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UNDERGRADUATE MUSIC STUDENT STRESS AND BURNOUT

A Thesis

Presented to

The Faculty of the School of Music and Dance

San José State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Helen Orzel

December 2010

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The Designated Thesis Committee Approves the Thesis Titled

UNDERGRADUATE MUSIC STUDENT STRESS AND BURNOUT

by

Helen Orzel

APPROVED FOR THE SCHOOL OF MUSIC AND DANCE

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December 2010

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ABSTRACT

UNDERGRADUATE MUSIC STUDENT STRESS AND BURNOUT

by Helen Orzel

Burnout is fatigue and diminished interest caused by long-term stress. It is characterized by emotional exhaustion, depersonalization, and lack of personal accomplishment. In the university music atmosphere, stress and burnout are prevalent and accepted as part of the culture. Symptoms and causes of general stress and burnout have been well researched, but much less has been presented on college musicians' burnout, let alone how to deal with it. This study examines the sources of stress, burnout, and ways of coping for undergraduate music students.

A questionnaire with both quantitative and open-ended questions was administered during the 2009 spring semester. Participants were undergraduate music majors attending a large urban university. The qualitative section revealed that the majority of survey participants attributed a high level of stress to their general undergraduate studies and to their music studies in particular. The mechanism rated most effective for alleviating stress was sleep, followed by spending time with family and friends, breathing exercises, exercise and eating well, meditation, and lastly, medical attention. The open-ended section revealed many music students were overburdened with schoolwork and music commitments. Many expressed that they had no time for things they enjoyed and had a need to learn better time management. Students also listed coping mechanisms not listed in the quantitative section.

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CHAPTER 1

INTRODUCTION

The term burnout is used casually in everyday speech, but the word is the clinical term in the psychology field for the condition of emotional exhaustion, depersonalization and lack of perceived personal accomplishment.[1] Palladio writes that Harvard University experimenters "concluded that specific neural circuits gradually become saturated with information... preventing further perceptual processing."[2] They concluded that burnout is the brain's attempt to prevent losing what it is currently storing before that information has the chance to be fully processed. It stops the learning of new information so the old information has a better chance to make it to long-term storage in the brain.

Stress and burnout are widespread in the college music student culture as it is largely accepted in the professional music world. According to Radocy and Heller, being a musician is one of the top five most stressful and taxing occupations.[3] Bernhard states "music majors reported higher levels of emotional exhaustion and depersonalization than non-music majors."[4] If it is not addressed, students carry this into professional life. In

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1. Cynthia L. Cordes and Thomas W. Dougherty, "A Review and an Integration of Research on Job Burnout," *The Academy of Management Review* 18, no. 4 (October, 1993): 625.

2. Lucy Jo Palladino, "In Praise of the Power Nap," *Fearless Focus*, http://www.fearlessfocus.com/articles/power_nap.html (accessed September 7, 2010).

3. Rudolf Radocy and George N. Heller, "Tips for Coping: The Music Educator and Stress," *Music Educators Journal* 69, no. 4 (1982): 43.

4. H. Christian Bernhard, "A Comparison of Burnout Between Undergraduate Music and

this study, stress and burnout in undergraduate music students are addressed and methods of controlling them are researched.

Need for the Study

Serious musicians tend to be very dedicated to their work. Pushing beyond reasonable psychological and physical limits is common practice. This can be brought on by high expectations and unrealistic goals which often lead to feelings of inadequacy. Hamman and Gordon write "Although continually striving for a goal can provide a sense of direction and purpose, unrealistic goals and rewards are inherently stressful."[5] Bill Lavinder, the senior associate manager of the Southeast region at American Hearing Aid Associates (AHAA), writes about the dangers of not arresting burnout:

> Unless the downward spiral is interrupted, it continues to more serious stages where you become cynical, detached, and depressed. You drift into a full scale burnout with panic, anxiety attacks, and despair. You experience an overwhelming sense of failure and devastating loss of self-esteem, feeling paralyzed to action and lonely. You have a 'what's-the-use attitude' and talk about quitting.[6]

Burnout is essentially a psychological and emotional crisis brought on by long-term untreated stress. This study is needed because burnout and stress in student

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Non-Music Majors," State University of New York at Fredonia, Fredonia, NY. http://www-usr.rider.edu/~vrme/v9n1/vision/Bernard%20Final.pdf (accessed September 10, 2010).

5. Donald L. Hamman and Debra G. Gordon, "Burnout: An Occupational Hazard," *Music Educators Journal* 87, no. 3 (2000): 43.

6. Bill Lavinder, "Avoiding Practice Burnout," *The Hearing Review*, http://www.hearingreview.com/issues/articles/2005-07_03.asp (accessed September 10, 2010).

musicians is prevalent and untreated.

Purpose of the Study

This study has a twofold purpose: first, to examine sources of stress and burnout for undergraduate music students and second, to examine existing methods of controlling stress and burnout. This information can also be a tool for college music students needing help with stress and burnout.

Questions of the Study

Three questions were asked in this study:

1. What coping mechanisms do undergraduate college music students currently practice to alleviate stress?
2. How effective are these coping mechanisms?
3. What can be done to help college music students with stress and burnout?

It is important to discover what college music students already do that is helpful in their own stress management. This gives a better idea of what stress management tools are lacking and what students still need.

Definition of Terms

Burnout: It is important to note that the terms stress and burnout are not interchangeable. Ganster and Schaubroeck claim that burnout is a specific type of stress

calling it "an ongoing psychological and physiological response pattern to stressful work conditions that include a substantial amount of contact with other people."[7] Cordes and Dougherty state "Burnout is a distinctive aspect of stress in that it has been defined and studied primarily as a pattern of responses to stressors at work."[8]

Sanford powerfully illustrates the feelings of burnout:

> If we apply the dictionary definition of burnout to human beings, we must imagine a man or woman who has been devoured from within by fiery energy until, like a gutted house, nothing is left. Or we may imagine a person who once carried a current of psychic energy but now, like a burned out electrical conductor, cannot supply power anymore. Or an individual who, like a burned out forest, feels that her power to renew herself has been destroyed.[9]

Burnout is a psychological and physical event. Apathy, fatigue, boredom, and depression are indicative of the condition.[10] A hallmark sign of musician burnout is when musical activities are consistently experienced with feelings of severe distress.

Bellingrath, Weigl, and Kudielka write "Burnout is a non-psychiatric syndrome principally defined by the three-core dimensions of emotional exhaustion, work-related cynicism, and feelings of work inefficacy or reduced productivity."[11] In this study, the

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7. D.C. Ganster and J. Schaubroeck, "Work, Stress, and Employment Health," *Journal of Management* 17 (1991): 239.

8. Cordes and Dougherty, "Integration of Research," 625.

9. John Sanford, *Ministry Burnout,* (New York: Paulist Press 1982), 3-4.

10. Jane Christensen, "Burning and Burnout," *The English Journal* 70, no. 4 (1981): 13.

11. Silja Bellingrath, et. al., "Cortisol Dystregulation in School Teachers in Relation to Burnout, Vital Exhaustion, and Effort-Reward-Imbalance," *Biological Psychology* 78 (2008): 104.

term burnout refers to the condition of emotional exhaustion, depersonalization, and lack of perceived personal accomplishment resulting from long-term stress.[12]

Depersonalization: Depersonalization occurs in many psychological disorders such as in depression, hypomania, phobic anxiety, obsessionalism, borderline disorders, and schizophrenia. "'Depersonalization' is a state in which an individual experiences either his feelings, thoughts, memories, or bodily sensations as not belonging to himself. Often there is a feeling of 'strangeness' about oneself, a feeling of this 'not being me,' or a sense of unreality of oneself."[13]

Concerning burnout, Lee and Ashforth write "Depersonalization corresponds to the notion of coping; through depersonalization, the individual attempts to staunch the depletion of emotional energy by treating others as objects or numbers rather than as people."[14] Lee and Ashforth go on to state that depersonalization is associated with escape as a coping method.[15] Emotionally disassociating oneself from stressful circumstances is the escapist aspect of depersonalization. For the purposes of this study, depersonalization is defined as a loss of personal identity and individual character in an effort to cope with burnout, and is not connected to any mental illness.

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12. Raymond T. Lee and Blake E. Ashforth, "On the Meaning of Maslach's Three Dimensions of Burnout," *Journal of Applied Psychology* 75, no. 6 (December, 1990): 743.

13. David Trueman, "Depersonalization in a Nonclinical Population," *Journal of Psychology* 116 (1984): 107.

14. Raymond T. Lee and Black E. Ashforth, "On the meaning of Maslach's three dimensions of burnout," *Journal of Applied Psychology* 75, no. 6 (1990): 743.

15. Lee and Ashforth, "Maslach's Three Dimensions of Burnout," 743.

Stress: The term stress came from the field of engineering and means an external force directed at an object.[16] Psychological and physiological researchers have adopted this term because the concept parallels the body's tendency to resist external changes and stay in homeostasis.[17] Stress implies physiological responses like back pain, tension headaches, and fatigue. It is also implies psychological responses such as anxiety and worry. In this study, the term stress means any physical, mental, or emotional discomfort in reaction to specific circumstances or events.[18]

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16. Jeffrey S. Kaiser and James J. Polczynski, "Educational Stress: Sources, Reactions, Preventions," *Peabody Journal of Education* 59, no. 2 (1982): 127.

17. Kaiser and Polczynski, "Educational Stress," 127.

18. Kaiser and Polczynski, "Educational Stress," 128.

CHAPTER 2

LITERATURE REVIEW

Background

Dr. Christina Maslach at University of California, Berkeley is the psychologist who uncovered the phenomenon of burnout in the 1970s. She authored the Maslach Burnout Inventory (MBI) that is the most widely used research measure in the field of burnout study.[19] Gold, Bachelor, and Michael have developed and tested a college student version of the MBI entitled College Student Survey (CSS). The CSS is identical to the MBI except that the term "work" was replaced with "school," "co-workers" was replaced with "friends and classmates," and "job" was replaced with "college."[20]

As late as 2005, thirty-five years after his initial work, Bernhard stated "Despite a wealth of research regarding college student mental health and teacher burnout, less literature has been published regarding the mental health of college education majors, particularly in the field of music."[21] In Bernhard's final report on the Health Promotion in Schools Conference of 2004, he wrote "Research is also needed to enhance current knowledge regarding variables related to or causing mental health problems in music

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19. Iain L. Densten, "Re-Thinking Burnout," *Journal of Organizational Behavior* 22 (2001): 833.

20. H. Christian Bernhard, "A Survey of Burnout Among College Music Majors," *College Student Journal* 41, no. 2 (2007): 396.

21. H. Christian Bernhard, "Burnout and the College Music Education Major," *Journal of Music Teacher Education* 15, no. 1 (2005): 43.

performance, teaching, and learning."[22]

According to Cordes, those in helping professions like teaching, social work, and nursing often suffer from burnout.[23] Students in higher music education have different demands than those in helping professions, but still suffer from burnout. Some college music students teach on top of their already demanding workloads. Bernhard states that levels of burnout in undergraduate music students are generally the same regardless of what primary instruments they play or what concentration inside their majors they pursue such as music education, performance, therapy, business, theater, or composition, but burnout does appear to increase per school year for undergraduate students.[24] Bernhard also states that graduate music students have significantly lower levels of burnout than undergraduate music students.[25]

Causes

Corwin observed that the benefits of work are not worth the effort when a person does not receive fair compensation.[26] Compensation can refer to monetary payment,

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22. H. Christian Bernhard, "HPSM Conference 2004 Final Report, Mental Health Report," Health Promotion in Schools of Music, http://www.unt.edu/hpsm/mental_stress.htm (accessed September 9, 2010).

23. Cynthia L. Cordes and Thomas W. Dougherty, "A Review and an Integration of Research on Job Burnout," *The Academy of Management Review* 18, no. 4 (October, 1993): 621.

24. Bernhard, "A Survey of Burnout," 396.

25. Bernhard, "A Survey of Burnout," 399.

26. Megan Corwin, "Cure Your Burnout!" *Job Snake*, http://www.jobsnake.com/

recognition, progress towards a degree, or anything fulfilling. Some sources of fulfillment are support from teachers, peers, family, recognition, perceived growth, and feeling involved and a part of the environment. It is not surprising that the opposites of these things are sources of stress: lack of support, perceived slow progress, excessive workload, underappreciation, and isolation.[27] A student musician feels undermined and that his or her endeavors are of little value. Endeavors are not worth the effort when circumstances become too overwhelming. A person develops a dreary opinion of one's competence and a low self-esteem.

Authority figures can either aid or hinder progress forwards a goal. Unnecessarily disparaging behavior from an authority figure like a conductor or private music teacher can wear down and damage a developing musician's artistic capacity and investment in his or her art. This can cause frustration, helplessness, increasingly poor self-esteem and dissatisfaction.

Bartel writes "People's stories about their music learning are often potent with the terror experienced and the soul-deadening castigations endured."[28] Stories like these are sometimes glorified, but the students suffer because this type of music teaching directly demeans the music student's hard work and personal investment in their art in an ironic attempt to get the student to work harder. Cameron and Bartel write:

Where tact, thoughtfulness, and 'seeing the individual' are present students

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seek/articles/index.cgi?openarticle&8478 (accessed September 8, 2010).

27. Bernhard, "A Survey of Burnout," 393.

28. L. Cameron and L. Bartel, "Engage or Disengage: A Study of Lasting Response to Music Teaching," *Orbit* 31, no. 1 (2000): 22.

> seem to see the teacher as friend and as enthusiastic about music. It leads them to emulate and grow. Just as the positive emotional tone is nurturing and fosters engagement and lasting involvement, a negative emotional tone is destructive. We were shocked at the frequency and seriousness of the verbal, emotional and physical abuse experienced in learning music.[29]

Brandfonbrener and Lederman state "The relationship between studio teachers and students, at all levels, can be intense and has the potential for being both healthy and unhealthy for both student and teacher."[30] Teachers are trusted authority figures who students depend on for support and misusing this role sabotages a supportive working environment. If a teacher is too critical towards students, they often take it very personally, especially in music because of their emotional investment. Students often respond with emotional exhaustion, depersonalization, diminished self-esteem, and a lack of personal accomplishment, which are all integral in burnout.

Although college administration (representing "bureaucracy" for students) is aimed at being helpful and efficient, tedious forms, rules, prevalent errors in advising, and strict procedures can hinder the results of a student's hard work. Radocy and Heller state "Bureaucratic procedures may contribute to stress, particularly if they are perceived as harassing or unnecessary."[31]

Jacobs and Dodd found that *perceived* academic workload influenced burnout, but

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29. Cameron and Bartel, "Engage or Disengage," 24.

30. Alice G. Brandfonbrener and Richard J. Lederman, "Performing Arts Medicine" in Part XIII *Neuroscience, Medicine, and Music*, ed. John W. Flohr of *The New Handbook of Research on Music Teaching and Learning: A Project of the Music Educators National Conference*, ed. Richard Colwell and Carol Richardson (Oxford: Oxford University Press, 2002), 1013.

31. Rudolf Radocy and George N. Heller, "Tips for Coping: The Music Educator and Stress," *Music Educators Journal* 69, no. 4 (1982): 43.

actual academic workload did not.[32] Perceived unreasonable demands and obstacles overwork students into exhaustion. Unclear goals can exacerbate the issue. If a student is given unclear instructions on playing piece of music, he or she does not know what direction to work in and that is stressful. Issues could continue to compound if the student completes the unclear task and does not receive recognition because it is not what the teacher wanted. The effort invested into improving one's musical performance is then undermined and invalidated

Competition is an inherent part of music even from the beginnings of a musician's experience. Musicians are subjected to adjudication in order to win membership in ensembles, placement within a section, an opportunity to play a solo, acceptance to schools, scholarship awards, and employment. "Paradoxically, art very often becomes a casualty to the very social conditions it tries to reflect."[33] An audition is the ultimate arena of competition, yielding one winner and a number of losers. There is an enormous amount at stake and this pressure greatly contributes to stress levels as well as to performance anxiety.

Symptoms

A side effect of burnout is an increased rate of aging in the brain. According to

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32. Sheri R. Jacobs and David K. Dodd, "Student Burnout as a Function of Personality, Social Support, and Workload," *Journal of College Student Development* 44, no. 3 (2003): 299.

33. Rodney E. Miller, "A Dysfunctional Culture: Competition in Music," *Music Educators Journal* 81, no. 3 (November, 1994): 29.

psychologist Elissa Epel, "Stress even affects cells at the molecular level."[34] Telomeres are the protective coatings on the end of our chromosomes, made of disposable and highly repetitive DNA. Stress frays telomeres, mimicking the aging process.[35]

Stress demands a lot of the body, and the body is designed to endure it. Adrenaline and cortisol are released in response leading to energy generation, strengthening of the immune system, enhancement of reflexes, and improvement of memory.[36] Too much adrenaline and cortisol, however, debilitates the brain. In a CBS interview, Bruce McEwen (a scientist at the Rockefeller University in NY) claimed that chronic stress causes the neurons in our brains to shrink and change shape. When the stress stops, neurons return to normal size and shape.

Sandstöm affirms another effect of burnout is loss of cognitive function and memory loss.[37] This is partially due to a significant slowing down of neurogenesis, the formation of new neurons in the human adult brain. The neurologists Eriksson and Wallin propose "...burnout to be an exponent of stress-mediated decrease in adult neurogenesis leading to a decreased ability to cope with stress through decreased hippocampal function..."[38] Thus neurogenesis is slowed and can even stop completely

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34. CBS, "Brain's Resilience May Prevent Burnout," CBS News in Focus, http://www.cbsnews.com/stories/2007/01/19/eveningnews/main2378248.shtml (accessed September 10, 2010).

35. CBS, "Brain's Resilience," (accessed September 10, 2010).

36. CBS, "Brain's Resilience," (accessed September 10, 2010).

37. Agneta Sandström et al., "Impaired Cognitive Performance in Patients with Chronic Burnout Syndrome," *Biological Psychology* 69, no. 3 (July, 2005): 271.

38. P.S. Eriksson and L. Wallin, "Functional Consequences of Stress-Related Suppression

altering brain plasticity, which is the brain's ability to reorganize neural pathways as we learn and experience new things. Neurogenesis and brain plasticity are crucial for memory and learning. Beyond studying and working on projects, music students must memorize and practice music. If neurogenesis is slowed or stopped, these demands on the brain are difficult to fulfill.

Stress significantly impacts physical health. According to Ossebaard, complaints of bodily pain are commonly associated with stress.[39] Typical examples of complaints brought on to a large degree by physical tension are neck and back pain, upset stomach, chest pain, headaches as well as fatigue and physical exhaustion. Silja Bellingrath et. al note "BO [burnout] is often accompanied by reports of physical symptoms such as recurrent headaches, gastro-intestinal discomfort, disturbed sleep patterns, or non-specific pain and has positively associated with various illnesses such as infections, cardio-vascular disease, or type 2 diabetes."[40] Kaiser and Polczynski assert that burnout has led to early deaths and serious illnesses.[41] Burnout also impacts appetite. One can feel the need to eat less or more. A change in weight is a good indicator of this. Kaiser and

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of Adult Hippocampal Neurogenesis- A Novel Hypothesis on the Neurobiology of Burnout," *Acta Neurologica Scandinavica* 110, no. 5 (2004): 275.

39. Hans C. Ossebaard, "Stress Reduction by Technology? An Experimental Study into the Effects of Brain Machines on Burnout and State Anxiety," *Applied Psychophysiology and Biofeedback* 25, no. 2 (2000): 93.

40. Silja Bellingrath, et. al., "Cortisol Dysregulation in School Teachers in Relation to Burnout, Vital Exhaustion, and Effort-Reward-Imbalance," *Biological Psychology* 78 (2008): 104.

41. Jeffrey S. Kaiser and James. J. Polczynski, "Educational Stress: Sources, Reactions, Preventions," *Peabody Journal of Education* 59, no. 2 (1982): 135.

Polczynksi state cravings for sweet food are especially idiomatic of burnout.[42]

Adrenal burnout is a condition directly resulting from excess stress.[43] When a human being is under stress, the adrenal glands above the kidneys secrete adrenaline and cortisol, hormones that help the body cope with stress by sending blood to large leg muscles and the heart and away from the digestive organs. This reaction was intended to help early humans meet the physical demands of hunting and running from danger. According to Emily Kane:

> Humans were built to outwit and kill larger mammals, and to use our brains to choose between running away or fighting. Early humans also had many protracted periods of significant inactivity, relative to today's standards. Whereas we once had occasional, horrific stress, we now tend to have chronic, low-grade stress day after day (e.g., bad boss, poor diet, sedentary lifestyle, insufficient sleep, prescription drug use), which builds to the point of exhaustion or dysfunctional anxiety. This is what is meant by adrenal burnout. What is actually happening is adrenal atrophy. The glands literally wear down and secrete adrenaline on a hair trigger — with no buffering capacity.[44]

Because adrenaline dissipates quickly in the blood stream, it is difficult to measure. Cortisol, however, can be measured in saliva, and Emily Kane observes, "Cortisol is considered a major indicator of altered physiological states in response to stressful stimulation."[45]

For momentary stress, this physical reaction does no real damage. With chronic low-grade stress, the hormonal reaction is prolonged and can damage the body. Emily

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42. Kaiser and Polczynski, "Educational Stress," 132.

43. Emily Kane, "From Stressed to Sane," *Better Nutrition* 70, no. 5 (2008): 38.

44. Kane, "From Stressed to Sane," 38.

45. Kane, "From Stressed to Sane," 38.

Kane describes some damage that can occur: "Cortisol increases your blood sugar level and depresses your immune response to maintain that stress."[46] High cortisol levels have been associated with fatigue and irritability after work,[47] nervousness,[48] sleep disturbances,[49] and biochemical changes underlying the risks of cardiovascular disease.[50] Henry reveals that cortisol and other stress hormones have many effects that could influence atherogenesis, the formation of plaque in the inner lining of the arteries.[51] Additionally, excess adrenaline exhausts the body; it causes the heart to beat faster and harder resulting in strain. According to Torpy, there is a significant link between heart conditions and stress.[52]

Cortisol levels are normally highest in the morning and wane throughout the day. In a study conducted at Utrect University, researchers found that in people suffering from

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46. Kane, "From Stressed to Sane," 38.

47. Samuel Melamed and Shelly Bruhis, "The Effects of Chronic Industrial Noise Exposure on Urinary Cortisol, Fatigue and Irritability," *Journal of Occupational and Environmental Medicine* 38 (1996): 252.

48. A. Mazur, "Do Cortisol and Thyroxin Correlate with Nervousness and Depression Among Male Army Veterans?" *Biological Psychology* 37 (1994): 259.

49. S. Doucevic, T. Theorell, and G. Scalia-Tomba, "The Psychosocial Work Environment of District Nurses in Sweden. Stress in the Public Service," *Work and Stress* 2 (1988): 341.

50. Samuel Melamed et al., "Chronic Burnout, Next Term Somatic Arousal and Elevated Salivary Cortisol Levels," *Journal of Psychosomatic Research* 46, no. 6 (1999): 596.

51. James P. Henry, "Coronary Heart Disease and Arousal of the Previous Termadrenalnext Term Cortical Axis," in *Biobehavioral Bases of Coronary Heart Disease*, ed. T.M. Dembroski, T. Schmidt and G. Blumchen (Basel: Karger, 1983), 366.

52. Janet M. Torpy, "Acute Emotional Stress and the Heart," *Journal of the American Medical Association* 298, no. 3 (2007): 260.

burnout, cortisol levels are lower than normal in the morning.[53] These researchers gave subjects suffering from burnout fourteen sessions of cognitive therapy. Mommersteeg et al. reveal, "These morning cortisol levels were increased after 14 treatment sessions."[54] This suggests that therapy positively influences cortisol levels.

Consistently being overworked naturally tires one out on many levels. Stern and Cox state exhaustion is not just physical, it is emotional and mental as well.[55] Sharon Toker et al. acknowledge panic and anxiety are two critical reactions from stress and burnout that exhaust one physically and emotionally.[56] Burnout and depression seem to be closely linked. Iacovides, Fountoulakis, and Kaprinis write, "The more severe the burnout, the qualitatively closer it is to depression, while remaining nevertheless as an independent syndrome."[57] Ahola and Hakanen also draw the correlation and assert "the effects between burnout and depression are reciprocal: occupational burnout predicted new cases of depressive symptoms and depression predicted new cases of burnout."[58]

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53. Paula M. C. Mommersteeg et al., "Cortisol Deviations in People with Burnout Before and After a Psychotherapy: A Pilot Study," *Health Psychology* 25, no. 2 (2006): 246.

54. Mommersteeg, "Cortisol Deviations," 247.

55. Abby Stern and James Cox, "Teacher Burnout: The Dull Reality," *Music Educators Journal* 80, no. 3 (1993): 35.

56. Sharon Toker et al., "The Association Between Burnout, Depression, Anxiety, and Inflammation Biomarkers: C-Reactive Protein and Fibrinogen in Men and Women," *Journal of Occupational Health Psychology* 10, no. 4 (2005): 344.

57. A. Iacovides et al., "The Relationship Between Job Stress, Burnout and Clinical Depression," *Journal of Affective Disorders* 75, no. 3 (August, 2003): 218.

58. Kirsi Ahola and Jari Hakanen, "Job Strain, Burnout, and Depressive Symptoms: A Prospective Study Among Dentists," *Journal of Affective Disorders* 104 (2007): 107-108.

Iacovides, Fountoulakis, and Kaprinis write:

> However, the critical issue that may discriminate burnout from depression is that in burnout, helplessness is confined to work environment, while in depression it is spread and covers most aspects of the patient's life. In this sense, the burned-out professional possesses (in contrast to the depressed patient) routes for escape. But if generalization occurs, then this helplessness may spread and burn-out may progress to real depression.[59]

Barney and Williams state that music students often have an emotional investment in what they are studying.[60] Art is expressive and emotional by its very nature. The doubting of abilities can drive a person to work harder, but in the case of burnout, the distrust of self can be so strong that it actually deters one from improving. A music student who suffers from a lack of personal accomplishment and a sense of inadequacy is not as inclined to practice or study. Blanket discouragement rules in this musician's self-conception. All the love and joy is gone and a sense of depersonalization takes over. Music happens completely by rote, becoming a menial task; work happens at a distance, devoid of interest.

Researchers in Greek health facilities have observed:

> Inadequate control over one's work, frustrated hopes and expectations and the feeling of losing the meaning of life, seem to be independent causes of burnout. These factors are highly determined by the individual's personality and original attitude towards work and the position work as in the individual's life.[61]

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59. Iacovides et al., "Job Stress, Burnout and Clinical Depression," 218.

60. C.L. Barney Dews and Martha S. Williams, "Student Musicians' Personality Styles, Stresses, and Coping Patterns," *Psychology of Music* 17 (1989): 37.

61. Iacovides et al., "Job Stress, Burnout and Clinical Depression," 210.

Treatment

Prevention and treatment options for burnout and severe stress are often the same. The choices for handling stress and burnout as outlined in this section are healthy lifestyle, sleep, supportive environment, medical attention, and alternative medicine. Current educational efforts are also discussed.

Healthy Lifestyle

According to Help Guide, an organization of health experts providing supportive health information, "You can increase your resistance to stress by strengthening your physical health."[62] Less sleep, an unhealthy diet, and other negative behaviors make a person less resilient in coping with teachers, bureaucracy, work, homework, practicing, relationships, and any other stressors, therefore an unhealthy lifestyle could intensify burnout. Patterson et al. confirm "Stressful working conditions contribute to personal stress, poor health, and substance abuse risk."[63] For a student musician, hours of daily practice in addition to other obligations like homework and classes could give him or her little opportunity for proper sleep and limit food to whatever fast food and unhealthy choices may be available. Unhealthy choices undermine the brain's work and hinder

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62. Melinda Smith et al., "Stress Management How to Reduce, Prevent, and Cope with Stress," Help Guide http://helpguide.org/mental/stress_management_relief_coping.htm (accessed September 10, 2010).

63. Camille R. Patterson et al., "Healthy and Unhealthy Stress Unwinding: Promoting Health in Small Businesses," *Journal of Business and Psychology* 20, no. 2 (Winter 2005): 221.

intellectual development.

Proper nutrition and exercise are very important in supporting brain health. According to Miller, the vitamin B group supports the nervous system as well as helping the digestive system efficiently turn food into energy.[64] Bragg and Bragg write that drinking enough water flushes toxins away and prevents symptoms of dehydration like irritability, physical aches, and fatigue.[65] Williams indicates that iron supports energy levels in the body.[66] According to *Newsweek,* exercise actually promotes brain health. Exercise increases production of several chemicals including Brain Derived Neurotrophic Factor (BDNF). In a controlled study at the Ege University School of Medicine, thirty-seven clinically diagnosed burnout participants' BDNF levels were compared with thirty-five healthy controls' levels. According to the researchers, "The burnout group had significantly lower levels of sBDNF [serum BDNF] compared with the healthy control group."[67] BDNF encourages new brain cell growth and influences the brain's nerve cells to branch out, join together, and communicate differently. It has been a commonly held opinion in medicine that the human adult brain cannot grow new nerve cells. In a

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64. Darrell Miller, "B Vitamin Complex and Stress: How Vitamin B Can Reduce Stress," Articlesbase Free Online Articles Directory, http://www.articlesbase.com/health-articles/b-vitamin-complex-and-stress-how-vitamin-b-can-reduce-stress-669503.html (accessed September 10, 2010).

65. Patricia Bragg and Paul C. Bragg, *Water: The Shocking Truth That Can Save Your Life* (Santa Barbara: Bragg Health Sciences, 2005), 8.

66. Joy Williams, "How I Fought Teacher Burnout With Good Nutrition," *Instructor-Primary* 107 (September, 1997): 96.

67. Ozen Onen Sertoz et al., "The Role of BDFN and HPA Axis in the Neurobiology of Burnout Syndrome," *Progress in Neuro-Psychopharmacology & Biological Psychiatry* 32, no. 6 (Aug. 2008): 1462.

Newsweek interview with Charles Hillman, associate professor at the University of Illinois, Urbana-Champaign, it is asserted that "Regular exercise builds up the body's levels of BDNF- a 'Miracle-Gro for the brain' that is critical for learning, memory, and many other processes of higher thought."[68] Exercise also helps to restore norepinephrine, an emotion-stabilizing hormone that is depleted by stress. Charles Hillman and some of his colleagues found that exercise influences many chemicals which counteract the effects of stress on the brain.[69]

David S. Holmes, a professor of psychology at the University of Kansas in Lawrence, has spent most of his career studying stress. He claims, "...I have never run across any stress-relief method as strong as aerobic fitness." According to him, improving the cardiovascular system and stimulating beneficial brain chemicals through exercise is stronger therapy than psychotherapy, meditation, stress management, and biofeedback. Exercise deepens breathing, which counteracts the fast and shallow breathing associated with stress. Any kind of exercise can do this, not just aerobic exercise. Exercise also relaxes the muscles by reducing and even eliminating stress hormones in the blood stream.

According to Tracy Temple, "Stress is a natural part of life, and a healthy body, as well as a healthy attitude, can ensure that it does not inhibit a musician's performance, and enjoyment of her art."[70] Creating a healthy life style supports a healthy mentality. It

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68. Mary Carmichael, "Stronger, Faster, Smarter," *Newsweek*, March 26, 2007, 43.

69. Rod K. Dishman et al., "Neurobiology of Exercise," *Obesity* 14 (2006): 347.

70. Tracy Temple, "The Effects of Stress on Music Performance," Ithaca College. http://www.ithaca.edu/faculty/nquarrie/stress.html (accessed September 2, 2010).

may help treat burnout immensely, but examining the entirety of issues that led to the development of burnout is also mandatory in overcoming it. The key to coping with stress and burnout is understanding its causes and coping mechanisms.

Sleep

College music students often struggle to maintain healthy sleep habits. Not only are they generally overburdened, but with all the time it takes to complete tasks, sleep deprivation is the norm which further aggravates poor health. Most college music students can attest to music departments being unofficially open until the early hours of the morning so that they can complete their work. Bernhard states that poor personal and academic support actually affects sleep patterns negatively.[71]

As mentioned, Harvard experimenters observed subjects with burnout who took afternoon naps as opposed to those who did not. They found that napping stopped or reversed mental deterioration endured during the day. Researchers concluded that sleep consolidates information the stored by the brain. This lets the brain "re-open" to learning new material. According to Dr. Palladino, "After a nap, the brain no longer needs burnout to prevent the loss of recently stored information."[72] Harrell concluded this is

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71. H. Christian Bernhard, "Burnout and the College Music Education Major," *Journal of Music Teacher Education* 15, no. 1 (2005): 43.

72. Peter Harrell, "In Praise of the Power Nap: Even World Leaders Need a Little Shut-Eye," *The Daily Princetonian*, http://www.dailyprincetonian.com/archives/2000/04/24/opinion/859.shtml (accessed September 10, 2010).

why many students are observed napping in university libraries.[73]

Lucy Jo Palladino reports that Robert Stickgold and colleagues at Harvard University "show that a midday snooze reverses information overload and that a 20 percent overnight improvement in learning a motor skill is largely traceable to a late stage of sleep that some early risers might be missing. Their studies suggest that the brain uses a night's sleep to consolidate the memories of habits, actions and skills learned during the day."[74] Thirty-minute naps were sufficient to prevent any further deterioration, but one hour naps boosted capabilities. Hour long naps have more than four times as much deep, or slow wave sleep and rapid eye movement (REM) sleep than thirty minute naps. Palladino further states:

> Previous studies by the Harvard group have traced overnight memory consolidation and improvement on the same perceptual task to amounts of slow wave sleep in the first quarter of the night and to REM sleep in the last quarter. Since a nap hardly allows enough time for the latter early morning REM sleep effect to develop, a slow wave sleep effect appears to be the antidote to burnout.[75]

Sandström et al. confirm "Sleep strengthens memory traces and can also promote mental restructuring..."[76] Since college musicians who practice their instruments large amounts of time are essentially trying to consolidate and improve on the same perceptual task, it is in their best interest to get the right amount of sleep!

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73. Harrell, "In Praise of the Power Nap," (accessed September 10, 2010).

74. Palladino, Lucy Jo. "In Praise of the Power Nap," *Fearless Focus*, http://www.fearlessfocus.com/articles/power_nap.html (accessed September 7, 2010).

75. Palladino, "In Praise of the Power Nap," (accessed September 7, 2010).

76. Sandström et al.,"Impaired Cognitive," 277.

Supportive Environment

Bernhard claimed "high levels of burnout were related to negative personality and perceived workload, while low levels of burnout were related to positive personality, peer support, and participation in extracurricular activities."[77] Time spent with loved ones provides a therapeutic opportunity to talk through problems. It also provides the opportunity to have a positive experience enjoying someone else's company. Sternbach states "There is now abundant evidence from the fields of social psychology and neuroscience to support the theory that we are hard-wired for social interactions."[78] Social activity is a natural need for human beings which counters the solitude music students usually need in order to practice. Sternbach further acknowledges "Even though the student years are a time for developing social skills, it remains a fact of life that music students improve by practicing in isolation, away from others."[79] Foltz-Gray and Goldstein reported "Researchers speculate that social ties may help us cope with the stresses that lower immunity. 'Immune cells have receptors that bind to stress hormones,' explains Bruce S. Rabin, MD, PhD, study coauthor and director of the Brain, Behavior, and Immunity Center at the University of Pittsburgh. 'When this occurs, the immune cells don't work as well.'"[80]

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77. Bernhard, "Burnout and the College Music Education Major," 46.

78. David J. Sternbach, "Stress in the Lives of Music Students," *Music Educators Journal* 94, no. 3 (2008): 44.

79. Sternbach, "Stress in the Lives of Music Students," 44.

80. Dorothy Foltz-Gray and Laura Goldstein, "The Laughing Cure," *Prevention* 50, no. 10 (October, 1998): 96.

Laughing has been shown to have very positive effects on the mind. Foltz-Gray and Goldstein report "Laughter expert and neuroimmunologist Lee S. Berk, DHSc, and colleagues at Loma Linda University School of Medicine in California have found that the positive emotions associated with laughter decrease stress hormones and increase certain immune cells while activating others."[81]

Extracurricular activities can counteract the effects of burnout and time spent with hobbies can relax and rehabilitate the brain and body counteracting stress. Spending time with loved ones, like friends and family, and in extracurricular activities elevate chemicals responsible for our feelings of happiness in our brain and body. Jacobs and Dodd conducted research on stress in college students and found that "Extracurricular activities also appear to be important to a student's sense of accomplishment, thus additionally counteracting burnout."[82] Jacobs and Dodd went on to state "Reducing extracurricular activities, or perhaps even hours of employment, may reduce the student's level of interaction with supportive friends and thus exacerbate burnout."[83]

Medical Attention

Consulting a doctor is especially necessary when signs of depression continue longer than two weeks, physical reactions to stress develop, and/or a panic attack happens. According to the Sydney West Area Health Service, signs of depression

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81. Foltz-Gray and Goldstein, "The Laughing Cure," 96.

82. Jacobs and Dodd, "Student Burnout," 298.

83. Jacobs and Dodd, "Student Burnout," 298.

include pervasive sadness, insomnia, sleeping too much, weight loss or gain, significant loss or increase in appetite, inability to concentrate, and thoughts of suicide.[84] Common physical symptoms of stress include an upset stomach, headaches, and back pain. Hill et al. define a panic attack as a distinct episode of uncontrollable panic or increased anxiety.[85] Gottlieb acknowledges a person may experience a rapid heartbeat, unusual perspiring, and light-headedness.[86]

Alternative Medicine

According to Gottlieb, natural healing methods have also been very beneficial to those suffering from burnout and stress. For example, hornbeam and aloe vera flower essences are thought to help with mental exhaustion.[87] Julian Whitaker, M.D., founder and president of the Whitaker Wellness Center in Newport Beach, California, suggests that plenty of ginseng can give burned-out people more energy. In looking for food products or tea with ginseng, anything with over 10% ginsenosides will have this effect.[88] Dr. Whitaker recommends using one to two teaspoons of dry ginseng in one to two meals

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84. Sydney West Area Health Service – Mental Health Network, *The Wellness Guide – A Resource to Support the Recovery Journey* (Liverpool, Australia: Sydney West Area Health Service – Mental Health Network, 2008), 21-25.

85. Terrence D. Hill et al., "Neighborhood Disorder, Psychophysiological Distress, and Health." *Journal of Health and Social Behavior* 46, no. 2 (June, 2005): 170-186.

86. Bill Gottlieb, *New Choices in Natural Healing* (New York: Rodale Books, 1997), 517.

87. Gottlieb, *New Choices in Natural Healing*, 517.

88. Gottlieb, *New Choices in Natural Healing*, 219.

a day.

According to Dr. Mills, meditation exercises are good for both burnout prevention and treatment.[89] Martial arts and yoga instruction provide many different ways to breathe, meditate, and relive stress.[90] The aim is to slow and calm the mind and body so one can think more clearly. Martial arts and yoga themselves tend to relax one by changing focus. Peace and centering are often at the core of these practices and most practices promote a mind, body, and spirit connection. Most universities and community centers offer martial arts instruction and yoga classes; for the music student, it may count towards general education credit. Hamman and Gordon state exercises using imagery such as picturing yourself in a pleasant place are especially effective.[91] Bernhard reports "…students who had received self-defense instruction with guided imagery or tai chi chuan instruction reported significantly lower levels of posttreatment burnout than students who had received exclusively self-defense instruction."[92]

There are a number of exercises that can produce relaxing sensations. According to Hamman and Gordon, a common routine is to systematically tense and relax one muscle group at a time until the entire body is completely relaxed.[93] Breathing exercises

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89. Cassie J. Moore, "Peace and Quiet," *Chronicle of Philanthropy* 20, no. 16 (2008): 39.

90. Harry Mills et al., "Yoga, Pilates and Tai Chi for Stress Reduction," Gulf Bend Center, http://www.gulfbend.org/poc/view_doc.php?type=doc&id=15662&cn=117 (accessed September 2, 2010).

91. Donald L. Hamman and Debra G. Gordon, "Burnout: An Occupational Hazard," *Music Educators Journal* 87, no. 3 (2000): 37.

92. Bernhard, "Burnout and the College Music Education Major," 50.

93. Hamman and Gordon, "Burnout," 37.

concentrating on depth and rate have been practiced for centuries. Meharg states the body associates deep and slow breathing with sleep influencing the body to relax.[94]

Current Educational Efforts

The first conference for the Health Promotion in Schools of Music (HPSM) Project was held in 2004 at the University of North Texas in response to the National Association of Schools of Music (NASM) directive to include health information in every music curriculum. The HPSM Project is a collaborative effort between the University of North Texas and the Performing Arts Medical Association. Professionals from both performing arts medicine and music were involved. During the conference, different task force groups discussed the four health areas pertaining to musicians: physical health, mental health, audiological health, and vocal health.

The goal of the HPSM conference was to gather, organize, and distribute this information to the National Association of Schools of Music schools for the benefit of teachers and students. How this information reaches the students is left up to the schools. Some suggestions have been to incorporate information into pedagogy courses, applied lessons, or specially designated wellness courses.

Many pioneering music schools already have included wellness courses in their curriculum, including the University of North Texas. There, the course is offered to students of all majors and is constructed in such a way to teach health lessons through music so that the lessons are applicable to all occupations. The course is IRB approved

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94. Stephen S. Meharg, "Help for the Anxious Performer," *Music Educators Journal* 75, no. 2 (1988): 36.

for gathering information from the students. Dr. Kris Chesky, cofounder and director of the Texas Center for Music and Medicine at UNT, helped lead the HPSM conference and has taken a direct role in gathering data from the occupational music health classes. The data gathered that could apply to burnout in college music students is in response to questions on how heavily music students invest their identities in their art.

In 2007, the Music Education National Conference (MENC) issued a Health in Music Education Position Statement containing information and guidelines targeted at K-12 school music teachers for promoting overall health in music students. Hearing, physical, and psychological health are the three areas covered in the position statement that music teachers must be aware of and take precautions toward. The psychological risk addressed is performance anxiety: "The performance of music, especially the public performance of music, involves a host of social and emotional factors that are key to the importance we place on music and a potential source of stress in the student."[95] Dr. Chesky has affirmed that prevention and treatment is all in teaching.[96] Music teachers are the central resource for modeling behaviors and influencing attitudes surrounding musical practice. Just as we are now more aware of music-related physical injuries, so we are becoming more aware of stress and burnout as they relate to music and music education.

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95. Music Educators National Conference, "Health in Music Education Position Statement," Music Educators National Conference, http://menc.org/about/view/health-in-music-education-position-statement (accessed September 10, 2010).

96. Music Educators National Conference, "Health in Music Education Position Statement," (accessed September 10, 2010).

Conclusion

As previously cited, researchers such as Bernhard and Chesky have highlighted the serious lack of research into undergraduate musician burnout. What little there is written about college music student burnout is mostly focused on causes and symptoms, not treatment. Bernhard has proposed that an important step in understanding burnout in college musicians is to adapt the MBI to college music students. He has already conducted studies measuring college music student burnout, concluding that it is quite prevalent.[97]

Gaining an understanding of stress levels in undergraduate music students is important, but there is also a need for information on help and treatment. The level of awareness about burnout in the college music atmosphere is very low, meaning that when burnout happens, it may go undiagnosed and attention may not be spent on caring or providing support for students. Knowing how college music students currently attempt to cope with stress and the respective effectiveness of these techniques is the logical place to start building our understanding of the stress and burnout phenomena.

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97. Bernhard, "A Survey of Burnout," 401.

CHAPTER 3

RESEARCH METHODS

This study included a questionnaire to measure stress in undergraduate music students. It also gathered information on what these students were doing to alleviate stress and how effective these practices were. The questionnaire was both quantitative and open-ended. The quantitative section was largely descriptive with several short Likert-style questions. (A Likert scale is a psychometric rating scale.) This section allowed for statistical information to be gathered on what standard and recommended stress alleviation techniques these students use and do not use. The open-ended section allowed for students to elaborate on their answers from the quantitative section and provide their own insight into their problems and solutions in dealing with stress, allowing for more detailed responses. Besides the benefit of challenging the participants of this study to reflect on what helps them, answers to these questions might provide new information on stress relief to aid others in the future.

Although the original intent of this study was to uncover more about burnout in undergraduate music students, this was difficult to measure in the limited scope of a questionnaire. Measuring burnout would require a significantly prolonged study as it is a result of long-term stress. Therefore, this instrument instead measures present stress levels, that if prolonged could lead to burnout. The most useful way to gather meaningful information on undergraduate music student stress is to question those in the environments where this occurs. The *Undergraduate Music Student Stress and Coping Skills Questionnaire* was designed for this demographic (Appendix A).

Questionnaire

The objective of this questionnaire was to gather information about undergraduate music student stress levels, what coping mechanisms they use, and to what degree these practices are effective. The first three questions employ a Likert-type scale. Since liberal art schools require music students to take general education classes, the first question addresses the stress level of the students' studies in general. The second question pertains to stress levels associated specifically with music studies. Question 3 addresses practices for relieving stress, including meditation practices, time with family and friends, breathing exercises, medical attention, eating well, and sleep.

The second section of the questionnaire is a series of three open-ended questions requiring brief written responses. This open-ended section was designed to collect information that may not have been elicited by the first section, or expand on answers from the quantitative section. The three inquiries were:

1. What factors elevate your stress level?
2. Please list anything not listed here (healthy or unhealthy) that you do to relieve stress.
3. What are things you believe would help alleviate stress, but you currently do not practice?

Procedure

The questionnaire was administered during the 2009 spring semester. Participants were undergraduate music majors attending a large urban university with a population of 31,906 students of which 24,390 were undergraduates. The age breakdown of the undergraduate population in this university is as follows: 22% were nineteen years of age or younger, 52% were between the ages of twenty and twenty-four, 15% were between the ages of twenty-five and twenty-nine, 11% were aged thirty and over. To focus the study on the typical age range for undergraduate students, only undergraduates below the age of twenty-four were asked to fill out the questionnaire. Since Bernhard's research indicated burnout in undergraduate music students is generally the same regardless of what primary instruments they play, what year, or what concentration inside their majors they pursue, students from all musical disciplines were given the opportunity to complete this questionnaire.[98]

The questionnaires and consent forms were distributed in music theory and large ensemble classes (Appendix A and B). Since all music majors are required to take these classes, this gave the best chance of representing students in all music disciplines. Two hundred seven students had the chance to complete this questionnaire. One hundred two returned the questionnaire, giving a 60% return rate. Two questionnaires were not used in this study because they were filled out improperly.

Each questionnaire had a number that correlated to a number on a roster. The students were asked to sign their name next to the number respective to their

98. H. Christian Bernhard, "A Survey of Burnout Among College Music Majors," *College Student Journal* 41, no. 2 (June, 2007): 397.

questionnaire. This was to assure that no participant filled out more than one questionnaire and to be objective while reading the questionnaires. At the beginning of classes where there was much commotion and where it would be a difficult task to get every person to sign the roster (such as the ensemble classes), a card was given with each questionnaire with each respective questionnaire's number written on it. The students were asked to sign the card and give it back with the questionnaire. The names were then later recorded on the roster. To preserve subject anonymity, the cards and roster were not associated with the questionnaires during analysis. They were used only for the purpose described above. The only two people who saw the questionnaires, cards, and roster were Dr. Diana Hollinger, Professor of Music Education at San José State University, and the author.

CHAPTER 4

RESEARCH FINDINGS

Quantitative Data

The first question in the quantitative section was, "What is your overall stress level as an undergraduate music student?" and the second continued with, "In your musical studies specifically?" To examine the answers to the first two questions, the data was compiled and analyzed with both averages and modes. The mode reveals the most frequent response. The average takes into account the entire data set, including more extreme values, showing the bigger picture of what the data set represents. Comparing the two figures against each other reveals the consistency of the students' ratings. For example, in the question referring to stress from overall studies, the average was 3.74 and the mode was 4. For the second question on stress related to musical studies specifically, the average was 3.77 and the mode was 4 (Figure 1).

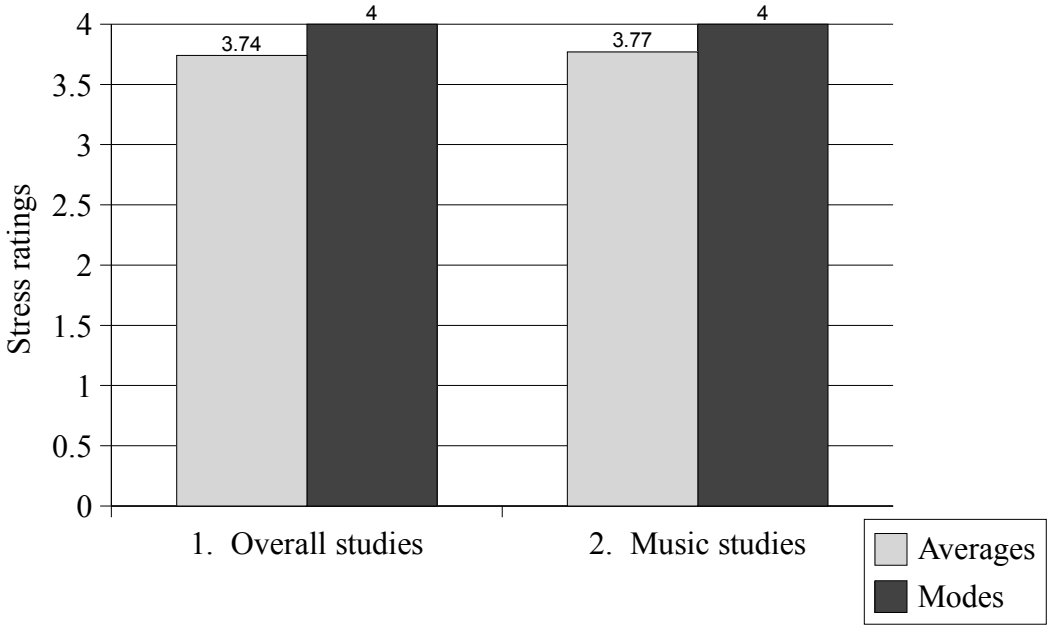

Figure 1. Ratings of stress sources from survey questions 1 and 2

The distribution of ratings is consistent with what the modes and averages represent. The most frequent response of students in regard to both their overall and music specific stress levels was 4. Taking into account extreme values in the averages, the distribution of responses to both questions are close in value to the mode. Generally, overall stress and stress related to music study were consistently high (Figures 2 and 3).

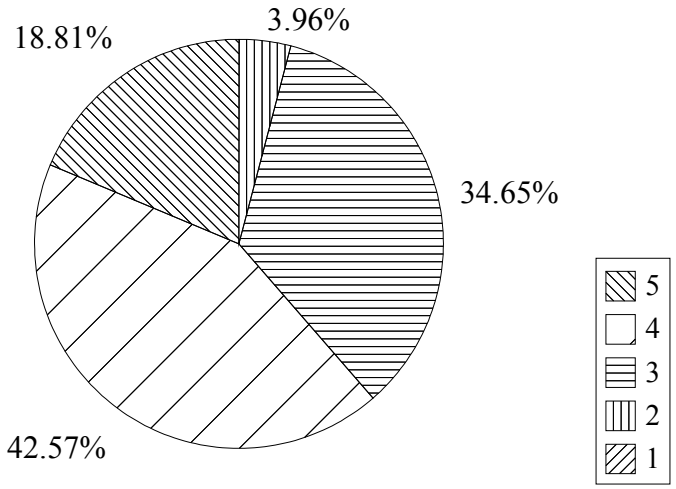

Figure 2. Rating distribution for overall stress in question 1

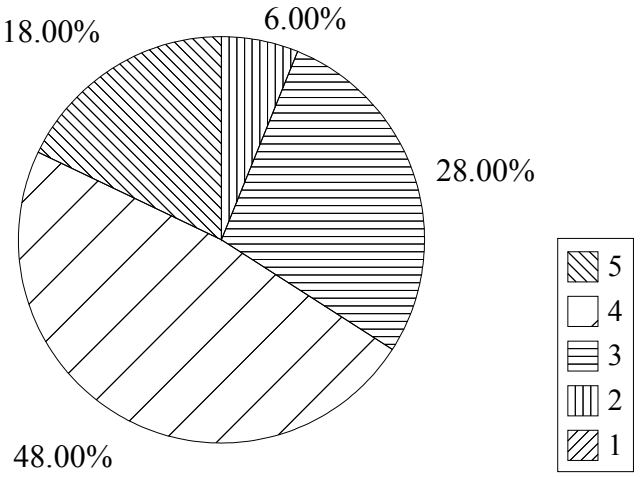

Figure 3. Rating distribution for music study stress in question 2

Students generally rated questions one and two with the same number or with two numbers having a difference of only 1. Fifty-three percent of all students answered questions one and two with the same stress level rating in undergraduate studies and in musical studies. Twenty-six percent of all students answered question one with a lower value than question two meaning the perceived level of stress in musical studies was one rating higher compared to the overall stress level as an undergraduate music student. For example, if question one was answered with 3, question two was answered with 4. Nineteen percent of all students rated the first question of overall stress higher than the second question of musical studies stress. Two percent of the questionnaires had ratings of overall stress two values higher compared to musical studies specifically.

In question one, none of the students responded with having very little stress in undergraduate studies. Only 3.96% of students claim they had little stress. The proportion of students with moderate stress was 34.65%, while 42.57% of students had high stress and 18.81% had very high levels of stress. Combined, the percentage of students with high or very high stress is 61.38% (Figure 2).

Responses to question two show some similar distributions of stress levels shown in Figure 3. Forty-eight percent had high stress and 18% had very high levels of stress. Combined, 66% of students responded to question two with high or very high levels of stress. A greater percentage of students rated musical studies with high or very high stress levels meaning that more students found their musical studies to be more stressful than their general undergraduate studies.

According to the results, the most effectively rated mechanisms for alleviating stress was sleep, followed closely by spending time with family and friends. Third comes

breathing exercises, then exercise, eating well, meditation, and lastly medical attention. These results are summarized in Figure 4, with modes and averages for each category of response.

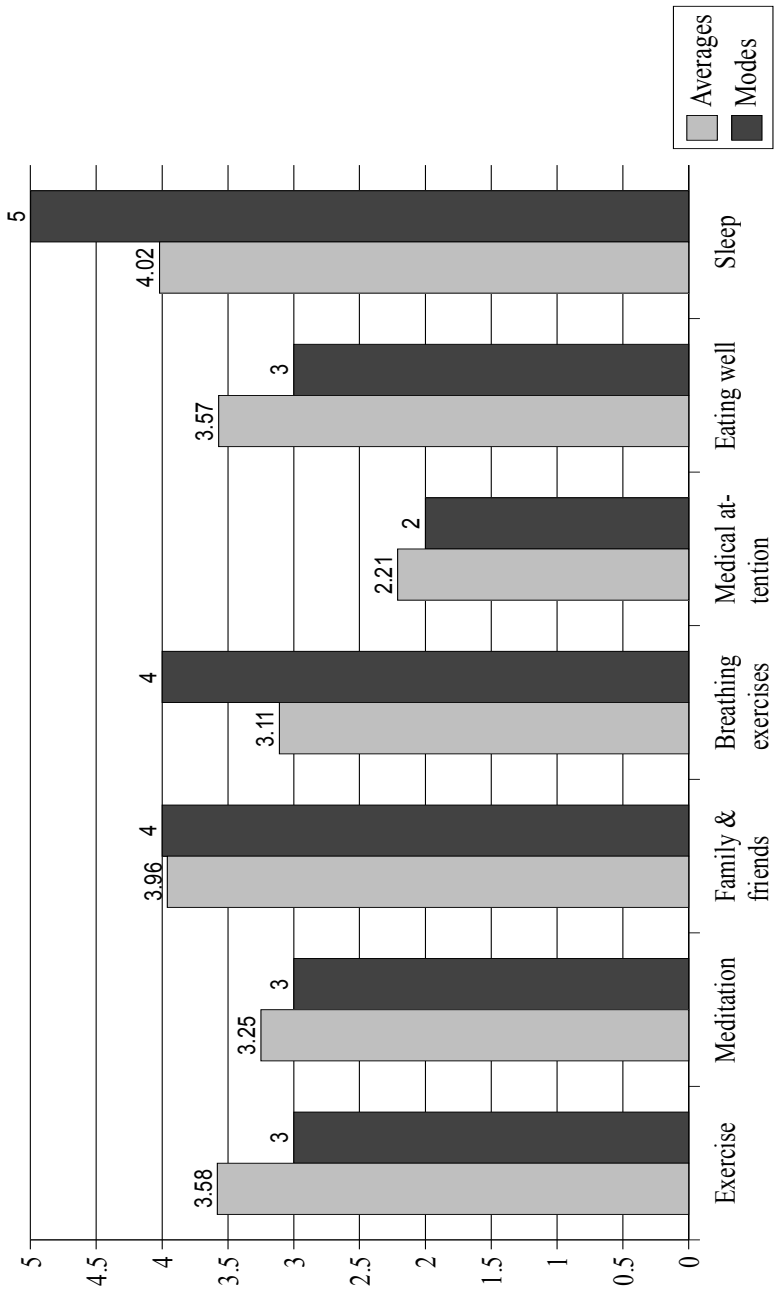

Figure 4. Averages and modes of coping mechanisms

Modes and averages were also calculated for the coping mechanism portion of the questionnaire to gather information on consistency. Having both numbers for each coping mechanism provides a more defined construct determining the order of what helps the most to the least. Figure 5 displays how many students rated a given coping mechanism as the most helpful.

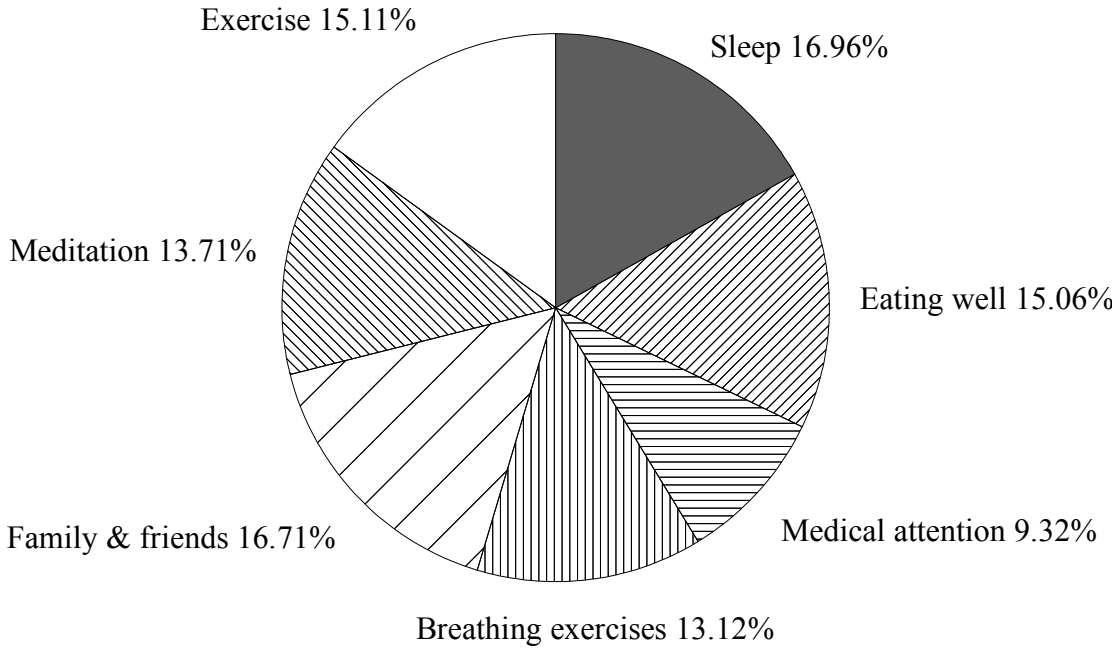

Figure 5. Distribution of coping mechanisms

Sleep was rated as the most helpful coping mechanism by 16.96% of the participants. More participants rated sleep as the most helpful than any other coping mechanisms which is also consistent with the findings in Figure 4. In both Figures 4 and 5, time with family and friends was rated as the second most helpful coping mechanism

and medical attention was rated as least effective. All other coping mechanisms did not correlate between Figures 4 and 5.

Open-Ended Descriptive Statistics

The first question in the open-ended second section states, "What factors elevate your stress level?" Ninety-three percent of students answered being overburdened with overwhelming amount schoolwork. Rehearsals, papers, tests, juries, and homework were among the specific endeavors listed when referring to schoolwork. Students also voiced concerns over not having enough time to sleep, spend with family and friends, or pursue hobbies. Another significant concern was lack of money and balancing commitments between jobs and school.

Thirty-three of the ninety-three percent mentioned above (making 35%) expressed they felt that some teachers and administration were unsupportive and that this significantly influenced stress levels. Specific concerns ranged from not getting needed help with piano proficiency, theory, or ear training, unorganized and unavailable teachers, unreasonably high expectations of the music major, and in five instances being yelled at by professors. To the first question in the open-ended portion asking "What factors elevate your stress level?" students wrote such answers as, "Professors with little or no personal interaction or care," and "No flexibility in class times, not many resources, not enough teachers, office hours, bad, horrible advising." This reflects only the opinions of some students and is in no way a generalization about the teachers and administration at this institution or others. At the particular university where this study took place, there

are good resources such as a personal counseling center, peer tutoring, and many dedicated faculty and staff.

Thirty-five of these ninety-three students who voiced they were overwhelmed by schoolwork (making 37%) expressed a desire to have more freedom to better concentrate on musical studies over general education classes. In these cases, it was not general education classes that were necessarily the problem as much as it was the sheer amount of these classes per semester on top of an already heavy music class load. These students also commonly expressed that the small amount of units for music classes was not at all proportional to the large amount of work expected. One student expressed that although he or she was enrolled in 13 units, he or she had 9 classes. Other students expressed that a one or two unit music class required too many hours of work. Performance anxiety was a stress-elevating factor for 18% of participants. The remaining 7% of the completed questionnaires had responses expressing that bad time management and procrastination elevated stress levels.

The second question states: "Please list anything not listed here (healthy or unhealthy) that you do to relieve stress." Students listed several different items per questionnaire, so overlapping percentages occurred. Fifty-seven percent of the responses to the second question were restatements from the previous quantitative section. The information being sought, however, was for any new ideas on stress alleviation practices. Thirty-four percent of the students responded with activities other than the stress alleviation practices already listed. The activities listed were mainly hobbies and entertainment, playing video games, watching television or a movie, reading for pleasure, traveling locally, shopping, spa treatments, massages, playing with pets, and hiking. Ten

percent of all students also said spiritual practice and attending religious services helped them with their stress levels. Of these, two students considered their martial art practices of a spiritual or religious nature.

Thirty percent wrote that they turned to musical activities for stress relief. The most popular activities were improvising on the students' major instruments or instruments outside their study, listening and playing music both in and out of the classical genre for fun, having impromptu jam sessions with other music students, and going to live concerts outside of the classical genre.

Eighteen percent of the participants stated they abused drugs and alcohol for stress alleviation. It is possible that there may be more participants that did abuse substances, but did not admit to it even though confidentiality was guaranteed. One student wrote in response "There's a few that are too inappropriate to put on this list." The illusionary aspect of escape drug and alcohol abuse may provide temporary relief from pressure and stress for these students.

Question 3 asked the students, "What are things you believe would help alleviate stress, but you currently do not practice?" Eighty-six percent of students answered with activities from the list of coping mechanisms in the prior quantitative section. Twenty-four percent of the students expressed a need to learn better time management.

Discussion

The averages and modes for questions one and two were very close. Those respondents who indicated that their stress was high in question one had the same or close to the same answer for question two, meaning that those students who perceived high overall stress also exhibited high stress in their musical studies. There were also virtually no extreme low values. Stress levels in music students were generally consistently in the high range. Those with lower perceived stress levels generally followed the stress management pattern of the majority meaning no matter the stress level, the same coping mechanisms were employed.

The descriptive statistics from the open-ended section indicate these high stress levels are generally caused by an overwhelming amount of schoolwork in and outside of musical studies. Thirty-seven percent of the students who indicated this as their main source of stress expressed that large amounts of general education work infringed on time and energy needed to be spent studying music, thus increasing the already high level of stress their demanding major requires. These students also expressed they had too much work to receive only one or two units from required classes. For many, this makes progress towards a music degree very slow.

The mechanism rated most effective and most used for alleviating stress was sleep. The most commonly occurring rating for the effectiveness of sleep was five, the highest rating possible. This is significant because no other coping mechanism was rated this high this often (Figure 4). The average rating for sleep's effectiveness was 4.02 followed closely by spending time with family and friends at 3.96. Figure 5 shows that

reliance on sleep is only slightly higher than reliance on family and friends for stress alleviation. Sleep is rated at 16.96%, and time spent with friends and family is rated at 16.71%. Out of all the choices made available to the participants, sleep is the most necessary in dealing with stress. Sleep is a necessary biological need and helps maintain the resilience of the body and brain; this may be why it is the highest rated stress alleviator.

The effectiveness of spending time with family and friends is a close second to the effectiveness of sleep. In the presence of loved ones, mood-enhancing hormones increase positive feelings. Spending time with loved ones also gives college music students the support to talk and work through problems over stress with people in whom they can confide. While spending time with loved ones, college music majors may take part in hobbies such as the ones students listed in response to the open ended questions, which included shopping, hiking, and enjoying entertainment.

The third most effective coping mechanism is breathing exercises. The mode is 4, which is high. The average is lower than the mode at 3.11, meaning that although enough students found it effective enough to result in a high mode, many found it much less effective and rated it lower. This could be because some students are not affected by breathing exercises or they are not doing them correctly.

Exercise, eating well, and meditation were rated as moderately effective in relieving stress. Meditation practices often include breathing exercises, so in some cases they might be viewed as the same mechanism. Students may not find these activities as useful as sleep and time with family and friends, but the activities appear to have merits

that cannot be ignored. With time issues, healthy lifestyle choices are often discarded.[99] The stress of college life influences many college students to eat junk food and unhealthy food in college cafeterias, as both are readily available.

Forty-seven percent of the students answered NA (not applicable) concerning the helpfulness of medical attention, and what ratings there were for the effectiveness of this coping mechanism were very low (Figure 4), meaning that students generally valued it poorly or did not seek it at all. Medical attention has been rated low as an effective coping mechanism, but there are clearly large contributions medicine has to offer those seeking help with stress and burnout. Why medical attention is rated with low effectiveness and what can be done to make it more effective are the most important places to start in making use of this rich resource.

Music students are significantly stressed and are already using some good coping mechanisms, but there is much more they could be doing. Perhaps if students were more educated about stress alleviation, there would be more awareness about tools that are not presently being used.

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99. Judith C. Rodriguez, "College Students, Diets of," *Internet FAQ Archives,* http://www.faqs.org/nutrition/Ca-De/College-Students-Diets-of.html (accessed December 19, 2010).

CHAPTER 5
CONCLUSION

What Music Students Can Do Now

A college musician's environment can significantly influence stress levels. Environmental stressors include overworked professors unable to provide support, competitive peers, lack of resources such as practice space or counseling services, overburdened schedules, and high standards and expectations set by institutions. Patterson notes that developing and maintaining a healthy lifestyle can help reduce the effects of environmental stress, promoting resilience.[100]

In reference to dealing with burnout, Sanford writes:

> We may have to look at some unpleasant facts in this process, but we can be sure of this: the price will be paid somewhere. If we do not pay the price creatively by examining ourselves creatively and carefully, we will have to pay the price later in the form of exhaustion with our work, broken relationships, or a life that has been incorrectly lived.[101]

While there is little students can do about high expectations, they can learn to manage their burdens. An overburdened schedule, as discussed previously, is generally an integral part of a college music student's life. In many universities, classes are offered to freshmen teaching coping skills for the new environments in which they have started

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100. Camille R. Patterson et al. "Healthy and Unhealthy Stress Unwinding: Promoting Health in Small Businesses." *Journal of Business and Psychology* 20, no. 2 (Winter 2005): 223.

101. John Sanford, *Ministry Burnout.* (New York: Paulist Press, 1982), 21.

living. Professional development can bring a student's mind back to a more positive place. This can be a master class, a conference, a new book on one's area in music or in a different area, a recreational music class, or even learning a new style of music or a new instrument. Radocy and Heller suggest "new knowledge and skills may provide new attitudes and approaches to the problem situations as well as enhance your mobility."[102] Sanford asserts "When faced with such endless work the crucial factor may be whether or not we can cultivate the correct, saving attitude toward it."[103]

There are several ways music students can take control of their environment. Hamman and Gordon state "Perhaps the most powerful element of stress reduction is our personal attitude and approach to the problem."[104] Radocy and Heller write "Enthusiasm for your work may be renewed at various levels of environmental change."[105] Radocy and Heller further state changing teaching assignments, temporary escapes from the work environment, or leaving the teaching profession can help alleviate burnout. As applied to the music student, perhaps practicing somewhere else besides a university or one's home, choosing to spend time with peers who promote a supportive environment, or finding a way to deal constructively with authority figures may help to relieve symptoms of burnout. Musicians can choose what music groups to work with based upon the effect the

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102. Rudolf Radocy and George N. Heller, "Tips for Coping: The Music Educator and Stress," *Music Educators Journal* 69, no. 4 (1982): 63.

103. Sanford, *Ministry Burnout,* 17.

104. Donald L. Hamman and Debra G. Gordon, "Burnout: An Occupational Hazard," *Music Educators Journal* 87, no. 3 (2000): 38.

105. Radocy and Heller, "Tips for Coping," 62.

job will have on their mental health. Perhaps a music student can communicate positively to a teacher what he or she needs. Music students should carefully evaluate if changing teachers, majors, or schools is a good option because these decisions are life altering.

The typical young undergraduate music student often does not have the tools to create balance in life. Sternbach states:

> Music students are also engaged in the additional challenge of trying to balance personal life with their music activities, an issue that begins for some at a very young age and is a constant challenge through high school and college. For many people, the act of juggling personal life and work life really only begins in adulthood when they enter the workforce. By then, they have had more time to consolidate their egos and their social confidence, as opposed to those music students coping with this challenge at far younger ages when the ego is less formed.[106]

In question three, 24% of the participants stated they needed to learn better time management which is part of creating balance in life. There is an obvious need in undergraduate music students for time management skills. There is no required course work at most universities for teaching time management classes, although universities offer counseling services offer workshops on time management as well as other subjects concerning college students. H. Christian Bernhard affirmed that the demand for school counseling services has increased significantly in college settings.[107]

To find meaning in music again, musicians can return to what first inspired them to pursue music. Radocy and Heller indicate "People ascribe certain powers, beauties,

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106. David J. Sternbach, "Stress in the Lives of Music Students," *Music Educators Journal* 94, no. 3 (2008): 43.

107. H. Christian Bernhard, "Burnout and the College Music Education Major," *Journal of Music Teacher Education* 15, no. 1 (2005): 43.

and joys to music. There must be something about music that keeps a person working and involved with it despite daily frustrations."[108] How much music students invest in their identity as musicians has a huge significance in burnout. Music is important for many people, but especially for musicians because it is a large part of *who they are.* If they become tired of something that is an integral part of their identities, their belief in themselves diminishes, and they need to find meaning again in what they do. Instead of looking at performances as a time of judgment and where all flaws are magnified, musicians cope better if they look at them as harmonious outgrowths of musical efforts. The stage becomes a place to show what has been learned and accomplished. The beauty of the music becomes the main attraction instead of focusing on flaws in a performance.

For musicians who practice and perform more than is manageable, limiting commitments is a healthy step. Learning to make manageable choices can help a musician focus better. Practicing and performing too much exhausts a musician making it difficult to carry on with these activities. This is a defining factor in musicians' burnout. Limiting commitments can make it possible to keep taking commitments in the future.

Both performing and being a music student brings with it high levels of interpersonal contact, a major stressor indicated by Cordes and Dougherty.[109] This taxes abilities to handle situations which is one of the many causes of stress. Lavinder

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108. Radocy and Heller, "Tips for Coping," 63.

109. Cynthia L. Cordes and Thomas W. Dougherty, "A Review and an Integration of Research on Job Burnout," *The Academy of Management Review* 18, no. 4 (October, 1993): 625.

acknowledges "Social stressors are all around us in any situation where personal relationships exist in our town, neighborhood, and in community organizations that we belong to."[110] Clausen writes that quiet and solitude can greatly help one's outlook on life.[111] Quiet and solitude can balance out the intense contact with many people that performance brings.

Although performance anxiety was only discussed by 18% of the participants, it would be neglectful to overlook this issue. It is one of the major documented stressors of all musicians, including undergraduate music students. Trembling, cold hand, an upset stomach, faintness, dry mouth, muscle tension, a rapid pulse, memory blocks, along with feelings of impending doom and dread are the most common symptoms of performance anxiety and can be devastating to the performance and performer. It can develop into a vicious cycle of fear and anxiety resulting in impaired performances. Meharg states "the joy and sense of accomplishment treasured by performing musicians is lost."[112] Removing these rewards directly contributes to burnout.

Meharg states "The body is not good at distinguishing among different types of stress."[113] Human beings react the same whether we are being chased by a tiger or are nervous about speaking in public. In this "fight or flight" mindset, muscles tense,

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110. Bill Lavinder, "Avoiding Practice Burnout," *The Hearing Review*, http://www.hearingreview.com/issues/articles/2005-07_03.asp (accessed September 10, 2010).

111. Don Clausen, "Idea Bank," *Music Educators Journal* 90, no. 2 (2003): 74.

112. Stephen S. Meharg, "Help for the Anxious Performer," *Music Educators Journal* 75, no. 2 (1988): 34.

113. Meharg, "Help for the Anxious Performer," 34.

adrenalin is pumped through the body in large amounts, and blood is concentrated in different parts of the body in case we need to move quickly or powerfully. Often, musicians in performance situations experience cold extremities. When aiming for composure, sensitivity, and fine motor control, this is the last thing a musician needs as these anxiety and fear based reactions set a performer up for perceived public humiliation and a damaged self-esteem.

Some amount of stress can be helpful to give a good performance. Many experienced performers express that the excitement, which is a stress itself, contributes to their concentration and aids in their efforts. Few college musicians, however, have yet to become seasoned performers. By practicing coping skills, a musician can break the cycle of anxiety. Dealing with performance anxiety in a healthy way can in turn lessen stress and burnout.

Some musicians self medicate with alcohol and other drugs to calm the nervous system. Propranolol HCI (also called Inderol) is a beta blocker used to control hypertension and some college and professional musicians have used it for performances. This drug does not help coldness or muscle tension, but helps control trembling caused by an overload of adrenalin. Although it helps control symptoms and is useful in some cases, it does not work on the problem of anxiety. A useful therapy is required if there is to be any progress.

Relaxing is difficult in a "fight or flight" situation and ironically, relaxing is exactly what one needs to control a performance situation. One strategy many performing musicians learn is to recognize sensations of deep relaxation like feeling heavy and an absence of tension. Then, in performing situations, musicians can recreate

these sensations. There are a number of breathing exercises that can produce relaxing sensations. These exercises are very effective when practiced before going on stage. There are some elaborate machines and tools that can measure body functions. They can measure electrical activity in muscles, skin temperature, sweat gland activity, and other body functions. Some performers have used these to monitor physical responses to performance anxiety and learn how to control them at will.

Performance anxiety stems from thought. A performer with uncontrollable anxiety often has thoughts of self-doubt and fear, asking like "What if I forget something?" or "What if I make a mistake?" or in some cases, "What if a string breaks?" A musician can counteract this thought process by using techniques for realistic and useful thinking. Talking openly about thoughts and beliefs has helped musicians bring them into a more objective state of mind and allowed change. Positive thinking like "I am a good musician" or "I can do a good job," can counteract "I am a horrible musician" or "I am going to make a mistake," maximizing the chance of a successful performance.

Another thought-based coping skill is called "thought stopping." This is the practice of consciously stopping unwanted thoughts before they cause any harm. Meharg states "Control over unwanted thoughts is gained as these thoughts become separated from the anxiety they create."[114]

"Cue-controlled relaxation" is using a word or set of words that bring forth relaxation. Picking a cue word or words is up to the individual musician. The word(s) should be associated with calmness. Also, concentrating on cue words focuses the mind

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114. Meharg, "Help for the Anxious Performer," 36.

on something else rather than any negative thoughts. Using this technique more and more conditions the mind and body to automatically calm down. A musician could even write their cue words down in music at points of difficulty. This helps keep tension from flying out of control.

Mental imagery is much like cue-controlled relaxation in that it is used to trigger the body and mind to relax. It also focuses the mind's attention on something else besides negative thoughts. In mental imagery, the performer imagines positive and calming fantasies. One can imagine, for example, that he or she is in a relative's kitchen on Thanksgiving or at a campfire laughing. Picturing warming one's hands by the campfire or oven can even increase blood flow to the hands. Specifically picturing one's self relaxed and confident while giving a fantastic performance may cause that performance to materialize on stage.

Hypnosis, although sometimes viewed as a mystical experience, is really just a trance or state of intense concentration and clarity. This experience has many of the same characteristics that enable a good performance. It is much like mental imagery in that it is brings a state of calmness through mental activity. A therapist can be used to guide a performer through this.

Mastering performing means practicing performing. A low-pressure way to do this is to look for performing opportunities where the audience is accepting and the music is simple and beautiful. This lets the performer enjoy performing by having a successful experience. College musicians have ample opportunity to do this in recital hours, studio classes, or for a few friends in a practice room. Performance anxiety can diminish over time with an increased number of performances. The more a musician performs, the

more desensitized he or she becomes. Imagining one's self on stage while practicing also helps prepare the mind for the shock of being on stage.

Before walking on stage, there are several tips for musicians to follow: 1. Warm up in a basic, relaxed, and concentrated way. 2. Realize that the audience is on the performer's side and even a bad performance is only a temporary set back. For a college musician performing in his or her academic setting, this is especially true. 3. Be inspired by one's own playing. Getting wrapped up in one's own playing distracts one from the audience.

Japanese samurai practiced the Zen concept of embracing their own deaths before fighting. They embraced the fact that they were going to die and that it was probably going to be in the next battle. This clears the mind and allows concentration in the moment. College musicians can apply this attitude by embracing the reality that they will make errors. All musicians make mistakes—even the most celebrated performers have made mistakes in performances. Adopting this attitude can allow the students to focus on the music being performed instead of concentrating on the probability of mistakes.

Institutional Changes

All music schools need to follow the lead from the University of North Texas (UNT) in offering wellness courses to music students. If this kind of course was offered at other schools of music, it would be an opportunity to gather information on how any given music school can specifically adapt to its population of students to better their chances of mental health within their studies. Manchester states that both the Ohio

University School of Music and Northwestern University offer classes for music majors that address many musicians' issues including stress and anxiety.[115] Manchester also lists George Mason University, the Royal College of Music, and the Hannover University of Music and Drama as offering wellness courses to musicians that include topics on psychological health.[116] According to Brandfonbrener and Lederman, "Successful music-making is dependent on the general health status of the individual..."[117] When the brain is not under an overwhelming amount of stress, it is in a much healthier state enabling a person to learn in a more efficient and meaningful way.

NASM has a directive to include health information in every music curriculum. Manchester asks "As stated in the article, each school is expected to come up with its own best answers to these questions, but should we develop some minimal national requirements?"[118] How this musician health information reaches students is left up to the schools and can therefore be easily disregarded. NASM needs to hold their schools of music accountable for this responsibility, which would encourage music schools to be

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115. Ralph A. Manchester, "Health Promotion Courses for Music Students: Part I," *Medical Problems of Performing Artists* 22, no. 1 (2007): 28.

116. Ralph A. Manchester, "Health Promotion Courses for Music Students: Part III," *Medical Problems of Performing Artists* 22, no. 3 (2007): 116.

117. Alice G. Brandfonbrener and Richard J. Lederman, "Performing Arts Medicine" in Part XIII *Neuroscience, Medicine, and Music*, ed. John W. Flohr of *The New Handbook of Research on Music Teaching and Learning: A Project of the Music Educators National Conference*, ed. Richard Colwell and Carol Richardson (Oxford: Oxford University Press, 2002), 1013.

118. Ralph A. Manchester, "Promoting Health in Post-Secondary Music Schools," *Medical Problems of Performing Artists* 21, no. 1 (2006): 96.

more proactive. An avenue to assess how effectively a music school is reaching its students' necessity for musical health needs to be created and implemented. Both music students and professors should be included in this kind of assessment to provide a fair picture of a music school's efforts and results.

It is not guaranteed that music professors have an awareness of healthy learning processes. If a music school is being held accountable for healthy teaching practices, then the professors should be given a fair chance at learning what these are. Professional development should be offered to all music professors. In cases where a professor has behaved inappropriately while teaching (such as yelling or being verbally abusive), these professional development sessions should be mandatory.

For music students, classes that teach professional health are beneficial. Topics could include how to manage performance anxiety, perfectionism, career concerns, and how to balance between musical and academic workloads. Reinforcing these lessons throughout the education of a musician would further guarantee future productivity and health. Mentoring, support from faculty, administrators, and professional counselors would enrich a music student's atmosphere for the better. A music student would not have to feel as if he or she is trying to accomplish anything alone and as discussed, people going through burnout discover that it often takes the support of many to achieve. Environmental improvements would benefit musicians not just while they are students, but the impact and lessons from those resources would stay with them for the rest of their lives and would be likely to help them avoid professional burnout.

There are workshops on time management offered at many universities, but musicians have special concerns with time management because of the specific demands

of the major like copious amounts of practice and long rehearsals on top of the already time consuming workloads of homework, papers, and studying for tests. Time management workshops tailored to the special needs of music students could be much more applicable than the more generalized time management workshops usually offered. Education on patterns of drugs and alcohol abuse should be included in music health related classes. Chesky et al. observed that many musicians work in environments dominated by drugs and alcohol. The also asserted:

> Problems may be avoided if students have a realistic view of their future work world and basic information for dealing with the stress of performing in a hazardous environment that is very substance centered. Educational efforts should be based on an understanding of the developmental patterns of alcohol use and associated alcohol-related problems among music students.[119]

Chesky et al. acknowledged "Outside of the area of performance anxiety, very little has been written in regard to counseling with musicians."[120] More research on counseling music students and professionals is needed. Having a counselor available in the music department who understands the special needs of music students would be very beneficial. If having a counselor in a music department is impractical, a counselor on the staff of a university counseling office who has an awareness and special training regarding the mental health of student musicians would be an invaluable resource. A counselor with this background could also provide peer support groups for student musicians.

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119. Kris Chesky et al., "Musicians' Health," In *The New Handbook of Research on Music Teaching and Learning,* ed. Richard Colwell and Carol Richardson, (Oxford: Oxford University Press, 2002), 1034.

120. Kris Chesky et al., "Musicians' Health," 1034.

Forty-seven percent of the participants marked NA when asked about medical attention. Undergraduate music students are not utilizing medical care properly. One hypothesis is that many students do not seek medical attention because they may have little faith that it would be helpful. Another reason college music students may not seek medical attention is the commonly voiced financial problems. University health and counseling services, however, often offer affordable health care. More research would have to be done to find out why medical care was rated with little effectiveness.

In Manchester's article reviewing the Health Promotion in Schools of Music guidelines, he suggests:

> The final recommendation does take a very practical approach to teaching students how to use health care resources. The best way to learn how to access help through a health care delivery system is to actually go through the process. Conversely, those of us who provide health care to music students need to take the initiative to inform them as to what services are available and how to access these services. Learning how to do this in the 'protected environment' of the college years is an appropriate warm-up exercise for what will need to happen later on in 'the real world.'[121]

Brandfonbrener and Lederman explain "As far as we are aware, there have been no studies examining student-teacher relationships and their bearing on the health of students – or, for that matter, on the health of the teachers!"[122] More research is needed to examine the impacts of teacher-student relationships on health, especially regarding stress and burnout.

Hobbies and extra curricular actives clearly reduce stress and the chances of burnout. Music schools can create extra curricular programs specifically designed for

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121. Manchester, "Promoting Health," 92.

122. Brandfonbrener and Lederman,"Performing Arts Medicine," 1013.

their students that not only provides a coping mechanism, but can promote student camaraderie which reduces the feeling of isolation that accompanies burnout and the typical competitive environment in music departments. These extra curricular programs could even revolve around healthy coping mechanisms like exercise or meditation making them even more effective. Student musicians could organize to do volunteer work, sign up and train for sporting events together, form healthy cooking clubs, plan events to local attractions, and hold meditation sessions. These are just a few of the many possibilities.

Despite the lack of emphasis on undergraduate music students in the burnout and stress research available to date, many strategies have already been developed that can help musicians deal with these issues, and many areas for further research have been identified. As more information becomes available, solutions to reduce stress and burnout levels, especially in music students, can be more finely understood. We musicians are what we do, and burnout is a threat to our identity. Davey offers some insight into the personal nature of our quandary:

> As both priest and psychologist I believe that our conscious and unconscious reactions to the challenges and pressures of life – what we do and why we do it – are not just related to the past, but are equally products of the present and future. Knowing who we are, and what we want to be, is the most important ingredient in ensuring our health and well-being.[123]

[123.] John Davey, *Burnout: Stress in the Ministry* (Leominister: Gracewing, 1995), viii.

APPENDIX A

Undergraduate Music Student Stress and Coping Skills Questionnaire

Please circle the rating that best fits your answers. The rating is as follows:
5-Very high 4-High 3-Moderate 2-Little 1-Very little NA- Not applicable

1) What is your overall stress level as an undergraduate music student?
   5 4 3 2 1 NA
2) In your musical studies specifically?
   5 4 3 2 1 NA

3) Please rate how effective these practices are in alleviating stress.

	Rating of effectiveness					
Exercise	5	4	3	2	1	NA
Meditation	5	4	3	2	1	NA
Time with family and friends	5	4	3	2	1	NA
Breathing exercises	5	4	3	2	1	NA
Medical attention	5	4	3	2	1	NA
Eating well	5	4	3	2	1	NA
Sleeping 7-8 hours a night	5	4	3	2	1	NA

The following three questions require brief written responses:

1) What factors elevate your stress level?

2) Please list anything not listed here (healthy or unhealthy) that you do to relieve stress.

3) What are things you believe would help alleviate stress, but you currently do not practice?

APPENDIX B

Consent Form Agreement to Participate in Research

Responsible Investigator: Helen Orzel, SJSU graduate student. Title of Protocol: Undergraduate Music Student Stress and Coping Skills Questionnaire

1. You have been asked to participate in a research study investigating the stress levels and coping skills in undergraduate music students.

2. You will be asked to complete a questionnaire at the end of this class session.

3. No risks are anticipated in this study.

4. Completed questionnaires will help in the research of college music student stress and may help future college music students in reducing their stress.

5. Although the results of this study may be published, no information that could identify you will be included.

6. There is no material compensation provided to the participants.

7. Please feel free to send questions about this research to Helen Orzel at hbinfinity@gmail.com. Complaints and concerns about the research may be presented to Dr. Hollinger, Director of Music Education studies at SJSU, at Diana.Hollinger@sjsu.edu.

8. No services of any kind, to which you are otherwise entitled, will be lost or jeopardized if you choose not to participate in the study.

9. You consent is being given voluntarily. You may refuse to participate in the entire study or in any part of the study. You have the right to not answer questions you do not wish to answer. If you decide to participate in this study, you are free to withdraw at any time without any negative effect on your relations with San Jose State University.

10. Your completion of the survey indicates your willingness to participate. Please keep this information for your records.

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