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- I. Solo Recital: Thursday, April 23, 2016, 3:30 p.m., Organ Recital Hall.
Sonata for Trombone and Piano (George Frederick McKay); *Seven Lieder (1,3,4)* (Johannes Brahms); *Trombone Concerto* (Friedebald Graefe).
- II. Solo Recital: Saturday, April 22, 2017, 1:30 p.m., Organ Recital Hall.
Concertpiece (Theodore Dubois); *Sonata for Trombone and Piano* (Paul Hindemith); *A Winter's Night* (Kevin McKee); *Fantasie Heroique* (Heinrich Gottwald).
- III. Solo Recital: Saturday, April 27, 2019, 5:30 p.m., Organ Recital Hall.
Toccata (Gaspar Cassadó); *Homage a Bach* (Eugène Bozza);
Sonatine (Jacques Castérède); *Concertino Basso* (Richard Lieb);
Piece Concertante (Marcel Samuel-Rousseau).
- IV. D.M.A. Research Project. FIBROMYALGIA AND ITS EFFECTS ON MUSICIANS: A CASE STUDY, (2020). The purpose of the paper was to provide a personal case study that describes how fibromyalgia has affected the career of a professional trombonist. How fibromyalgia has affected a musician's ability to practice and perform well is detailed. Methods of coping with these symptoms while still performing at a professional level and remaining in good academic standing also is discussed. Suggestions as to what musicians dealing with this disorder

might implement as they continue to excel in music performance and academic work during episodes of fibromyalgia are presented.

FIBROMYALGIA AND ITS EFFECTS ON MUSICIANS: A CASE STUDY

by

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Approved by

Dr. Randy Kohlenberg
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To my loving parents, Linda and Wayne White, who have continuously supported me and kept me going even in the most difficult days, and to all musicians who have suffered from the symptoms of fibromyalgia and moved beyond them into successful careers.

APPROVAL PAGE

This dissertation written by Christa White has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

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CHAPTER I

INTRODUCTION

Fibromyalgia is a medical disorder that presents as musculoskeletal pain throughout the body accompanied by touch sensitivity, fatigue, memory issues, sleep disorders, and mood changes. Fibromyalgia is thought to intensify a patient's pain by affecting how the brain processes pain signals. Studies have reported that repeated nerve stimulation causes change in the brains of people with the disorder. This change involves an abnormal increase of neurotransmitters in the brain that signal pain. The brain's pain receptors appear to develop a memory of the pain and become more sensitive causing them to overreact to pain signals (Shiel, 2020).

The first symptom of fibromyalgia is widespread pain often described as a constant dull ache that has persisted for at least three months. To be considered widespread, pain must occur on both sides of the body and above and below the waist. A second symptom is fatigue. Patients with fibromyalgia even after sleeping for long periods of time often awaken tired and unrested. Their sleep is often disrupted by pain and other sleep disorders including sleep apnea and restless leg syndrome. A third symptom of fibromyalgia, often referred to as "fibro fog," is the impairment of cognitive abilities that causes patients to lose the ability to focus, pay attention, and concentrate on mental tasks. Patients with

fibromyalgia not only have to cope with these symptoms, but also often have to live with symptoms of other painful conditions that co-exist such as irritable bowel syndrome (IBS), migraines, interstitial cystitis, and temporomandibular joint disorders (TMJ). Although physicians do not know the exact cause of fibromyalgia, they have deduced that it most likely involves a variety of factors working together that may include genetics, infections, and physical or emotional trauma (Mayo Clinic, 2020).

Many factors involved in music performance can be affected by fibromyalgia. The widespread musculoskeletal pain can often make it difficult for musicians to hold up their instrument for longer periods of time, stand up or sit in one position for entire performances, and even take deep enough breaths to produce the rich characteristic tone that is expected of professionals. Cognitive difficulties are another symptom of fibromyalgia that can affect performance. A musician's ability to focus and concentrate during their practices, rehearsals, and concerts can be impaired. This is especially concerning because musicians must read and understand the information on the page of music. As well musicians are required to read while performing the notes upcoming. In addition, musicians must simultaneously coordinate their physical movements such as where to place their breaths, which fingers to move and when, how exactly to produce the exact tone required for each pitch, and for instrumentalists, tongue placement and appropriate articulation for each phrase. Performing this myriad of tasks is

difficult when their cognitive abilities continue to be impaired by fibromyalgia.

Purpose of the Study

The purpose of this study was to present a case study that described how fibromyalgia has affected the career of a professional trombonist. This study is not intended to be a comprehensive review of fibromyalgia, nor was it intended to adhere to strict scientific research standards. In addition, the study was designed to document how fibromyalgia has affected a musician's ability while coping with these symptoms to practice and perform well, perform at a professional level, and remain in good academic standing. In addition, the study was intended to suggest what musicians during episodes of the debilitating condition might consider in order to excel in music performance and academic studies.

The case study was recorded during the course of the subject's academic work at Appalachian State University and the University of North Carolina at Greensboro, 2012-2020. During that time, documentation of being negatively affected by fibromyalgia in classes as well as in practice, rehearsal, and performance times for ensembles at the universities is provided. An in-depth description of these negative effects discussing the physical as well as mental difficulties that arise during the course of academic progress was documented. Necessary steps taken to combat each of these negative effects to maintain excellent grades and excel in performance studies is described. Using this information, solutions for other student and professional musicians being

negatively affected by fibromyalgia is suggested as an aid to lessening this debilitating experience over the course of their careers.

Chapter II contains a brief overview of fibromyalgia. Included is a general definition of the disorder, syndromes that are prevalent, the process of diagnosing fibromyalgia, celebrities who have developed careers while combatting the symptoms of fibromyalgia, and suggestions that have been promoted to combat the disease. The third chapter is a description of a female trombonist, the author of this document, in a case-study, first-person presentation. The author continued to battle the symptoms of fibromyalgia throughout the completion of this document in December 2020. The fourth chapter is a summary of the document, conclusions reached during the study, and suggestions for further study.

CHAPTER II

DEFINING FIBROMYALGIA

Fibromyalgia is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory, and mood issues. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way your brain processes pain signals. Symptoms sometimes begin after a physical trauma, surgery, infection, or significant psychological stress. In other cases, symptoms gradually accumulate over time with no single triggering event. Women are more likely to develop fibromyalgia than men. Many who have fibromyalgia also have tension headaches, TMJ disorders, IBS, anxiety, and depression. Although no cure for fibromyalgia exists, a variety of medications can help control symptoms. Exercise, relaxation, and stress-reduction measures also may help (Mayo Clinic, 2020).

Physician researchers do not understand what causes fibromyalgia, but it most likely involves a variety of factors working in tandem. These may include, but are not limited to:

- Genetics: Fibromyalgia tends to run in families, and certain genetic mutations may increase a patient's susceptibility to developing the disorder

- Infections: Some illnesses, such as influenza or hepatitis C, appear to trigger or aggravate fibromyalgia
- Physical or emotional trauma: Fibromyalgia can sometimes be triggered by a physical trauma, such as a car accident. Psychological stress may also trigger the condition (Felman, 2018).

Researchers believe repeated nerve stimulation causes the brains of people with fibromyalgia to change. This change involves an abnormal increase in levels of certain chemicals in the brain that signal pain (neurotransmitters). In addition, the brain's pain receptors seem to develop a sort of memory of the pain and become more sensitive, meaning they can overreact to pain signals. The pain and lack of sleep associated with fibromyalgia can interfere with a patient's ability to function at home or on the job. The frustration of dealing with an often-misunderstood condition also can result in depression and health-related anxiety (Mayo Clinic, 2020).

Several risk factors for developing fibromyalgia exist including:

- Gender: fibromyalgia is diagnosed more often in females than in males
- Family history: if fibromyalgia is experienced by other family members, the likelihood of being diagnosed with the same disorder is prevalent.
- The presence of other disorders: osteoarthritis, rheumatoid arthritis, or lupus, the likelihood of developing fibromyalgia increases (Mayo Clinic, 2020).

Fibromyalgia has been notoriously challenging to diagnose. In the past, doctors checked 18 specific points on a person's body to determine how many of them were painful when pressed firmly (Osborn, 2020). Newer guidelines do not require these "tender point" exams. Instead, a fibromyalgia diagnosis can be made if a person has experienced widespread pain for more than three months without underlying medical conditions that could cause the pain. Although no lab tests to confirm a diagnosis of fibromyalgia exist, physicians may tend to rule out other conditions that have similar symptoms. Blood tests for fibromyalgia can include complete blood count, erythrocyte sedimentation rate, cyclic citrullinated peptide test, rheumatoid factor, and thyroid function tests (Mayo Clinic, 2020).

Studies have indicated that women with a history of trauma become more likely to develop fibromyalgia. A study from 2017 found that 49% of women diagnosed with fibromyalgia had experienced at least one type of adversity such as emotional or physical abuse during childhood. Women with fibromyalgia were also six times more likely to have a history of post-traumatic stress disorder (PTSD) than women with esophageal or gastrointestinal disorders. Fibromyalgia, however, is not a psychological condition. Instead it shows a link between the mind and the body indicating that a history of trauma can cause or worsen physical pain (Coppens, et al., 2017).

In general, treatments for fibromyalgia include both medication and self-care. The emphasis is to minimize symptoms and improve general health. No

one treatment works for all symptoms. Medications can help to reduce the pain of fibromyalgia and improve a patient's sleep patterns. Common medication choices include:

- Pain relievers: over the counter (OTC) pain relievers such as Tylenol®, Ibuprofen®, or Naproxen Sodium®. Doctors may also suggest a prescription pain reliever such as Tramadol®. Narcotics are viewed to be as a last resort because they can lead to dependence and could possibly worsen the pain over time.
- Acetaminophen is usually recommended as a first line of treatment for mild to moderate pain may be combined with opioid medications. Extended use, however, of acetaminophen can cause severe liver damage and regular blood tests must be taken to keep an eye on a patient's liver function.
- NSAIDS: Non-Steroidal Anti-Inflammatory Drugs are most effective for mild to moderate pain when accompanied by edema. When taken as directed, NSAIDS are generally safe, but if more than the recommended dosage is taken, and sometimes even just the recommended dosage, nausea, stomach bleeding or ulcers may result. In addition, large doses can lead to kidney problems, fluid retention and high blood pressure.
- Opioids: drugs often prescribed for acute pain that arises from traumatic injury or broken bones. Synthetic cousins of opium, opioids have caused

the most prescription drug-related overdose deaths in the United States.

Due to the risks involved, opioids are used at the lowest dose possible and usually for just a few days. Examples of opioids include:

Hydrocodone®, Fentanyl®, Oxycodone®, etc. These drugs work by mimicking the natural pain-relieving chemicals, endorphins, produced in the brain. These drugs “turn down the volume” on the pain signals the nervous system sends throughout the body.

- Antidepressants: Cymbalta® and Savella® may help ease the pain and fatigue associated with fibromyalgia. A physician may prescribe amitriptyline or the muscle relaxant cyclobenzaprine to promote sleep. Side effects of antidepressants are generally mild, but may include nausea, dizziness or drowsiness. They can, rarely, worsen depression or suicidal thoughts.
- Anti-seizure drugs: Medications designed to treat epilepsy are often useful in reducing certain types of pain. Gabapentin® is sometimes helpful in reducing fibromyalgia symptoms (Üçeyler, et. al.), while Lyrica® was the first drug approved by the FDA to treat fibromyalgia. (Science Daily, 2007)

A variety of different therapies can help reduce the effect that fibromyalgia

has on the body and a person’s life. Examples include:

- Physical therapy: A physical therapist can teach exercises that will improve strength, flexibility, and stamina. Water-based exercises might be

particularly helpful because being in water lessens the weight of patient's bodies while they are exercising.

- Occupational therapy: An occupational therapist can help to make adjustments to the work area or the way certain tasks that can be performed and cause less stress on the body.
- Counseling: Talking with a counselor can help strengthen a belief in personal abilities and teach strategies for dealing with stressful situations.

(Mayo Clinic, 2020)

Use of Transcutaneous Electrical Nerve Stimulation (TENS) unit can also help to reduce the pain of fibromyalgia. An article by Verywell Health stated that TENS, traditionally not a typical fibromyalgia treatment regimen, yet but a small and growing body of literature, suggests the intervention can be helpful. The study also suggested that the central nervous system can be calmed through use of the TENS unit. Fibromyalgia causes the central nervous system to be hypersensitized and likely could be beneficial for anyone with fibromyalgia to use the TENS unit in this manner (Dellwo, 2019).

When fibromyalgia pain or fatigue is severe, being able to think clearly might be difficult, but having a plan for coping can be beneficial. Notating a variety of prophylactic options can likewise be helpful. Avoiding negative self-talk is essential. Instead of saying, "I can't do anything because of my symptoms," state positively, "I can do many things. I just need to pace myself and take

breaks.”

Resist the urge to stay alone. Isolation for days can cause loneliness and deepen depression. Tell an understanding friend or family member when a feeling of frustration or being overwhelmed exist, but do not dwell on symptoms. Keep and review a calendar. Identify what is necessary and what is not. Prioritizing can reduce stress, and when people become overly stressed, their muscles have the tendency to tense up. Tension tends to amplify fibromyalgia pain. Also request help when needed. Fibromyalgia is not known to be a progressive disorder to date; however, in some cases it can worsen over time. For most patients with fibromyalgia, symptoms go through flare periods (when symptoms are severe) and remission periods (when symptoms become minimal or completely absent). Fibromyalgia is usually thought of to be non-inflammatory, although a 2017 study found widespread inflammation in people with fibromyalgia. Inflammation is a process involving the immune system. Inflammation can become chronic and lead to muscle pain; it also plays a role in conditions such as arthritis (Gordon, 2018).

CHAPTER III

CASE STUDY INTRODUCTION

This case study is focused on a female trombonist diagnosed with fibromyalgia in November of 2011 at the age of 25. Women are more likely than men to be diagnosed with fibromyalgia and most cases are diagnosed between the ages of 25-35. The subject in this case fit perfectly into those categories. Because fibromyalgia is notoriously difficult to diagnose, physicians often mistake or misdiagnose it as other common ailments. The subject in this case was suffering symptoms of the disease for a year before being diagnosed properly. Over the course of the year, she was sent to multiple orthopedic physicians, neurologists, and pain clinics before finally being properly diagnosed in November 2011. The subject was performing in multiple ensembles at Appalachian State University at the time and was not able to participate in marching band for multiple days due to her symptoms. Due to intense shoulder pain, the subject decided to use a euphonium to play in several classes because the pain was less than holding the trombone. Playing the euphonium allowed her to continue to practice as much as possible due to her situation. Trombonists who have a difficult time holding the weight of the instrument may discover that the euphonium is easier to hold while going through flares of fibromyalgia. Other

aids are also available, such as the ErgoBone®, that is made by the ErgoBrass® company. This device comes with a harness that allows the player's upper body to support the weight of the trombone as opposed to the player's arm having to support all of the weight. This product has been reviewed positively for the way in which it allows the player to sit erect with effective posture, and therefore inhale more efficiently, resulting in a better tone. Positive reviews of the ErgoBone® on their website includes highly acclaimed trombonists such as Kevin Price, Principal Trombone of the Royal Liverpool Philharmonic Orchestra, Gordon Cherry, Principal Trombone of the Vancouver Symphony, Stephen Fissel, Bass Trombonist of the Seattle Symphony Orchestra, and others. This product is recommended to any trombonist suffering with fibromyalgia. ErgoBrass® has devices for horn, euphonium, trumpet, saxophone, and clarinet as well. Also, purchasing a hand brace or installing a counterweight on the trombone can alleviate the pressure from the musician's body while practicing or performing.

One musician who has detailed her experiences as a fibromyalgia patient is Stefani Germanotta, known better as her stage name, Lady Gaga. In October of 2018 she described fibromyalgia as “a cyclone of anxiety, depression, PTSD, trauma, and panic disorder all of which sends the nervous system into overdrive, and then you have nerve pain as a result (Mozes, 2017).” Germanotta expressed many times that she is tired of people claiming that fibromyalgia is not real. In September of 2017, Germanotta revealed that she was hospitalized due to

severe pain and cancelled several upcoming concerts. In addition to prescription medications, she has been receiving trigger point injections (a combination of local anesthetic with or without steroids) and platelet-rich plasma therapy on her hip that was injured in an incident that caused her PTSD to develop into fibromyalgia. Clauw (2014), professor of anesthesiology, medicine/rheumatology, and psychiatry at the University of Michigan, stated, “Lady Gaga being diagnosed when she was younger is good, because many people go years or decades undiagnosed. She also almost certainly got better recognition and treatment because of who she is. Others in similar medical—but different social—situations would struggle to even find a doctor to see them and take them seriously (Phillips & Clauw, 2014).”

Sinead O’Connor, an Irish singer/songwriter who took a break from music in 2003 due to the struggles of fibromyalgia, said in a 2005 interview,

Fibromyalgia is not curable, but it is manageable. I have a high pain threshold, so that helps, but it’s the tiredness part that I have difficulty with. You get to know your patterns and limits, though, so you can work and plan around it. It is made worse by stress, so you have to try to keep life quiet and peaceful (Cherney, 2017).

O’Connor returned from her brief hiatus in 2005 and said that she would continue singing and doing what she loves. She intended to reject parts that could cause her excessive stress thus leading to worse symptoms of fibromyalgia.

Rosie Hamlin, front woman of the group Rosie and the Originals, best

known for their hit song "Angel Baby" in 1960, and the first Latina to be honored by the Rock and Roll Hall of Fame, continued to perform revival concerts until 2002 when she had to officially retire from performing due to advanced fibromyalgia. In 2011, she stated that, "it's taken me a couple of years now to have to deal with fibromyalgia, and have to re-think my life, re-organize, and realize—just having to realize that I'm so limited now. I don't like it, but I have to deal with it (Cherney, 2017)."

In 2017, in a blog article in *The Mighty*, musician Victoria Campbell wrote about her personal difficulty with fibromyalgia. In the article, she wrote about how she used to play several instruments in addition to the flute, but the pain in her arms, hands, shoulders, neck, head, and spine made it extremely difficult to focus on any other instrument than the flute (Campbell, 2017). Campbell also explained that during the time she was unaware that she had fibromyalgia, her first symptom was pain in her arms, hips, thighs, knees, calves, and feet. She also suffered from dizzy spells and blurred vision that affected her ability to read music. Campbell said that she felt like she was falling apart and none of her doctors could figure out what was happening to her. Her doctors told her to stop playing the flute and piano until they were able to diagnose her symptoms (Campbell, 2017). Orders such as those can be extremely detrimental to musicians because even going a couple of days without playing progress on an instrument begins to deteriorate. Furthermore, musicians must have a daily

maintenance routine uninterrupted to continue to improve. Campbell's original goal was to become a professional flautist, but her experience of fibromyalgia made it impossible. She has since switched her focus and is now on the road to becoming a flute teacher. Campbell concluded by stating that fibromyalgia does not have to stop a musician from fulfilling professional dreams, but it does mean different approaches may be required to achieve goals while dealing with this difficult disease (Campbell, 2017).

In 2014, a study was created to investigate the analgesic effects of music on fibromyalgia pain. In this study, the researchers chose 22 people who were then passively exposed to self-chosen music that each considered to be pleasant and relaxing, and also to a control auditory condition that they referred to as "pink noise." The subjects then rated their pain after being exposed to both. The study found that listening to the self-chosen music "reduced pain and increased functional mobility significantly" in the subjects (Garza-Villareal, et al., 2014). This indicates that even though it may be difficult for fibromyalgia patients to endure a day with their pain, having music that they enjoy in their lives can significantly help them to cope with their symptoms. Another study conducted in 2019 found that "fibromyalgia patients experienced an analgesic effect after listening to music and this effect correlated with mostly a reduction in resting state functional connectivity between pain related regions of the brain, and in areas of the default mode network processing emotion, memory retrieval, and auditory attention

(Pando-Naude, et al., 2019).” The study concluded that music does indeed affect brain function in ways that can significantly reduce fibromyalgia pain.

In conclusion, a variety of tools can be utilized to combat the various symptoms of fibromyalgia. Hand braces, counterweights, and the ErgoBone® can alleviate the pressure from a trombonist’s body while practicing or performing. Trombonists can continue to practice while going through flares of fibromyalgia through use of a euphonium. Trigger point injections and platelet-rich plasma therapy can be effective in reducing fibromyalgia pain. Listening to music that is enjoyable and relaxing could result in reduced pain and increased functional mobility. Well known musicians such as Lady Gaga, Sinead O’Conner, and Rosie Hamlin have maintained lucrative careers while suffering from fibromyalgia. In some cases, however, these tools are not sufficient to reduce symptoms to a manageable level and it is necessary for the patient to reduce their workload and responsibilities.

The following Chapter IV presents the case study of the author who was diagnosed with fibromyalgia in and continues to endure the symptoms at the time this document was prepared and completed in 2020. First person tense is used to throughout this chapter to communicate how the author confronted and overcame the multiple issues caused by the fibromyalgia syndrome.

CHAPTER IV

CASE STUDY

In my case, I discovered that I had fibromyalgia in November of 2011 when I was 24 years old. I had been in marching band for the past 4 years and it was one of the few things that I really enjoyed in my life at the time. That all started to change, however, around September of 2011. For reasons I could not explain, I was becoming unable to inhale enough breath to perform adequately and experiencing significant back and shoulder pain when rehearsing marching band shows. Many days, I was unable to rehearse while others were able to do what I loved the most in the world. The symptoms of fibromyalgia are so arbitrary that it was very difficult for physicians to discover what exactly was wrong. I first went to the orthopedic physician because I was suffering from back and arm pain. Cortisone injections were administered to my shoulder, which admittedly, relieved the pain for a while. Soon, however, the level of pain returned. Soon thereafter, I was referred to a neurologist to determine if some type of nerve damage was causing the pain. No nerve damage problems were identified. After months of searching, I was referred to a rheumatologist who diagnosed the symptoms as fibromyalgia. The diagnosis was at first a nerve-wracking experience. How much life could be affected by this diagnosis was unknown.

Because the symptoms of fibromyalgia are random and not always present, knowing what the next day will require is difficult. I was able to sleep and feel fine and then the next morning barely be able to walk. I was able to work on class assignments in the morning, but in the evening, unable to complete them because I was experiencing a lot of trouble concentrating. In 2012, I had to resign from the marching band completely, one of my hardest experiences ever. Fibromyalgia ruined the last few years of my undergraduate experience. Most days, I just did not feel like attending my classes, and at first, I simply skipped them to lay around in my dorm room, which was absolutely the wrong approach. I am not sure if I was depressed, but I certainly felt that way. I did not want to go to school, and some days I did not want to do anything at all, even eat. Nothing made me happy anymore, not even playing because I was constantly thinking, “What if this is the end and I have to stop and change career paths”? I was afraid and made bad decisions. I did not realize that I had wonderful teachers who could work with me and help me through those hard times. After a semester of this, I finally realized that fibromyalgia was not going away. I needed to reorganize, rethink my approach, and learn how to overcome the symptoms. I spoke to my teachers and described what I was going through; they were wonderfully supportive and caring. They worked with me to make me more comfortable, and I was finally able to graduate a year later. Most helpful was the physician’s support to obtain a handicap placard. This is considered to be a must

for other college students who suffer from fibromyalgia. I would never have been able to walk the distance from the student parking lots to my classes every single day without that placard. I went through a period of 2 to 3 weeks that I could barely support the weight of my trombone due to shoulder pain and had to switch to euphonium to maintain my performance endurance. While not ideal, this was also a good opportunity to work on a secondary instrument. Learning to perform on the euphonium helped me as I pursued the Master of Music and Doctor of Musical Arts degrees. In fact, performing as a euphoniumist may allow more lucrative position opportunities. Trombonists with fibromyalgia may find that having access to the euphonium might be helpful during days of extreme flare ups. The hardest aspect in dealing with fibromyalgia as a trombone player was always enduring practice sessions. Prior to the onset of fibromyalgia, I was able to practice 3 to 4 hours a day, usually in 1 to 2 sessions of 1.5 to 2 hours each. Once the fibromyalgia was experienced, holding the instrument for more than 10 to 15 minutes was impossible. I had to lay down the instrument and rest for about 10 minutes after each 15-minute run. I grew discouraged finding enough time to practice between classes when I was able to practice only 10 to 15 minutes per session. This was not as much of an issue during the M.M. and D.M.A. programs because I did not have as many classes. During my undergraduate program, I was required to enroll in some 10 classes per semester, and the practice rooms were always occupied during the daytime. Practicing at night was difficult

because I had already been through an entire day of classes, and my body did not handle it well after already being active for so many hours. If I wanted to practice, it had to be done early in the morning before other students arrived. For those experiencing symptoms of fibromyalgia, going to bed early and awakening early in the morning is likely to produce the most effective practice sessions. To restate, fibromyalgia patients are likely to experience less symptoms in the mornings; a day of activities tends to exacerbate symptoms and pain.

Recitals and other performances are occasions when fibromyalgia can negatively affect a musician's career. Professional recitals are typically an hour to an hour and a half in length, with only a 10-minute intermission. That time can be used to recover. As a performance major, all recitals were required to be one hour in length. As previously stated, I had difficulty holding the weight of the trombone after only 10 to 15 minutes of practice. Holding the trombone was more difficult during recitals because of nerves caused by being on stage in front of teachers, peers, and family. Nerves and anxiety almost always amplifies the symptoms of fibromyalgia. I do not typically get nervous when performing, but the effects of fibromyalgia were notable. The intense concentration required during recitals can also be affected by the fibro fog, mentioned previously. Fibro fog causes difficulty in concentration on tasks that require quick thinking and flexibility. The effects of fibro fog can be devastating in a recital performance. Although I have not been affected by this fibro fog, but to avoid this condition

breathing exercises 15 to 20 minutes prior to the recital can sometimes avoid these symptoms. Several breathing apps exist on mobile platforms such as iOS® and Android™ that are free to use on the smartphone and will provide guidance and suggestions to relax and alleviate tension in the body.

During the recital, the accompanist can also be of help. Inform the accompanist to develop a trusting relationship. Explain the condition of fibromyalgia and the symptoms. Provide suggestions to the accompanist that will alleviate any flare up during the performance. In my case, the accompanist was of great help. She included additional time at the beginning and end of movements and cadenzas. This extra time with the trombone down allowed me to regain some strength before beginning the next movement or work. The accompanist helped me to keep track of time when I began to exhibit tension. The accompanist was observant enough to suggest when tension began to build and informed me that I needed to breathe deeply and eliminate the weight of the trombone. During the works that followed, the accompanist manipulated solo passages to allow a sip of water or simply to lower my arms and eliminate the weight. The accompanist never allowed early entrance to the stage, but assessed my physical wellbeing. Offstage the accompanist not only timed the break, but also ensured that I was able to complete the performance of the next work. The importance of a well-informed, excellent and caring accompanist cannot be stressed enough. Although identifying an accompanist of this caliber

and sensitivity may require higher fees, the end result can avoid exhibiting visible symptoms of fibromyalgia onstage.

During the M.M. degree another step that helped me greatly in dealing with fibromyalgia was enrollment in an Alexander Technique class. Alexander Technique focuses on ridding the body of harmful tension. Learning about inefficient habits that interfere with your ability to move easily can avoid excess tension in the body. Breaking those habits and feeling more relaxed can avoid exhibiting symptoms of fibromyalgia. Prominent musicians have endorsed the Alexander Technique, including Paul McCartney, Sting, Julian Bream, James Galway, Sir Colin Davis, and others (National Health Service, 2018). The United Kingdom National Health Service Choices suggested that the Alexander Technique can help to alleviate the following conditions:

- Long-Term Back Pain. Lessons in the technique may lead to reduced back pain-associated disability and reduce pain for up to a year or more.
- Long-Term Neck Pain. Lessons in the technique may lead to reduced neck pain and associated disability for up to a year or more.
- Parkinson's disease. Lessons in the technique may facilitate everyday tasks and improve physical wellbeing. (National Health Service, 2018)

I can personally attest to the effectiveness of the Alexander Technique. Enrolling in the class and changing my habits to allow for more efficient movement of my

body, I found that I could hold up my instrument for around 30 minutes at a time instead of 15. This improvement may not seem to be significant, but it was extremely helpful during recitals and practice sessions. Employing the Alexander Technique allowed me to practice twice as much as before in only one session. I was also much more comfortable during my recitals because I was able to take a break for intermission after 30 minutes of performing.

Over the course of my experience with fibromyalgia, I have taken several different medications to counteract it. The first medication that I tried was an anti-depressant and nerve pain reducer called Savella®; however, the nausea that resulted from taking this medication was too difficult for me to handle. The next prescribed medication was an anti-depressant called Cymbalta®. This medication worked very well for me, but over time it began to have the opposite of its intended effects. It caused depression and even suicidal thoughts, and I had to be taken off of the medication immediately. Finally, my rheumatologist prescribed a medication called Lyrica®. This medication also helped me to a great extent, but it caused me to gain almost 30 pounds while taking it. Gaining weight is detrimental to patients with fibromyalgia because the extra weight puts more tension and stress on the body. At this time, the fibromyalgia went into remission and allowed me to stop taking the Lyrica®. I began to lose weight and maintained a period of remission for almost a year.

Another important aspect of battling my Fibromyalgia was knowing when

to rest. On days that I was not experiencing any pain, I had to remember to rest if I felt myself beginning to get tired. In her book, *Career or Fibromyalgia, Do I Have to Choose*, Karen Brinklow states, “as soon as you feel tired, you need to rest. Even if it means resting all day, listen to your body for cues telling you it needs a break and rest”. She also likens her energy to that of a battery, saying that her battery was no longer brand new, that it drained much faster and that each resting period did not give her as much charge as they had prior to her diagnosis of Fibromyalgia (Brinklow, 2020). Like Brinklow, I also discovered that I was expending too much of my energy on days that I was not in pain, which caused me to have several flare-ups that I could have otherwise avoided if I had been more careful and taken the amount of rest that I required.

A proper exercise routine is also highly recommended if you are suffering from Fibromyalgia. At first, I did not realize that exercise would help reduce my long-term pain because each attempt at exercise subsequently caused my pain levels to rise. In her book, *Living With Fibromyalgia*, Christine Craggs-Hinton states, “without exercise our bodies are liable to become increasingly painful—prolonged inactivity, ultimately, causing our muscles to waste (Craggs-Hinton, 2000)”. During weeks when I was experiencing my worst pain, I did not get the proper exercise that I required, and this caused me to become weak and lose muscle in my arms and legs. Subsequently, I found playing the trombone to be more difficult and more pain-inducing due to my lack of strength. If possible, do

not neglect proper exercise

At the beginning of the 2019-2020 school year, I was not experiencing any symptoms of fibromyalgia. I had entered a period of remission and I was doing quite well with my practice and my schoolwork. The fall semester of 2019 was arguably the best I had ever felt since first being diagnosed with fibromyalgia. I was able to practice 4 hours per day without much difficulty. Rehearsing for my final recital was much easier than it had been for the previous recitals that I had done while working on this degree. The mental issues that had been plaguing me in the past were improving, and I was beginning to become confident again that I would be able to live what others consider to be a normal life as a musician. Any pain that I experienced mostly would only flare up while I was going through other medical issues such as colds or other sicknesses. I experienced minimal back pain during concerts, but not enough to affect my concentration or my ability to enjoy the performance. Over time though, my body grew accustomed to being pain free. Being without pain and feeling confident contrasted what occurred in spring 2020.

During the spring semester of 2020, the fibromyalgia symptoms started to return. It started so slowly at first that I did not realize what was happening. As the semester continued, I began to distance myself, and I did not understand why. Now after assessing the situation I realized that depression, a common symptom of fibromyalgia, had started to return. I was not experiencing much pain

during this time, and I believe that this is why I did not realize that remission was coming to an end. The symptoms only continued to worsen during the summer. In the fall, the pain from fibromyalgia began to flare. I was unable to practice much due to upper back pain that began less than 5 minutes into the session. The fibromyalgia pain also flared while sitting at a desk. While writing this study I had to find creative ways to stay comfortable enough so that I could concentrate on the task. The only way I discovered to stop back pain was to lie on my right side. This posture made typing efficiently on the keyboard difficult. I have been taking many doses of full-strength ibuprofen per day to avoid taking medicines that might interfere with my ability to concentrate. This has been especially difficult because prior to this I had gone through a time of remission. Unused to the pain, ignoring the symptoms of fibromyalgia became more difficult. My shoulders, arms, and hands were also affected by this reemergence of symptoms. This discomfort is difficult to describe, but my hands are swollen and feel as if they are burning. Thus, it is difficult for me to do things I normally find easy to do, such as typing, holding a pencil, or using the trigger on the trombone. To maintain the strength in my embouchure and breath endurance on the trombone, I found that playing the alto trombone was easier to lift. This eventually will affect my ability to play on the tenor trombone. As stated previously, to perform at a professional level requires consistent and daily practice.

Other effects of fibromyalgia reappeared. Fibromyalgia has affected my

immune system, and feeling ill for most of the summer affected my overall physical well-being. The symptoms included feeling nauseated daily and issues with ears and the upper respiratory system. Feelings of depression tended to permeate daily activities. Fibromyalgia is known to cause depression, but I am unsure if this depression is due directly to the fibromyalgia or whether it has also been caused by the sheltering at home required by the COVID-19 pandemic. When classes were terminated in March 2020, I began to notice that anxiety might have caused the depression and other symptoms of fibromyalgia. On most days I feel like doing nothing, including activities that I normally would enjoy, such as reading, riding my bike, or even something as simple as watching television. I have not felt like talking to anyone, even friends with whom I had previously been very close and communicated with daily. This added to the upper body pain and made it extremely difficult for me to continue to focus on the completion of my degree. To counteract this particular flare up, I forced myself to walk outside at least 10 minutes per day and adjusted work hours to less than 15 hours per week. I spent most days lying in bed in a position that allowed me to work on this document without being in too much pain. I took 10 to 15 minute breaks for every hour of typing. I made an appointment with a psychologist with the intention of addressing the feeling of depression. If the symptoms are not addressed, I will have to make an appointment with the rheumatologist, who will most likely prescribe Lyrica® again. Unfortunately, taking Lyrica® long-term had

the side effect of weight gain which increases the effect and pain of fibromyalgia. Throughout, the positive aspect that inspires me to forge ahead is music. When I am in pain, stressed, angry, or sad, music helps me to push through each day.

The preparation and presentation of this document itself contributed to my experiencing a myriad of symptoms described above. Although I have been suffering with fibromyalgia since it was first diagnosed in 2013, I can never plan in advance as to which symptom or pain will appear during my next task. As stated, I have learned that even if I experience a period when I believe that I am in remission and perhaps have overcome the symptoms of the disease, their recurrence can reappear at any time without warning. Predictably, symptoms from fibromyalgia manifest themselves at inopportune times and often during important performance and presentation events.

CHAPTER V

SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER STUDY

The purpose of this study was to present a case study that described how fibromyalgia has affected the career of a professional trombonist. Not intended to be a comprehensive review of fibromyalgia, the study was designed to document how fibromyalgia can affect musical study and a professional musician's career through a case study. The study covers the span of the years 2012, the point of initial diagnosis, through 2020, the completion of this document.

Fibromyalgia is a disorder characterized by widespread musculoskeletal pain accompanied by fatigue, sleep, memory, and mood issues. Researchers believe that fibromyalgia amplifies painful sensations by affecting the way the brain processes pain signals. Symptoms sometimes begin after a physical trauma, surgery, infection, or significant psychological stress. Physician researchers have not determined the cause fibromyalgia, but most likely, a variety of factors are involved. Although fibromyalgia is debilitating at times for the many who suffer from this mysterious syndrome, a number of well-known celebrities have been able to cope with the disease during the development of their careers. Medications can be prescribed to alleviate or lessen some of the symptoms of fibromyalgia, but each presents with side effects that sometimes

are worse than dealing with the syndrome itself. Natural coping mechanisms as well can be employed to battle the symptoms, but at times during flare-ups of the disease, the only attack is to endure the pain and focus on the task. The case study includes the details the female author who is a trombonist and how she has addressed and coped with fibromyalgia. The time frame of the case study covers some eight years during which the subject began to suffer many of the symptoms of fibromyalgia during her undergraduate study in trombone performance through the completion of a doctoral degree and the presentation of this document. Various stages of the disease are presented including the initial diagnosis, medications prescribed and their side effects, and more natural coping mechanisms that have helped to combat the debilitating symptoms. Although fibromyalgia is not progressive, the syndrome can move unpredictably from remission to a period of flare-ups without warning.

Musicians as well as performers in many artistic areas have been able to develop successful careers in spite of suffering from fibromyalgia. Musicians who must keep a daily practice schedule have learned that they can continue to perform at a level of excellence through various approaches to counter the symptoms. Although the medications can provide some relief for individuals, the side effects are so pronounced that at times they are worse than the symptoms themselves. Various approaches that include relaxation techniques, study of the Alexander Technique, listening to music, and others, have been found to

increase functional mobility. More serious and even more debilitating symptoms such as depression and thoughts of suicide must be addressed immediately through psychiatric intervention. Although some musicians who suffer from fibromyalgia have not been able to pursue their originally intended careers, they have found related careers that provide just as much enjoyment and passion. For trombonists who suffer from fibromyalgia, purchasing devices such as the ErgoBone® can lessen the pain caused by holding the weight of the instrument. Backstraps for balancing the weight or securing a trombone that is lighter, such as perhaps an alto trombone for tenor players, or a tenor instrument without F or other attachments, may alleviate some of the symptomatic pain. In performance situations where an accompanist is involved, allowing that person to know about the symptoms of fibromyalgia and the coping mechanisms that can be countered by working collaboratively can provide a feeling of security and lessen the anxiety. Rest and sleep is especially important for musicians who must deal with fibromyalgia. Finally, a positive support system of colleagues, friends, and family can allow a musician to pursue a successful career while enduring the many symptoms.

Because information about musicians who deal with fibromyalgia has not been presented in readily available sources, how artists have dealt with the symptoms and developed successful careers merit study and publication. Further study of natural methods and approaches that can alleviate pain and symptoms

from fibromyalgia could become a valuable resource. An investigation that could identify musical genres (instrumental or vocal) might provide invaluable guidance for students with fibromyalgia who wish to pursue the study of music.

Musicians are especially susceptible to the myriad of symptoms that fibromyalgia can produce. Finding and discovering additional approaches becomes the quest for all who are building and maintaining a professional career. Sharing information with others and staying in touch with artists who suffer from fibromyalgia can prove to be a valuable and collaborative network. Although suggestions for combatting the effects of fibromyalgia have been presented in this document, the syndrome is different for every person, and it is unpredictable day to day.

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APPENDIX A

RECOMMENDED AIDS TO LESSEN FIBROMYALGIA SYMPTOMS FOR MUSICIANS

The following list of aids suggested for musicians may help to alleviate or halt the progression of fibromyalgia symptoms. Each aid mentioned previously in the document is followed by the page number on which it was introduced.

- Pain relievers, non-steroidal anti-inflammatory drugs, opioids, anti-depressants, and anti-seizure medications. page 8.
- Physical or Occupational Therapy and Counseling. page 9.
- Use of Transcutaneous Electrical Nerve Stimulation (TENS). page 10.
- Use of a secondary instrument that exerts less pressure on the body. page 11.
- Ergobone® and other products from the Ergobrass® company. page 13.
- Regularly listening to music that is enjoyable and relaxing. page 16.
- Obtaining a handicap placard. page 19.
- Getting plenty of sleep and waking up early. page 20.
- Breathing exercises. page 20.
- Alexander Technique. page 22.