see Kirsch et al., 1995), including public speaking anxiety (Schoenberger et al., 1997). Thus, a useful line of inquiry would involve evaluating the effects of combining hypnosis with the exposure and cognitive therapies that have already been proven to be effective in reducing musical performance anxiety.

Another area in which more research is needed involves the mediators and moderators of psychological treatments for musical performance anxiety. With regard to moderator variables, of the 10 reviewed studies, only 1 examined person variables that interacted with treatment to predict outcome. Montello et al. (1990) found that musicians scoring higher on trait anxiety and lower on narcissism at the outset of treatment showed the most improvement in performance confidence as a result of participating in group music therapy. Moderator studies may be useful for prescriptive matching of clients to treatments for musical performance anxiety. For example, individuals who manifest their anxiety using an avoidant-coping style may benefit more from exposure-based therapy, whereas those who tend to catastrophize may profit more from a cognitive treatment.

As for mediator variables, only 1 of the 10 reviewed studies examined possible mechanisms of action of psychological treatments for musical performance anxiety. In their evaluation of treatments, Kendrick et al. (1982) reported that expectations of personal efficacy and positive self-talk at posttime predicted improvements in anxiety and quality of performance at follow-up.
Several variables have been proposed as mediators of cognitive–behavioral treatments for social phobia, including attentional focus and causal attributions (Hope, Gansler, & Heimberg, 1989), as well as perceived emotional control, perceived self-efficacy, and negative cognitive appraisal (Hofmann, 2000). A potentially fruitful area of investigation would involve assessing whether these variables also mediate cognitive–behavioral treatments for musical performance anxiety. Future research on the mediation and moderation of psychological treatments for musical performance anxiety should be conducted in conformity with Baron and Kenny’s (1986) classic paper on mediator and moderator variables.

Implications for Clinical Practice

Individuals experiencing musical performance anxiety pursue a broad range of treatments that extend well beyond those evaluated in this review of controlled outcome studies. Undoubtedly, many musicians with performance anxiety are seen in individual, insight-oriented talking therapy or in group therapy. Indeed, some people with this problem arrive at their own naturalistic remedies, several of which may be of questionable value or even harmful. For example, anecdotal evidence suggests that many music students eat bananas before performance, based on the belief that bananas possess natural beta-blockers. Other musicians smoke cigarettes to calm their performance anxieties. However, smoking may be counterproductive in that wind musicians and vocalists need premium air supply to perform at an optimal level. Finally, some musicians who have been prescribed beta-blockers freely share them with others.

As for bona fide psychotherapies, the results of this review most clearly point to the value of exposure and cognitive restructuring in treating individuals with musical performance anxiety (Appel, 1976; Kendrick et al., 1982; Sweeney & Horan, 1982). In cognitive restructuring, the psychotherapist helps the musician to identify negative thoughts that occur before, during, and after performance, to assess the accuracy of those thoughts, and to replace inaccurate thoughts with more accurate or adaptive ones. Relatedly, clients can be given “homework assignments” in which they are instructed to have experiences that challenge their negative beliefs. For example, a music student who believes that he or she must always perform perfectly during practice can be instructed to deliberately insert a few mistakes and to report back to the psychotherapist on the reaction of the other performers.

In exposure therapy, the psychotherapist helps the musician to generate a graded list of anxiety-provoking performance situations. Then, in imagination, role-play, or real life, the musician is asked to fully engage in the feared situation until the anxiety diminishes. Exposure begins with the least anxiety-provoking situation (e.g., performing alone in a practice room) and later progresses to increasingly feared situations (e.g., performing in front of a large audience). Progressive muscle relaxation can be usefully paired with exposure therapy. In progressive muscle relaxation, the musician is taught to tense and relax each of the major muscle groups. With practice, musicians can learn to quickly relax their entire body. After mastering the basic relaxation procedure, musicians can be taught cue-controlled relaxation in which they are helped to pair a cue word, such as “relax” with the feeling of muscle relaxation, and then to use the cue word to become more relaxed when they begin to feel anxious in performance situations (see Sweeney & Horan, 1982).

Clinicians may want to consider using hypnosis as an adjunct to these cognitive–behavioral procedures. Kirsch et al. (1995) showed that clients receiving cognitive–behavioral therapy supplemented by hypnosis showed greater improvement than 70% of clients receiving standard cognitive–behavioral treatment. Classically, hypnosis involves the use of direct suggestions for symptom reduction. Stanton (1994) showed that such suggestions were beneficial in reducing musical performance anxiety. However, some contemporary hypnotists prefer to deliver standard cognitive–behavioral procedures within the context of hypnosis. A psychotherapist can accomplish this by first delivering a hypnotic induction and then framing cognitive–behavioral techniques as being hypnotic in nature. Thus, imaginative exposure can be intensified by labeling it as “hypnotic exposure” and presenting the images while the client is in hypnosis. Similarly, progressive muscle relaxation can be enhanced by labeling it as “hypnotic muscle relaxation” and delivering it after an induction. There are large individual differences in responsiveness to hypnosis, and not all musicians will be appropriate candidates for it. Therefore, psychotherapists considering hypnosis as a therapeutic
vehicle may wish to assess the client’s level of hypnotic suggestibility before initiating hypnotic treatment.

Advances in computer technology may provide another way in which exposure therapy can be enhanced. Recently, virtual reality was successfully used as a medium for exposure therapy in treating public speaking anxiety (Anderson, Rothbaum, & Hodges, 2003). A video of actual people embedded in a virtual classroom was used as the fear stimulus. Conceivably, a comparable video of a group of performers and an audience could be generated. Structuring exposure sessions of graded fear intensity with a virtual orchestra may be more feasible than doing so with a real symphonic orchestra.

Kendrick et al. (1982) reported that efficacy expectations mediated the effect of cognitive–behavioral treatment on musical performance anxiety. Therefore, psychotherapists may wish to target efficacy expectations when they work with musicians suffering from this problem. According to Bandura, experience is more impactful than vicarious learning or verbal persuasion in modifying efficacy expectations (Bandura, Adams, & Beyer, 1977). Therefore, psychotherapists may wish to provide their clients with what Bandura (1977) refers to as “guided mastery experiences” by structuring exposure sessions so that the musician is almost guaranteed success. Accordingly, performance situations can be broken down into small steps, each of which can be mastered with just a slight increase in effort. Each successful experience strengthens the musician’s expectancy that he or she will be able to perform the next step in the exposure hierarchy.

Finally, psychotherapists who work with clients experiencing musical performance anxiety may find it helpful to have had musical training themselves. Psychotherapists lacking such training may wish to consult with a professional musician (e.g., a music professor or certified music teacher) to better understand the technical challenges involved in musical performance.

Moreover, the contribution of much of this research has been attenuated by recurring methodological limitations, particularly an overreliance on self-report measures of treatment outcome. Future research on treatments for this problem may profit from tapping reduction of anxiety via self-report, observational, and physiological channels of measurement, as well as assessing improvements in quality of musical performance. Also, comprehensive outcome measures should be obtained both at the conclusion of treatment and at long-term follow-up. Furthermore, the treatments investigated in this research should be operationalized in a manual and delivered by multiple therapists. However, despite methodological limitations of the existing literature, the available data suggest that psychological treatments, particularly exposure therapy and cognitive restructuring, hold much promise for treating a serious problem that affects many musicians.

Conclusion

In sum, research evaluating psychological treatments for musical performance anxiety is in a nascent stage of development. Compared with research on other performance anxieties and on generalized social phobia, there have been relatively few studies of treatments for this problem.

References


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