

The Performance Wellness Seminar: An Integrative Music Therapy Approach to Preventing Performance-Related Disorders in College-Age Musicians

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Abstract

A number of recent studies have pointed to the prevalence of performance-related disorders experienced by college-age music students in the United States (Barton et al., 2008; Chesky, Dawson, & Manchester, 2006; Chesky & Hipple, 1997; Fehm & Schmidt, 2004; Manchester, 1988; Manchester & Lustik, 1989; Smith, 1992). These disorders include overuse injuries, chronic pain, debilitating stage fright, depression, and substance abuse. This article addresses the underlying causes of performance-related disorders in college-age musicians and offers a clinically tested curriculum for prevention, treatment, and empowerment. The integrative curriculum draws from clinically proven techniques from the disciplines of music therapy, behavioral medicine, and yoga science. Performance Wellness training recommendations are included for educators, counselors, and health professionals who work with college-age music students.

Keywords

music medicine, performing arts medicine, music psychotherapy, arts medicine

A number of recent studies have pointed to the high proportions of performance-related disorders experienced by college-age music students in the United States (Barton et al., 2008; Chesky et al., 2006; Chesky & Hipple, 1997; Fehm & Schmidt, 2004; Manchester, 1988; Manchester & Lustik, 1989; Smith, 1992). These disorders include overuse injuries, chronic pain, debilitating stage fright, depression, and substance abuse. This article addresses the underlying causes of performance-related disorders in college-age musicians and offers a clinically tested curriculum for prevention, treatment, and empowerment. The integrative curriculum draws from clinically proven techniques from the disciplines of music therapy, behavioral medicine, and yoga science. Performance Wellness training recommendations are included for educators, counselors, and health professionals who work with college-age music students.

Qualitative research (Bressers & Wells, 2009; Chesky, 2008; Montello, 1992) suggests that there are three main reasons that young musicians succumb to performance-related disorders. First of all, for many students, music performance is a highly stressful activity that leaves little room for error. Music students are constantly being evaluated and many feel that if they do not play perfectly, they will be rejected and/or humiliated. For these students, performance itself becomes a major threat that can lead to debilitating anxiety (stage fright). Most students are unfamiliar with the psychophysiology of the performance anxiety reaction, also known as the “fight-or-flight” response (Sapolsky, 1984), that can leave them at the mercy of

their seemingly uncontrollable fear-based thoughts, feelings, and bodily sensations.

Another factor underlying the incidence of performance-related disorders in college-age musicians involves the act of leaving home. For many students, entering college or conservatory is often the first time that they have left home for a significant period of time. Most students are accustomed to relying on parents and/or caretakers for time management, nutritional guidance, and consistent love and nurturance. Additionally, the qualitative research cited above indicates that a large number of music students are sensitive, often introverted individuals who are privy to a wide range of emotions through the very act of playing and/or creating music. Most of these students have received little, if any, coaching on how to cope with extreme emotions and thus may feel lost and fearful when they find themselves in stressful, unfamiliar environments.

The third reason involves the often-overwhelming demands of conservatory life—assignments, practice, rehearsals, juries, auditions, competitions, and roommate/interpersonal issues. These demands, along with normal adolescent developmental

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issues, can take their toll on the physical and mental health of young musicians, particularly when they lack coping skills for dealing with stressful situations.

To stay healthy and maximize their potential as individuals and as performers, music students can benefit from learning tools to increase self-awareness and expression, and for managing stress. The wellness model presented in this article provides a useful format for this kind of training. Wellness is defined as an active, lifelong process of fostering health and wholeness through becoming aware of the interrelatedness of body, mind, spirit, and community (Pilzer, 2002). It involves the willingness to take responsibility for one's own health and healing and to be proactive in creating a balanced and fulfilling life. Since the act of performing music requires that the music student exert refined control over the body, mind, and emotions, while at the same time communicating with an audience, it is recommended that a performance wellness program be included as an essential component in the training of college-age musicians.

Personality Factors and Performance Stress

In reexamining the data from psychoneuroimmunological research conducted by Coons, Montello, and Perez (1995), it is surmised that personality factors may play a role in how music students perceive and cope with performance stress, from both a mental and a physical health perspective. The study measured changes in salivary Immunoglobulin-A (S-IgA) in 20 musicians in response to a piano exam stressor. These changes were examined as a joint function of the two personality factors emerging from answers to a battery of questionnaire items. Conversely, musicians scoring high on both "Low Confidence/High Threat" and "High Denial/Detached Affect" defense against performance anxiety showed significantly depressed IgA levels 1½ hours after the exam as compared to levels measured 1½ weeks earlier (baseline). Oppositely, musicians with high confidence and low denial showed significantly elevated IgA levels compared to baseline—a positive, good health prognosticator. The results confirmed expectations derived from pilot and other work and from Dienstbier's "toughness" formulation concerning identification of how one's particular immune system will respond positively or negatively to stress. A clinical research study is currently being designed by the authors of the above study to assess the use of the Performance Wellness Seminar (Montello, Coons, & Kantor, 1990) to increase confidence and reduce denial and self-destructive behaviors in college-age music students. It is hypothesized that the intervention will help to prevent performance-related disorders through providing students with effective tools for increasing emotional intelligence, performance mastery, and resilience.

The Performance Wellness (PW) Seminar (Montello, 2001)

The Performance Wellness Seminar offers musicians, music students, and educators a clinically proven systematic approach

to diagnosing, treating, and preventing performance-related disorders (i.e., stage fright, mind-body illnesses/injuries, and addictions). Using a powerful synthesis of research, theory, and techniques from the disciplines of music therapy (Brown & Pavlicevic, 1996; Bruscia, 1987; Hanser, 1985; Montello, 1998, 1999, 2002, 2003), behavioral medicine (Brotsky & Sloboda, 1997; Kendrick et al., 1982; McKinney, 1984; Niemann et al., 1993; Sweeney & Horan, 1982) and yoga science (Chang, 2001), the training offers participants a deeper understanding of the implications of stress in performance, as well as practical tools for allowing the body-mind to become a resilient "instrument" in the face of stressful situations.

The uniqueness of this approach involves the activation of essential musical intelligence (EMI) (Montello, 2002)—the innate ability to use music and sound as self-reflecting, transformational tools to instantly change maladaptive thoughts and feelings through bypassing the limitations of the conscious mind and moving directly to the emotional brain centers where memories, feelings, and desires are stored and activated. The "feel good" quality of the musical engagement, which can activate the release of neurotransmitters like dopamine, endorphins, and serotonin (Pert, 1997), seems to help participants in making healthy choices more consistently, which can, in time, change negative habits and beliefs and solidify a more positive, forward moving life focus.

The Performance Wellness treatment approach was found to be effective in treating anxious musicians in two experimental studies (Montello et al., 1990). The 12-week group music therapy intervention consisted of music improvisation, three music performances in front of an audience, body-mind awareness techniques, and verbal processing of participants' anxiety responses. The outcome measures in the first study were self-ratings of confidence in performance and trait anxiety. In the second study, a replication of the first, an attentional control group and additional outcome measures were included. These were the Narcissistic Personality Inventory (NPI) and judgments of improvements in participants' musicality as a function of treatment by objective observers. The 10 experimental participants became significantly more confident (effect size = 2.46) as performers are measured by the Personal Report of Confidence as a Performer Scale (PRCP; Appel, 1976) and less anxious as measured by the Spielberger State/Trait Anxiety Inventory (STAI) than the 10 waiting-list control participants after music therapy intervention. In Study II, experimental participants became significantly less self-involved, less stressed, and more musical after group music therapy as compared to attentional control participants (all effect sizes greater than 2). The integrative music therapy intervention was recommended as a way to reduce performance anxiety by helping musicians to become more aware of the underlying dynamics of performance anxiety; experience unconditional acceptance and support in a safe group environment; bond with their musical-selves; transform anxiety through creativity (reparation); and bond with others in the spirit of musical community.

In developing the Performance Wellness Seminar for college-age musicians, I used the theoretical and clinical

framework from the above-mentioned approach, along with wellness techniques that were specifically prevention oriented. I included a number of clinically proven tools from the disciplines of behavioral medicine and yoga science, along with techniques from art and drama therapy. The main components of the Performance Wellness curriculum, along with its applicability to college-age musicians, is outlined and described below.

Performance Wellness Seminar for College-Age Musicians

Breath awareness. Students first learn about the psychophysiology of the fight-or-flight (Sapolsky, 1984) reaction associated with stage fright. They learn that they can exert a measure of control over the bodily symptoms associated with sympathetic nervous system activation (arousal) through intentional breathing. The breath is the link between the mind and body. Music students are taught how to breathe diaphragmatically and to use the breath to activate the “relaxation response” (parasympathetic nervous system activation) when overly aroused in performance situations. A number of other yogic breathing exercises are effective for coping with performance stress/stage fright. Two-to-one breathing doubles the length of the exhalation during the breath cycle (i.e., breathing in for 3 counts and out for 6). In this way, slow and deep abdominal breathing helps to ground and center the student when he or she is experiencing acute anxiety. Alternate nostril breathing helps to balance the right and left hemispheres of the brain (along with the parasympathetic and sympathetic arms of the autonomic nervous system) and is used to increase mental clarity and creativity (Rama, Ballentine, & Hymes, 1979).

Relaxation techniques. Two clinically tested techniques have proven to be effective in facilitating relaxation, pain reduction, mind-body integration, and coherence in stressed musicians. Progressive relaxation (Bernstein, Borkovec, & Hazlett-Stevens, 2000) trains the musician to systematically tense and relax the major muscle groups throughout the body. Students learn to discriminate between tense and relaxed muscles and are encouraged to instantly “relax and let go” when they find they are holding tension in a particular body part.

Autogenic training (Brodsky, 1996; Luthe, 1963) incorporates visualization and self-hypnosis in teaching music students how to control autonomic functioning such as heart rate, breathing, and blood flow. Students learn that they have ultimate control over their own body-mind. This significantly reduces the fear of being overwhelmed by the symptoms of performance anxiety and allows them to stay calm in the midst of stressful situations.

Joints and glands exercises. This set of simple yoga-based stretching exercises (Ballentine, 1977) increases circulation to all parts of the body and helps to improve overall flexibility. By releasing accumulated tensions from students’ joints and

glands, the exercises help restore a natural vitality to the body and mind and prevent injuries.

Cognitive restructuring. Four studies point to the positive therapeutic effect of cognitive-behavioral strategies on music performance anxiety (Harris, 1987; Kendrick et al., 1982; Roland, 1993; Sweeney & Horan, 1982). With this technique, music students learn that maladaptive thinking is one of the root causes of performance anxiety. Students learn to become the observer of the modifications of the mind and to root out negative, destructive thought patterns. Once they become aware of a negative thought such as, “I’m not good enough,” they are asked to evaluate the thought to see if it is indeed true and health-giving. When they realize that negative thoughts are usually based on past associations/memories and are not rational or applicable to their lives today, they are asked to change the thought to one that is more adaptive and rational (“I accept and honor myself in all performance situations.”). With practice, students learn to become the master of their own minds and to change maladaptive thoughts “in the moment” before they have a chance to negatively affect behavior.

Mindfulness meditation. Meditation is a focusing technique that helps musicians to strengthen the witnessing aspect of the mind. The student learns to become the observer of thoughts, feelings, and bodily sensations and in time settles into a state of “no-thought,” which can lead to higher levels of creativity and vibrant health. Regular practice of meditation can facilitate the state of “flow” that is highly desirable for music performers (Chang, 2001).

Imagery training. Numerous studies have shown the positive effect of mental imagery in enhancing performance in athletes (Hardy et al., 1996; Shambrook & Bull, 1996; Vadocz, Hall, & Moritz, 1997). Achieving performance mastery is also a goal of professional and student musicians. With this technique, students learn how to use their imaginations to produce relaxing images and thoughts with the goal of reducing and controlling mental anxiety. Once they have developed their ability to create pleasant mental images, the students are encouraged to visualize themselves in a series of successful performance situations. Visualization helps to transform anticipatory performance anxiety and can also be used to allay related feelings of dread and powerlessness. Imagery techniques can also be used by students for coping with pain associated with overuse injuries.

Music therapy for musicians. Research shows that music therapy techniques can be especially beneficial in treating and preventing performance-related disorders in musicians (Montello et al., 1990). Music improvisation (Brown & Pavlicevic, 1996; Bruscia, 1987), in particular, was used in my study to reawaken the original joy of playing music in stressed musicians. Improvisation helps musicians to connect with the essential elements and meaning of music (melody, rhythm, texture, form, etc.); facilitates inner listening; fosters spontaneity and

self-expression; develops intuition and imagination; activates EMI (Montello, 2002), the innate ability to use music as a source of healing for self and other; and keeps the musician focused in the present moment.

The following music therapy techniques (Montello, 1998, 1999, 2003) have been found to increase self-awareness and expression and decrease performance-related disorders:

Musical self-statements. The student is instructed to choose an instrument for improvisation that he is particularly drawn to from an array of easy-to-play instruments. Once he has chosen, the student is asked to still the mind through focused breathing and to wait for a bodily impulse to move from inside to out through the instrument. The student relaxes and allows the musical impulse to move him into creative expression. The music stops as directed by the inner impulse.

The purpose of this exercise is to shift the student from thinking about music while playing (which distances the player from the musical, body-based impulse) to spontaneously expressing music “from the heart” without thinking. Here, musicians learn to trust themselves, their body/mind connection, and the creative process, thereby releasing the internalized “threat” associated with music performance.

Musical charades. Music students can develop emotional intelligence through exploring the spectrum of emotions through improvisational games such as “musical charades.” In this technique, students form small groups (3–4 members each) and one member randomly selects a folded piece of paper from a hat. Inscribed on the slip of paper is a title of an emotionally laden scenario that the students are invited to portray musically for the rest of the class (i.e., “Belonging”; “She’s Gone”). The small group members discuss their interpretations of the scenario and decide how to convey its emotional tone and meaning through improvised music and pantomime. Students may use their own instruments or choose from a variety of instruments for improvisation (drums, recorders, xylophones, Tibetan bell bowls, etc.) provided for them. Once the musical scenario is performed, the remaining class members are asked to use their emotional intelligence in ascertaining the exact title. Along with emotional awareness, this music therapy technique helps students to develop a deeper aesthetic sensibility, spontaneity, sensitivity to group dynamics, and joy and levity in music performance.

Group music improvisation. This helps students to experience and understand the diverse roles and relationships that form within the musical context. While improvising together, musicians are encouraged to explore the typical roles that they play in groups and to try out new roles, particularly those that are threatening or off-putting. Here, students learn to trust in their innate musical intelligence (Gardner, 1983), creativity, and authority and, with time, become more able to trust fellow musicians. Group improvisation helps to harmonize the polarization of authority and subordination and empowers musicians to be more assertive and risk-taking.

Renowned psychoanalyst D. W. Winnicott (1971) wrote that it is only in being creative that the individual discovers the self. Most college-age music students are still considered adolescents, developmentally, and must continue the process of self-discovery while at conservatory on the road to becoming fully functioning adults. In summary, music therapy capitalizes on the “playful” approach to musical expression and helps stressed music students to connect with and honor the beauty inherent in their unique musical voices.

Disarming the “inner critic” through combined art and music therapy processes. For those students with debilitating stage fright, it is important to understand how internalized negative voices from past traumatic performance experiences can sabotage the good feelings and self-confidence that enhance musical expression. During a guided meditation offered during the ninth class of the Performance Wellness Seminar, students are asked to allow these unresolved negative criticisms and related feelings and images to emerge and then to release them through spontaneous drawing. The student thus creatively externalizes the beliefs/images related to the inner critic (i.e., “I’m not good enough.”) that get in the way of the “flow” experience and, at the same time, gains some distance from it.

The student is then encouraged to take back the power that was granted to the internalized critic through improvising its “music” on an instrument of his or her choice. The student is then asked to improvise the sound of one’s own music when he or she feels incapacitated by the inner critic on a different instrument. There is obviously a qualitative difference between these two musical statements (yet both are alive in the same person). With a class member playing the role of the self-state that he or she is least identified with and the student playing the other, the partners engage in an improvised musical dialogue to find a balance point between the two extreme polarities. By the end of the improvisation, usually both players feel more integrated and empowered and the music expressed is deeply harmonic, balanced, and vibrant. After the student has reclaimed split-off feelings relegated to the former inner critic, he or she is then asked to perform a piece of music from this now unencumbered place. Most students experience a significant reduction in fear during this performance that quite often transfers over to future real-life performance situations.

Transforming “Polarized Perfectionism”

Many music students base their self-worth on how their music performances are evaluated by teachers, peers, audience members, and so on. In this way, they become obsessed with playing perfectly, lest they receive negative feedback and lose face. These students often over-practice and limit their social engagements to only those that will enhance their music careers. They often become depressed if they play poorly and are not top of their class. The following are characteristics of “polarized perfectionists” as described in the *Performance Wellness Manual* (Montello, 2005):

- Need for outside approval; low self-esteem
- Polarized thinking—one is either a winner or a loser
- Difficulty with showing vulnerability
- Narcissistically wounded
- Lack of emotional intelligence

Symptoms of polarized perfectionism as described in the same manual are as follows:

- Isolation
- Rigidity
- External locus of control
- Compulsive behavior
- Extremes of emotion
- Emptiness
- Identity issues
- Extreme judgment/competitiveness
- Focusing on product versus process

To overcome polarized perfectionism, students are encouraged to engage in the following activities during the course of their week:

- Allow 30 minutes per day to do nothing; waste time
- Take time daily to improvise on their primary or other cherished instrument
- Form or join a recreational music improvisation group
- Do meditative activities that facilitate an internal focus that arouses feelings of happiness and contentment
- Create a bridge from the inner life to the outer through daily journaling

Assertiveness training. Findings from my qualitative research on the underlying causes of music performance stress (Montello, 1992) suggest that many anxious musicians tend to be compliant in relational situations and find it difficult to stand up for themselves, ask for what they need, and say “no” when appropriate. Learning skills in assertiveness could empower anxious musicians through increasing confidence and reducing anxiety (Delamater & McNamara, 1986). In the Performance Wellness Seminar, students first learn the four styles of communicating: passive, aggressive, passive-aggressive, and assertive. They are then taught to discriminate between the different styles and are offered a number of role-playing opportunities to practice assertive behavior in real-life situations. Additionally, students learn empathetic listening techniques, along with a variety of ways to say “no” effectively. Finally, students are taught how to give constructive criticism and to cope with negative feedback.

Behavioral rehearsal. In her study on treating music performance anxiety, Kendrick et al. (1982) found that behavioral rehearsal significantly improved performance quality and self-statements about performance anxiety and reduced visual signs of anxiety posttreatment. In the Performance Wellness Seminar, students are asked to volunteer to perform for the

class with the purpose of integrating relevant techniques from the PW curriculum into a live performance. During this class, students focus on the art of performance versus playing music in rehearsal and/or in practice rooms. Students review and practice all the steps to giving a masterful performance, including the following:

- Proper performance attitude—reverence for the composer and audience; desire to give their best
- Deep and even breathing
- Clear intentionality; positive thinking
- Activating the “giving-and-receiving feedback loop” between performer and audience
- Hearing the music from deep within and playing from this place of flow
- Hearing the first couple of phrases of the piece in their mind before starting to play
- At close of performance, receiving the audience’s reactions with equanimity
- Self-care post performance (i.e., whatever healthy behavior that allows the performer to stay joyfully centered in the here-and-now)

Assignments for the Performance Wellness Seminar include a mid-term exam that focuses on theory and techniques learned from readings and in-class experientials; a final research paper focusing on a more in-depth exploration of a topic covered in class (i.e., music improvisation; assertiveness training); and weekly home-practice charts where students rate changes in stress symptoms before and after practicing assigned exercises.

The Performance Wellness Seminar is taught at a number of music colleges and conservatories across the United States and around the world. Anecdotal evidence derived through a survey of participants and instructors indicates that the training decreases fear and increases joy and mastery in performance. A description of the entire Three Level Certificate Training Program in Performance Wellness, which prepares music educators, music therapists, and other health professionals to become Certified Performance Wellness Trainers, follows:

Level I: Introduction to Performance Wellness

The Level I Performance Wellness Training is a series of clinically tested exercises for preventing and alleviating the stresses associated with performance (on stage and in the classroom, board room, treatment room, and playing field). During the Level I Training, participants learn tools for creatively transforming stress at the level of the body, mind, emotions, environment, and relationships. The Performance Wellness approach is unique in that it integrates music therapy techniques with cutting-edge research and practices from behavioral medicine, yoga science, depth psychology, and other CAT modalities. At the deepest level, participants learn to awaken their EMI, the innate ability to use music or sound to facilitate health, wholeness, and happiness in daily life.

After completing Level I, participants are strongly encouraged to maintain a daily practice of key wellness techniques using the *Performance Wellness Workbook* (Montello, 2005). The workbook provides a framework for participants to keep track of their changing stress levels as they practice the music-based wellness techniques over a 30-day period. Intentional daily journaling is also recommended as a way for participants to process and cope with change-related challenges and document new life-enhancing insights, feelings, and thoughts into daily life. Performance Wellness Trainers are available by phone during the 30-day period to answer any questions and to further guide participants if they are in need of assistance.

The main focus of the Level I Training is for participants to experience and understand the clinical applications of each of the nine Performance Wellness modules. Graduates are encouraged to integrate the music-based wellness techniques into their personal wellness routines and in their professional work. With practice, they will develop the skills to use the Performance Wellness techniques as a preventive measure for all clinical populations through training, coaching, and/or supportive and re-educative therapy. Understanding and treating the root causes of performance-related stress is highlighted in the Level II Training.

Level II: Teacher Training in Performance Wellness

Level II Training (open to musicians, music educators, music therapists, and other health professionals who have successfully completed Level I; limited to 10 participants) is a 4-day residential intensive, recommended for participants who want to learn additional music therapy techniques for treating and preventing performance-related disorders and/or who want to become professionally certified as Performance Wellness Trainers. This advanced training provides experiential learning for participants who are encouraged to hone in on the deeper issues that block their own sense of joy and mastery in performance and in clinical work. Participants on the Performance Wellness Trainer track learn about cutting-edge developments in the field of psychoneuroimmunology and trauma research/treatment models (Ogden, Minton, & Pain, 2006) and apply this knowledge in coaching practice through participating in a number of creativity-based processes through alternately role-playing as client and trainer under the supervision of the director. Level II also provides training in a number of advanced creative arts therapy and stress management techniques and offers opportunities for those participants on the Performance Wellness Trainer track to practice-teach one or more of the nine Level I modules, under the director's supervision.

Level III: Apprenticeship

Level III is open to clinicians who have successfully completed Level II and must be completed from 6 months to 1 year after completing Level II. Participants are offered opportunities to co-teach with the director at a Level I Training either in their geographic area or in New York City. Performance Wellness

Trainees are coached in developing their own free Introductory Performance Wellness lectures/workshops to build a client base and in eventually setting up their own Level I Training and/or coaching practice with the population of their choice. If trainees do not live in the NYC area, they are asked to videotape their presentations and send the tapes to the director for evaluation.

Trainees are also required to conduct three case studies on the use of the Performance Wellness approach in coaching three different individual clients who are experiencing performance-related disorders. Trainees are supervised weekly (4–8 weeks) by the director during this process either in person, by phone, or through videotaped analysis. As their final project, trainees are required to work with the director in developing a Performance Wellness training manual addressing the needs and issues of their defining population. This includes implementation of assessment tools, treatment approach, and evaluation tools.

When the director has observed the trainee successfully teaching at least five of the nine PW modules and approves of his or her training manual and individual coaching work, the trainee is eligible for certification. In the final stage of the certification process, the trainee must pass a written exam focusing on Performance Wellness theory and practice and must conduct a teaching demonstration before a panel that includes the director and two Certified Performance Wellness Trainers. Upon successful completion, trainees receive a certificate that acknowledges that they are Performance Wellness Trainers. They can then freely use the PW logo and marketing materials to promote their work. Performance Wellness, Inc., will subsequently provide referrals to certified trainers and will also hire them to lead Level I Trainings in sites around the country.

In conclusion, it is hoped that as more educators, clinicians, and college-age music students are trained in Performance Wellness theory and techniques, there will be a significant decrease in performance-related disorders in the music community in years to come. Restoring the health and original joy of music making to the music workforce is the least we can do for those who bring such beauty, light, and joy to our society.

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References

- Appel, S. (1976). Modifying solo performance anxiety in adult pianists. *Journal of Music Therapy*, 13(1), 3-15.
- Ballentine, R. M. (1977). *Joints and glands exercises*. Honesdale, PA: Himalayan Institute Press.
- Barton, R., Killian, C., Bushee, M., Callen, J., Cupp, T., Ochs, B., et al. (2008). Occupational performance issues and predictors of dysfunction in college instrumentalists. *Medical Problems of Performing Artists*, 23(2), 72.
- Bernstein, D. A., Borkovec, T. D., & Hazlett-Stevens, H. (2000). *New directions in progressive relaxation training*. Westport, CT: Praeger.
- Bressers, H., & Wells, R. (2009, September). *Performance matters module evaluation*. London: The Guildhall School of Music and Drama.
- Brodsky, W., & Sloboda, J. A. (1997). Clinical trial of a music generated vibrotactile therapeutic environment for musicians: Main effects and outcome differences between therapy subgroups. *Journal of Music Therapy*, 34, 2-32.
- Brodsky, W. (1996). Music performance anxiety reconceptualized: A critique of current research practices and findings. *Medical Problems of Performing Artists*, 11(3), 88-98.
- Brown, S., & Pavlicevic, M. (1996). Clinical improvisation in creative music therapy: Musical aesthetic and the interpersonal dimension. *The Arts in Psychotherapy*, 23(5), 397-405.
- Bruscia, K. (1987). *Improvisational models of music therapy*. Springfield, IL: Charles C Thomas.
- Chang, J. C-W. (2001). *Effect of meditation on music performance anxiety* (Doctoral dissertation). Teachers College, Columbia University. *Dissertation Abstracts International*, AAT 3014754.
- Chesky, K. S. (2008). Music identity: Differences between music majors and non-music major college musicians. In *Proceedings, 26th Annual Symposium on Medical Problems of Musicians and Dancers*.
- Chesky, K. S., Dawson, W. J., & Manchester, R. (2006). Health promotion in schools of music: Initial recommendations for schools of music. *Medical Problems of Performing Artists*, 21(3), 142-144.
- Chesky, K. S., & Hipple, J. (1997). Performance anxiety, alcohol-related problems, and social/emotional difficulties of college students: A comparative study between lower division music and non-music majors. *Medical Problems of Performing Artists*, 12(4), 126-132.
- Coons, E. E., Montello, L., & Perez, J. (1995). Confidence and denial factors affect musicians' postperformance immune response. *International Journal of Arts Medicine*, 4(1), 4-14.
- Delamater, R. J., & Mcnamara, J. R. (1986). The social impact of assertiveness. *Behavior Modification*, 10(2), 139-158.
- Fehm, L., & Schmidt, K. (2006). Performance anxiety in gifted adolescent musicians. *Journal of Anxiety Disorders*, 20(1), 98-109.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books.
- Hanser, S. (1985). Stress research in music therapy. *Journal of Music Therapy*, 25(1), 190-205.
- Harris, S. R. (1987). Brief cognitive-behavioral group counselling for musical performance anxiety. *Journal of The International Society for the Study of Tension in Performance*, 4, 3-10.
- Kendrick, M. J., Craig, K. D., Lawson, D. M., & Davidson, P. O. (1982). Cognitive and behavioral therapy for musical-performance anxiety. *Journal of Consulting and Clinical Psychology*, 50(3), 353-362.
- Luthe, W. (1963, April 17). Autogenic training, method, research and application in medicine. *American Journal of Psychotherapy*, pp. 174-195.
- Manchester, R. (1988). The incidence of hand problems in music students. *Medical Problems of Performing Artists*, 3(1), 15-18.
- Manchester, R., & Lustik, S. (1989). The short-term outcome of hand problems in music students. *Medical Problems of Performing Artists*, 4(2), 95-96.
- McKinney, H. V. (1984). *The effects of thermal biofeedback training on musical performance and performance anxiety* (Unpublished doctoral dissertation). University of Northern Colorado.
- Montello, L. (1992a). Exploring the causes and treatment of musical performance stress: A process-oriented group music therapy approach. In R. Spintge & R. Droh (Eds.), *Music medicine* (pp. 116-127). St. Louis, MO: MMB Music.
- Montello, L. (1992b). Issues of music medicine from the perspective of a music therapist. In H. Lees (Ed.), *Music education: Sharing musics of the world*. London: ISME.
- Montello, L. (1998). Relational issues in psychoanalytic music therapy with traumatized individuals. In Bruscia, K. (Ed.), *The Dynamics of Music Psychotherapy* (pp. 299-314). New Hampshire: Barcelona Publishers.
- Montello, L. (1999a). A psychoanalytic music therapy approach to treating traumatized adults. *Music Therapy Perspectives*, 17(2), 74-81.
- Montello, L. (1999b, September). The perils of perfectionism. *Allegro*, pp. 13-15.
- Montello, L. (2001, August). Tuning the human instrument. *International Musician*, 7-9.
- Montello, L. (2002). *Essential musical intelligence*. Wheaton, IL: Quest Books.
- Montello, L. (2003). Protect this child. In S. Hadley (Ed.), *Psychodynamic music therapy: Case studies* (pp. 299-318). Gilsum, NH: Barcelona.
- Montello, L. (2005). *The Performance Wellness manual*. Honesdale, PA: Innovations Press.
- Montello, L., Coons, E. E., & Kantor, J. (1990). The use of music therapy as a treatment for musical performance stress. *Medical Problems of Performing Artists*, 5(1), 49.
- Niemann, B. K., Pratt, R. R., & Maughan, M. L. (1993). Biofeedback training, selected coping strategies, and music relaxation interventions to reduce debilitating musical performance anxiety. *International Journal of Arts Medicine*, 2, 7-15.
- Ogden, P., Minton, K., & Pain, C. (2006). *Trauma and the body*. New York: Norton.
- Pert, C. (1997). *Molecules of emotion*. New York: Touchstone.
- Pilzer, P. Z. (2002). *The wellness revolution*. New York: John Wiley.
- Rama, S., Ballentine, R., & Hymes, A. (1979). *The science of breath*. Honesdale, PA: Himalayan Institute Press.
- Roland, D. J. (1994). *The development and evaluation of a modified cognitive-behavioral treatment for musical performance anxiety*

- (Dissertation). *Dissertation Abstracts International: Section B: the Sciences & Engineering* 55(5-B), 2016.
- Sapolsky, R. J. (1984). *Why zebras don't get ulcers*. New York: Holt & Co.
- Shambrook, C. J., & Bull, S. J. (1996). The use of a single-case research design to investigate the efficacy of imagery training. *Journal of Applied Sport Psychology*, 8(1), 27-43.
- Smith, E. (1972). Medical problems of orchestral musicians according to age and stage of career. *Medical Problems of Performing Artists*, 7(4), 132-134.
- Sweeney, G. A., & Horan, J. J. (1982). Separate and combined effects of cue-controlled relaxation and cognitive restructuring in the treatment of musical performance anxiety. *Journal of Counseling Psychology*, 29(5), 486-497.
- Vadocz, E. A., Hall, C. R., & Moritz, S. E. (1997). The relationship between competitive anxiety and imagery use. *Journal of Applied Sport Psychology*, 9(2), 241-253.
- Winnicott, D. W. (1971). *Playing & reality*. London: Tavistock.

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