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## Psychological Pitfalls of the Modern Percussionist: A Survey of Coping Mechanisms for Downward Spirals in Mental Health

Andrew Naughton

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PSYCHOLOGICAL PITFALLS OF THE MODERN PERCUSSIONIST: A SURVEY OF  
COPING MECHANISMS FOR DOWNWARD SPIRALS IN MENTAL HEALTH

By

Andrew Michael Naughton

Bachelor of Music Performance  
Adams State University  
2018

Master of Music Education  
Adams State University  
2021

A doctoral project submitted in partial fulfillment  
of the requirements for the

Doctor of Musical Arts in Performance

School of Music  
College of Fine Arts  
The Graduate College

University of Nevada, Las Vegas  
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## Doctoral Project Approval

The Graduate College  
The University of Nevada, Las Vegas

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Andrew Naughton

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Psychological Pitfalls of the Modern Percussionist: A Survey of Coping Mechanisms  
for Downward Spirals in Mental Health

is approved in partial fulfillment of the requirements for the degree of

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## ABSTRACT

### **PSYCHOLOGICAL PITFALLS OF THE MODERN PERCUSSIONIST: A SURVEY OF COPING MECHANISMS FOR DOWNWARD SPIRALS IN MENTAL HEALTH**

By

Andrew Michael Naughton

Dr. Timothy Jones, Examination Committee Chair  
Vice-Dean, College of Fine Arts  
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This document explores three key facets of mental health significantly impacting percussionists in both educational and professional settings: Imposter Syndrome, sleep deprivation, and stress management. The primary focus is to understand the impact of these psychological conditions on percussionists and discover effective approaches to prevent, alleviate, or manage these ailments. This document is divided into four sections. The initial section delineates the concept of “Imposter Syndrome” and discusses its various manifestations as encountered by percussionists in both educational and professional environments. The second section discusses the consequences of sleep deprivation on mental well-being when it is disregarded. The third section explores the consequences of not effectively managing stress, which can result in a deterioration of mental well-being, and serves as a segue into the concluding segment. The concluding section presents techniques that can aid in alleviating, or managing, the mental health concerns discussed in this text. This document will contain an examination of widely recognized publications that offer effective approaches for promoting positive mental health including textbooks on percussion pedagogy.

## ACKNOWLEDGEMENTS

I am eternally grateful to the Division of Percussion at the University of Nevada in Las Vegas. The valuable experiences acquired at UNLV have served as a catalyst for my growth as both a scholar and a performer. I would like thank Dr. Timothy Jones for offering me a video lesson during my time as an undergraduate at Adams State University, specifically on six mallet technique for my preparation on the piece *Fabian Theory* by Nigel Westlake. This experience sparked my interest in studying there. He has consistently been the most influential, inspiring, and motivating professor during my time. His vast knowledge and expertise as well as obvious passion for the Division of Percussion at UNLV has inspired me to continue growing and expanding my understanding. The academic growth I experienced while under the instruction of Dr. Jones' has been paramount in the level of work I produce now.

I would like to convey my sincere appreciation to Dr. Dean Gronemeier, Dr. Alex Stopa, and Dr. Kyle Bissantz for being the leaders in my performance experience at UNLV and for instilling essential skills I apply in my musical and academic endeavors daily. Thank you to Dr. Alfonse Anderson and Professor Glenn Nowak for their valuable assistance as members of my committee, offering insightful perspectives throughout the progression of my work.

Finally, I express my gratitude to Ryan Bond, Sam Wetzel, and Chandler White for their exceptional professionalism and support, which have significantly contributed to sustaining my motivation. Their unwavering commitment to their profession and their exceptional work ethic have ensured my integrity and profoundly humbled me, imparting the invaluable lesson of the transformative power of hard work and effort.

## DEDICATION

I dedicate this document to the three most important people in my life. To my father, James J. Naughton for the unwavering support he has provided has greatly accelerated my achievements in education. He has exemplified the concept of unconditional love, perseverance in the face of challenges, and he taught me to consistently give maximum effort in all my endeavors. The cancer diagnosis he received followed in 2023 quickly by his passing was profoundly distressing, and although he is no longer here to witness my completion of this degree, I am hopeful that he continues to observe me with a sense of pride.

To my mom, Terri Ann Naughton who has imparted strength and perseverance to me like no one else. I deeply appreciate the valuable teachings my mom has passed on to me over the course of my life; these experiences have profoundly influenced my current identity.

Lastly, to my wife, Alonna Marie Younger-Naughton. She has been steadfastly at my side during both the most effortless and most challenging phases of my adult life. Her understanding has facilitated my unrestricted exploration of my identity and the path I desire to pursue in life. She consistently supports and reinforces every decision I make.

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## CHAPTER ONE: INTRODUCTION

Emphasizing mental health awareness is crucial for percussionists to effectively engage in the challenging educational and competitive percussion work environment. Much of the curricula centered around percussion deals with the progression of skill and relevance to teaching or performing, so there has not been as much attention to mental health and self-care. Although more percussion programs are including introductory elements of mental health considerations into their curriculum, there is a disparity in keeping up with the needs of many students. The typical guidance for mental health elicited in percussion curriculum is realized through organization and time management tactics.

The *Harvard Business Review* describes imposter syndrome as a “collection of feelings of inadequacy that persist despite evident success.”<sup>1</sup> The significance of mental health among the fields of academic and professional percussion is frequently underestimated. Students and professionals may often overlook the need for prioritizing their well-being in favor of completing challenging activities, which could result in unhealthy habits.

As a codified musical discipline, the craft of percussion is still in its infancy when compared to other instrument families. For example, the first accredited percussion department was created at the University of Illinois in 1950s by Paul Price,<sup>2</sup> thus research for development still focuses primarily on the progression of performance, education, and making percussion more prominent. Furthermore, professionals who did not receive formal music education in

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<sup>1</sup> Gill Corkindale, “Overcoming Imposter Syndrome,” *Harvard Business Review* (May 7, 2008), <https://hbr.org/2008/05/overcoming-imposter-syndrome#:~:text=Imposter%20syndrome%20can%20be%20defined,external%20proof%20of%20their%20competence>.

<sup>2</sup> Michael Rosen. “A Survey of Compositions Written for the Percussion Ensemble,” *Percussionist* V4, No. 2 (1967): 143.

school or through private lessons may continue to face the additional challenge of staying current in their field without access to a structured curriculum tailored to percussionists. This can become especially distressing due to the challenging work it takes to be successful as a musician in the modern day. Without guidance, it can become incredibly discouraging for the professional as they inevitably encounter obstacles preventing their progression. Percussion requires tedious work and progress may feel much less efficient than their educated colleagues within the same field.

This document addresses three prevalent concerns within the fields of academic and professional percussion that are directly related to mental health: Imposter Syndrome; sleep deprivation; and stress management. These afflictions are significantly prominent within the field of music,<sup>3</sup> and for percussionists having to juggle a variety of instruments at once, neglecting your mental health and not creating active strategies for prevention of these issues can be highly detrimental to our well-being. Many professionals and educators continue to have a mindset of ignoring the issues assuming they will just pass. Negative mental health that is left unaddressed begins festering poor habits can result in consequences such as unnecessary disability, substance abuse, and suicide.<sup>4</sup>

Currently, there is a growing need for increased involvement and understanding of every facet of percussion, and there is an expectation to bear a significant burden. There is an expectancy for percussionists to possess professional proficiency on a myriad of percussion instruments, as opposed to specializing in a single percussion instrument like pianists or

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<sup>3</sup> Mardon, Austin, and Reinette Schabert. *Mental Health in the Music Industry*, 2021: 5.

<sup>4</sup> Martin Prince, Vikram Patel, Shekhar Saxena, Mario Maj, Joanna Maselko, Michael R. Phillips, and Atif Rahman. “Global Mental Health 1 - No Health Without Mental Health.” *The Lancet (British Edition)* 370, no. 9590 (2007): 859–877. [https://doi.org/10.1016/S0140-6736\(07\)61238-0](https://doi.org/10.1016/S0140-6736(07)61238-0).

violinists. While most musicians typically focus on mastering a single instrument, percussionists must navigate the complexities of multiple instruments, each requiring distinct approaches. Schools are striving to meet the comprehensive demand for percussionists, which significantly increases the workload for students. This can also lead to students neglecting their mental health to meet the expectations placed on them by their institutions.

Ensemble leaders who do not have percussion experience often underestimate the need for percussionists and hold them to the same standards as other instrumentalists. Percussionists are often expected to sight read just as well as the woodwind players regardless of difficulty and setup involved. A classic example is sightreading a musical and the conductor or rehearsal leader becoming frustrated that the percussionist is struggling to sight read their part as the clarinetist is flying through their part with few issues. In these situations, percussionists may be navigating a mixed multiple percussion set up that is new for them. Most of the time when a percussionist comes across a multi-percussion piece they have not rehearsed or performed in the past, they are creating an entirely different setup from previous pieces. When a flautist gets new music, their instrument does not change, their notes are in the same place they were for previous pieces so the muscle memory is already there, when a percussionist sets up a new piece, they may have entirely different instruments with new notation and therefore must learn a new muscle memory for their new piece. If the director is unaware, this can lead to many demoralizing issues for percussionists. Reprimanding the student for this issue can quickly lead to what are known as imposter feelings that may quickly spiral into negative mental health issues.

Imposter Syndrome is prevalent in many occupations and professions. An artist or educator may feel inadequate making new contributions to their field, while a young lawyer may feel inundated by the magnitude of other lawyers with far more experience. The concern lies in

letting this emotion persist instead of confronting it directly. Without acknowledging the issue, it can lead to other problems. The purpose of this section on Imposter Syndrome in the document is to analyze the varieties of Imposter Syndrome that percussionists may encounter as students or professionals. It also highlights the potential consequences of not treating Imposter Syndrome, which can lead to the development of other mental health issues.

Sleep is a crucial factor in maintaining energy levels, preserving memory, and avoiding mental health decline. Therefore, a healthy sleep pattern must be prioritized. A significant number of students opt to sacrifice sleep during their academic and professional journeys to manage their demanding and intricate schedules. Sleep deprivation can occur due to several factors. Occasionally it is a deliberate choice, but more commonly it is an unintended consequence. Rest is necessary for the mind and body to rejuvenate, enabling optimal cognitive functioning. Music curriculums demand a significant amount of time to balance lessons, theory, history, piano, general education, ensembles and more. The courses in music theory alone can be a source of stress for many students, for example, many assignments can be quite complex and take up a great deal of time taking multiple hours for some assignments, and this is just one element in their overall workload. The sleep deprivation section of this document will provide comprehension for the necessity of sleep, why there is a tendency for percussionists to disregard or dismiss sleep, and potential consequences of this behavior on mental and physical well-being.

Stress significantly contributes to the increasing prevalence of mental health issues in the music industry.<sup>5</sup> Within the realm of performance, constant low compensation necessitates percussionists to seek multiple gigging opportunities just to survive. This predicament can

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<sup>5</sup> Austin Mardon and Reinette Schabert. *Mental Health in the Music Industry*, Golden Meteorite Press, 2021: 2.

swiftly spawn detrimental behaviors, such as neglecting various facets of mental and physical well-being and failure to effectively manage stress. Among educators, this may readily lead to an unfavorable workplace for both the educator and their fellow colleagues. Observing how most people cope with stress demonstrates the rapid impact on behavior and ability to manage additional stress.<sup>6</sup> Developing skills to effectively handle and reduce stress can greatly assist in addressing various mental health problems that result from neglecting escalating stress levels. The strategies acquired can mitigate these ailments and are crucial for preserving optimal mental well-being.

The concluding section of this document presents strategies for fostering favorable psychological health, and explains various approaches employed by professionals and educators to effectively cope with persistent mental strain. This section will also provide strategies targeting the overwhelmed percussionist to effectively manage their time and cultivate a positive mindset. The goal is to provide a range of techniques that address mental health challenges.

This document presents several strategies found to be effective by the author, while acknowledging the existence of alternative strategies that may be equally advantageous for specific people. The reader is encouraged to broaden their exploration to uncover personalized strategies beneficial for managing mental health.

### **Literature Review**

I have utilized a wide range of recommended books that were provided to me along my academic journey, with a significant portion of these inherited resources pertaining to the

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<sup>6</sup> Melanie Greenberg, PhD. *The Stress-Proof Brain: Master Your Emotional Response to Stress Using Mindfulness and Neuroplasticity*. New Harbinger Publications, 2016: 10.

practices of self-care, time management, and organization. At first, I collected and organized a compilation of resources pertaining to music and mental health in a broad sense. Later, I commenced the process of refining my research and adjusting my resources to focus on fundamental themes that were universally applicable in the extensive literature on music education and mental health. Among the several subjects available, I chose Imposter Syndrome, sleep deprivation, and stress-management due to their prevalence within various reviewed literature discussing mental health in musicians, and focused my resource selections accordingly.

I incorporate a literature analysis at the conclusion of the paper, examining the extent to which percussion pedagogy books address the topic of mental health to emphasize the growing need for awareness. I have compiled literature reviews on materials related to self-care, time management, and organizational strategies. These include several highly regarded books by Don Greene including *Audition Success*,<sup>7</sup> which provides insights into diverse preparation approaches; *Performing in the Zone*<sup>8</sup> by Jon Gorrie; and *Mindset: The New Psychology of Success*<sup>9</sup> by Carol S. Dweck, Ph.D. These books are reviewed in this document to cover many components that could greatly assist with the concerns addressed in this text.

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<sup>7</sup> Greene, Don. *Audition Success*. Routledge, 2015.

<sup>8</sup> Gorrie, Jon. *Performing in the Zone: Unleash Your True Performing Potential!* Createspace Independent Publishing Platform, 2009.

<sup>9</sup> Dweck, Carol S. *Mindset: The New Psychology of Success*. Ballantine Books, 2007.



## CHAPTER TWO: IMPOSTER SYNDROME

The concept of Imposter Syndrome is very recent in the field of mental health. In 1978, Dr. Pauline Rose and Dr. Suzanne Imes introduced “Imposter Phenomenon” while studying the experiences of their clients, particularly high-achieving women who question their own ability and competence despite extensive experience.<sup>10</sup> Imposter phenomenon is widely referred to as Imposter Syndrome, and more broadly referred to as a “fear of success.” The term initially began as term specifically geared towards women, however, Imposter Syndrome is one of few psychological issues thought to only effect women which has later been proven to effect everybody.<sup>11</sup> Many highly successful people have admitted to feeling a sense of not belonging due to surrounding circumstances of their occupations.<sup>12</sup> People suffering from Imposter Syndrome would not typically put this label on themselves, yet upon hearing about aspects of Imposter Syndrome these same people tend to agree and resonate with certain components.<sup>13</sup>

In many cases of imposter syndrome, people will attribute their achievements to uncontrolled factors such as ancestry and attractiveness.<sup>14</sup> These people attribute their current opportunities to a stroke of luck, despite having acquired numerous credentials and diligently

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<sup>10</sup> Pauline Rose Clance, Ph.D. *The Impostor Phenomenon: Overcoming the Fear That Haunts Your Success*, 1985: 1.

<sup>11</sup> Gregory C.R. Yates and Margaret Chandler, “Imposter Phenomenon in Tertiary Students,” paper presented at the Annual Conference of the Australian Association for Research in Education, University of South Australia, Adelaide, December 1998; Catherine Cozzarelli and Brenda Major, “Exploring the Validity of the Imposter Phenomenon.” *Journal of Social and Clinical Psychology* 9, no. 4 (1990): 401-417; D. Lester and T. Moderski, “The Imposter Phenomenon in Adolescents,” *Psychological Reports* 76, no. 4 (1995): 466; and Sharon-Buchalter, “Fear of Success, Fear of Failure, and the Imposter Phenomenon Among Male and Female Marketing Managers.” *Sex Roles* 37, nos. 11-12 (1997): 847-859.

<sup>12</sup> Ibid., 3.

<sup>13</sup> Ibid., 9.

<sup>14</sup> Valerie Young. *The Secret Thoughts of Successful Women: And Men: Why Capable People Suffer from Impostor Syndrome and How to Thrive in Spite of It*. Crown Currency, 2011: 14.

worked to acquire their current knowledge. According to a study, 80 percent of CEOs and 81 percent of managing directors in the United Kingdom say they occasionally feel “out of their depth” and that they are “struggling with their role.”<sup>15</sup> Dr. Pauline Rose Clance, pioneer of the imposter phenomenon term, has her book titled *The Imposter Phenomenon: Overcoming The Fear That Hunts Your Success* where she highlights many of her successful clients and students who have an extensive record of success yet still feel they do not deserve it for various reasons.<sup>16</sup>

Imposter syndrome is the ongoing sensation of not fitting in, or feeling undeserving, to be in a certain position despite one's level of education and expertise.<sup>17</sup> One common manifestation is through questioning one's intelligence, talents, and achievements.<sup>18</sup> Imposter syndrome manifests in various forms and impacts people's lives in unique ways. Some people may easily dismiss and move on from specific sentiments, while others dwell on them for an extended period, impacting their decision-making process. People with imposter syndrome sometimes attribute their accomplishment to chance or coincidence. They attribute their achievement not to their own ability but to "breaks and courage."<sup>19</sup> Another common factor of people suffering from this affliction is the feeling that if they were given the chance to do it again, they would fail.

A lawyer may attribute their client base to their attractiveness, while a writer may credit their sales to their famous family name. Both people have acquired skill in their respective fields through extensive work, yet they feel that their experience is not the reason they have their

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<sup>15</sup> “Research from The School of Life Show Two Thirds of Britons ‘Struggling’ at Work,” Dropbox and The School of Life White Paper, 2017, <https://dropboxbusinessblog.co.uk/two-thirds-britons-struggling-work-teamwork-difficulties-arise/>.

<sup>16</sup> Clance, 1985.

<sup>17</sup> Young, 2011: 14.

<sup>18</sup> Ibid., 14.

<sup>19</sup> Jessamy Hibberd. *The Imposter Cure: How to Stop Feeling Like a Fraud and Escape the Mind-trap of Imposter Syndrome*. Aster, 2019.

success. Many people experiencing imposter syndrome conceal it from their colleagues. They construct a persona that aligns with their achievements yet harbor doubts about deserving their position.<sup>20</sup> Undoubtedly, no person desires to experience this emotion. People suffering from imposter syndrome strive to disprove their self-doubt and demonstrate their capabilities to others. They often experience these emotions while feeling isolated. When successful persons discover that this widespread condition affects many other successful people as well, they realize they are not alone, which alleviates a significant burden. Discovering that accomplished people also face same emotions and that there is a specific label for them provides a profound sense of reassurance.

### **Who Does Imposter Syndrome Impact?**

The short answer for this burning question is anybody can be affected by imposter syndrome at any time. However, learning and understanding the full extent of why and how people may come across imposter syndrome will help both identify it as it arises and mitigate the effects it may cause. “It’s thought that around 7 in 10 people experience [imposter syndrome] at some point, and in the creative industries that figure climbs to 87 percent.”<sup>21</sup>

Many victims of imposter syndrome make wonderful first impressions and put up a well-crafted disguise hiding their insecurities and deficiencies. Feeding into this appearance while still feeling the other way is only adding to the self-created perception of being an imposter. It gives affirmation to imposter thoughts allowing the mind to consistently believe these imposter

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<sup>20</sup> Clance, 1985: 28.

<sup>21</sup> Hamda Issa-Salwe. “Imposter Syndrome in the Music Industry is Rife, but it’s not Impossible to Overcome.” *Mix Mag* (March 11, 2020). <https://mixmag.net/feature/imposter-syndrome-music-industry-mental-health>.

feelings regardless of if they are true or not.<sup>22</sup> Managing or changing these symptoms is discussed later in the document, but before change can occur one must understand the factors that contribute to Imposter Syndrome.

Feelings of phoniness typically affect those with insecurities related to knowledge or skills which is one explanation for why it happens more in academic and professional areas.<sup>23</sup> It is quite unclear on the time-frame for the existence of these types of feelings, however, what we know are from studies such as those done by Gail Matthews revealing that, in 1984, 70 percent of successful people involved in this study reported to have experienced Imposter Syndrome at some point.<sup>24</sup> Today, a systematic evaluation of 62 studies showed prevalence of Imposter Syndrome with rates as high as 82 percent in graduate students, college students, nurses, medical students and other professionals.<sup>25</sup>

Percussionists experience Imposter Syndrome in various ways, but the common thread of feeling like they don't belong persists. Imposter Syndrome is caused by reinforcing sentiments of self-doubt instead of directly addressing them.<sup>26</sup> Acquiring the skill to cope with these emotions may lead to the belief that you cannot handle similar challenges without experiencing those emotions each time. Ignoring these emotions and letting them escalate may lead to various health hazards triggered by stress. It can result in nightmares, sleeplessness, and severe depression.<sup>27</sup>

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<sup>22</sup> Clance, 28.

<sup>23</sup> Young, Valerie. *The Secret Thoughts of Successful Women: And Men: Why Capable People Suffer from Impostor Syndrome and How to Thrive in Spite of It*. Crown Currency, 2011: 15.

<sup>24</sup> Gail M. Matthews. "Imposter Phenomenon: Attributes for Success and Failure," paper presented at the American Psychological Association, Toronto, 1984.

<sup>25</sup> Bravata, D.M., Watts, S.A., Keefer, A. L., et al. "Prevalence, Predictors, and Treatment of Imposter Syndrome: A Systematic Review." *Journal of General Internal Medicine* (2020).

<sup>26</sup> Young, 28.

<sup>27</sup> Ibid., 29.

Permitting these emotions to persist leads to the development of an impostor cycle.<sup>28</sup> They believe success can only be achieved through these emotions, leading to an unhealthy cycle. People should familiarize themselves with different varieties of impostor syndrome to effectively disrupt the imposter cycle.

The reasonings for which people get affected can be of countless origins and understanding possible reasons can help a person to understanding why they are experiencing these feelings. “When you have an ‘imposter moment,’ it is tremendously helpful to understand the possible reasons behind the feeling. That’s because when you shift away from the personal it allows you to put your responses into perspective more quickly.”<sup>29</sup>

Much of the way we feel and react to events in our lives stem from the way we are raised and the environment that we grew up in within our families and in the world.<sup>30</sup> These aspects shape our personalities and gives a sense of individuality which means our childhood influences the way we view and approach life.<sup>31</sup> Dr. Pauline Clance attributes four elements within the families of imposter victims.

The first element is the “discrepancy between feedback a child receives from his or her immediate family and the feedback he or she receives from teachers, friends, neighbors, or other relatives.”<sup>32</sup> A family’s definition of success directly impacts the way a person views their experiences.<sup>33</sup> Famous American singer Andy Williams speaks in his memoir about his inability to get out of his own head during performances due to something his father told him as a child.

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<sup>28</sup> Clance, 25.

<sup>29</sup> Clance, 26.

<sup>30</sup> Jessamy Hibberd. *The Imposter Cure: How to Stop Feeling Like a Fraud and Escape the Mind-trap of Imposter Syndrome*. Aster, 2019; 60.

<sup>31</sup> Ibid., 60.

<sup>32</sup> Clance, 33.

<sup>33</sup> Hibberd, 69.

His father stated, “You’re not as good as them, so you have to work harder.”<sup>34</sup> This is a feeling that persisted throughout his career, regardless of recording 43 albums with 15 becoming gold certified and three platinum certified.<sup>35</sup>

These seemingly subtle messages can have enduring effects. Comments like the one made by Andy Williams' father can make the child feel as though they can never fully excel compared to their peers without considerable effort. Certain circumstances may arise where a family member lacks a role model to emulate, particularly in cases of first-generation college students or people who are the first in their family to achieve a successful career. This could cause these people to feel as though “they don’t fit in anywhere – they are out of step at home and in their new environment.”<sup>36</sup> Views of successes and failures are influenced by those around use, especially those that we look up to. They influence our expectations and therefore our decisions and reactions.<sup>37</sup>

The second of four elements within families of imposter syndrome that contributes to the feelings happen within families that “place very high of importance on a child’s ability to learn quickly and maneuver well in the world.”<sup>38</sup> Common in highly educated families, this expectation that a child’s success should be measured by how “smart” they are can be incredibly damaging to a child’s self-esteem.<sup>39</sup> These people can begin to create unrealistic standards for

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<sup>34</sup> Andy Williams, *Moon River and Me: A Memoir*, reprint edition, 2010.

<sup>35</sup> “Gold and Platinum: Andy Williams.” Recording Industry Association of America. Retrieved March 11, 2024.

<sup>36</sup> Hibberd, 70.

<sup>37</sup> Ibid., 71.

<sup>38</sup> Clance, 33.

<sup>39</sup> Young, 27.

themselves causing a great deal of stress while trying to live up to these expectations. Discussed later in the document, stress can have long lasting impacts on our mental well-being.<sup>40</sup>

The third family element that contributes to imposter feelings is when a person possesses distinct qualities that set them apart from the rest of their family.<sup>41</sup> Some people may be the only one in their family to have an education or career in music while the rest of the family do not share the same interest or, in some cases, do not support these interests. When parents display disinterest, it results in a lack of constructive input from these influential people in our life. This creates negative feedback, feeding into negative emotions when these people experience success separate from their families' views of success.<sup>42</sup> "Mixed or confusing messages from parents or mentor figures make it very difficult to internalize success as how you are doing is inconsistently reinforced."<sup>43</sup>

This relates closely with the fourth element within families contributing to victims of Imposter Syndrome which is lack of praise.<sup>44</sup> Many factors contribute to lack of praise from parents, some may be afraid that too much praise could lead to their child becoming arrogant. In cases of families with many children, they may be afraid that too much praise towards one child getting many achievements would make the other children feel inadequate in comparison. The opposite situation could happen as well where a parent favors one child over the others. Some parents are so confident in their children's achievements expecting them to always perform to the best of their abilities or better so they do not acknowledge the achievements being made and take their child's successes for granted. This is not always intentional. Many parents and role models

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<sup>40</sup> Covered in detail within the "Stress Management" section of this document.

<sup>41</sup> Clance, 33.

<sup>42</sup> Hibberd, 64.

<sup>43</sup> Ibid.

<sup>44</sup> Clance, 34.

do not realize the effect a lack of acknowledgement has on the psych. “Some parents may brag to friends and relatives about what their offspring have done, but they rarely let these children know how proud they are of their achievements.”<sup>45</sup> Children are naturally looking for the approval of their parents and when they do not receive that it can lead to feelings of shame, humility, and typically imposter feelings.<sup>46</sup>

### **The Clance Scale**

Table 1 shows a series of questions are a test created by Dr. Pauline Rose Clance,<sup>47</sup> founder of the term imposter phenomenon. These questions were created to assist people in determining whether they are being impacted by the imposter phenomenon or not, and to what extent if it is occurring.<sup>48</sup> This test is commonly referred to as the Clance Scale.

It is important to answer each question truthfully, as providing inaccurate responses may impact the results. This scale employs a numerical rating system ranging from one to five. Choosing number one means the stated question is *not true at all*. Choosing number five means the stated question is *very true*. Clance uses the terms *rarely*, *sometimes*, or *often* to describe the intermediate values two, three, and four.

Clance recommends giving your first response as soon as it comes to mind rather than dwelling on the topic for a long period of time.

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<sup>45</sup> Ibid.

<sup>46</sup> Hibberd, 63.

<sup>47</sup> Pauline Rose Clance, Ph.D. *The Impostor Phenomenon: Overcoming the Fear That Haunts Your Success*, 1985: 20.

<sup>48</sup> Clance, 19.



Table 1: The Clance Scale Quiz

#	Question	Scale (1-5)
1.	"I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task."	
2.	"I can give the impression that I'm more competent than I really am."	
4.	"I avoid evaluations if possible and have a dread of others evaluating me."	
5.	"When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future."	
6.	"I'm afraid people important to me may find out that I'm not as capable as they think I am."	
7.	"I tend to remember the incidents in which I have not done my best more than those times I have done my best."	
8.	"I rarely do a project or task as well as I'd like to do it."	
9.	"Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error."	
10.	"It's hard for me to accept compliments or praise about my intelligence or accomplishments."	
11.	"At times, I feel my success has been due to some kind of luck."	
12.	"I'm disappointed at times in my present accomplishments and think I should have accomplished much more."	
13.	"Sometimes I'm afraid others will discover how much knowledge or ability I really lack."	
14.	"I'm often afraid that I may fail at my new assignment or undertaking even though I generally do well at what I attempt."	
15.	"When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success."	
16.	"If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I have done."	
17.	"I often compare my ability to those around me and think they may be more intelligent than I am."	
18.	"I often worry about not succeeding with a project or on an examination, even though others around me have considerable confidence that I will do well."	

19.	"If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact."	
20.	"I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement."	

Once you have finished answering these questions and rating them one through five, find the sum of every question combined. A score of 40 or less shows imposter phenomenon is most likely not affecting you. A score between 41 and 60 shows a potential moderate affliction of imposter syndrome. Having a score of 61 and higher shows that imposter feelings are likely present frequently. "The higher the score, the more frequently and seriously the imposter phenomenon interferes in a person's life."<sup>49</sup>

### **Types of Imposter Syndrome**

It is essential to recognize the various categories of Imposter Syndrome to devise effective ways for tackling each specific difficulty.<sup>50</sup> People typically experience multiple developments of Imposter Syndrome. It manifests itself when we begin to question our abilities and capabilities. The recognition of these feelings as they arise can help to alleviate stress and provide insight into the factors that are contributing to them.<sup>51</sup> It is not necessarily the case that you are having imposter feelings if you discover that you are experiencing one or two of the items that fall under each category. It is not always the case that impostor syndrome is present in those who have a tendency toward perfectionistic impulses.

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<sup>49</sup> Ibid., 23.

<sup>50</sup> Clance, 86.

<sup>51</sup> Hibberd, 40.

This section will discuss five of the most common aspects of imposter syndrome experienced in successful people and will include a small descriptor on cultural imposter syndrome and how women are affected by imposter feelings differently than men due to their relevance to the percussion field.

The “perfectionist” kind of Imposter Syndrome is the most common type associated with the condition.<sup>52</sup> People that fall under this category experience emotions of inadequacy whenever they are unable to regularly complete tasks at their full potential.<sup>53</sup> Those who strive for perfection are rarely content with their achievements because they have the belief that they could have performed even better. When it comes to achieving perfection, the “perfectionist's” primary interest is the method or quality of how something is brought about.<sup>54</sup> They tend to set expectations for themselves that are impossible to achieve, which often leads to failure. One way in which students could exhibit this behavior is by avoiding presenting their assignments out of fear of receiving unacceptable grades. It is possible for professionals to stay away from releasing their work out of fear of receiving public criticism from those who will inevitably disagree with them.

“Perfectionists” are frequently referred to as "control freaks" because they prefer to manage difficult situations on their own since they believe that others would not be able to do it perfectly.<sup>55</sup> Even though they have the appropriate staff, they have difficulty properly assigning tasks. When they are unable to accomplish their excessively lofty objectives, “perfectionists” experience an overwhelming amount of stress and self-doubt.<sup>56</sup>

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<sup>52</sup> Ibid.

<sup>53</sup> Young, 106.

<sup>54</sup> Clance, 85.

<sup>55</sup> Ibid.

<sup>56</sup> Hibberd, 41.

In a setting where a “perfectionist” must rely on others to get tasks done, such as a project manager, they tend to identify with the motto “if you want something done right, you’ve got to do it yourself.”<sup>57</sup> They do not trust the work being produced because their standards are set so unreasonably high, so they feel the only way the work can be done appropriately is if they do it all themselves. This is quite damaging to the psyche of both the “perfectionist” and the rest of the team who are struggling to keep up with the impossible expectations. The “perfectionist” runs the risk of losing trust in those around them, leading them to overwork themselves to the point of mental and physical burnout.<sup>58</sup> The stress management section of this document discusses the damaging effects of burnout and how it can affect many aspects of our health all the way up to the way we behave and react to events around us.<sup>59</sup>

Another kind of imposter syndrome is referred to as the “expert.” It is common practice for members of this group to evaluate their degree of expertise based on the quality and quantity of the projects they have completed.<sup>60</sup> This impostor has a persistent need to improve their skills and is under the impression they do not have sufficient expertise, regardless of the amount of time they have spent working in their field.<sup>61</sup> When people in this category are referred to as experts in a certain field, they experience a sense of unease.

When an “expert” impostor in a professional context learns new information from a coworker, they fear that they will be exposed as inexperienced or unknowledgeable, regardless of how long they have been working in the field.<sup>62</sup> Likewise, even if a person does not meet all

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<sup>57</sup> Young, 106.

<sup>58</sup> Ibid.

<sup>59</sup> See the “Stress Management” section of this document under “burnout,” to read about the damaging effects of burnout.

<sup>60</sup> Hibberd, 43.

<sup>61</sup> Clance, 10.

<sup>62</sup> Hibberd, 44.

the standards outlined in a job description, they could decide not to apply for the position because they are under the impression that they will not be chosen over other people who may be more qualified.<sup>63</sup>

Men do not get as impacted by the effects of Imposter Syndrome; men typically grow up with the pressure of people assuming they know what they are doing.<sup>64</sup>

“All that time having to act confident while peering clueless under the car hood or at a frozen computer screen forced males to become comfortable with diving in despite a lack of knowledge. As a result, when a man takes on a new job or project, he’s more likely to be okay having only basic (or no) understanding because he’s comfortable figuring things out as he goes.”<sup>65</sup>

A different message was set for the women growing up, this was a message that assumed lack of knowledge or ability.<sup>66</sup> There are great deal of documentation on the mistreatment and unfair views of women in the work-force leading to a reasonable explanation of why women feel they need to know every bit of information there is to know before they feel they can be up for certain tasks.<sup>67</sup> This inequality leads to the “expert” imposter feelings.

As life progresses, it is not possible to acquire complete mastery of all knowledge on every subject as far as we know, and continuous learning is an unavoidable consequence. People who are constantly looking for new information to improve their skill set are falling into the trap of believing that they will never feel fulfilled in their lives.<sup>68</sup>

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<sup>63</sup> Ibid.

<sup>64</sup> Young, 116.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid.

<sup>68</sup> Clance, 88.

The third subtype of imposters is known as the “natural genius.” People of this kind think they should possess an innate ability that allows them to achieve things with little effort.<sup>69</sup> Thus, people evaluate their skills by the swiftness and efficiency with which they do tasks. Prolonged acquisition of a skill or retention of certain information might trigger feelings of shame. This impostor type resembles a “perfectionist” as they establish unattainably high standards for themselves, “natural geniuses” not only evaluate themselves against unrealistic standards but also assess themselves based on achieving perfection on the initial attempt.<sup>70</sup>

“Natural geniuses” may feel inadequate when faced with a challenging task, especially if they have previously succeeded effortlessly. They typically shy away from challenging tasks due to discomfort in attempting something they are not proficient at.<sup>71</sup> Mentioning having a mentor makes them uneasy as they believe they are capable of handling tasks independently. They constantly acquire knowledge to avoid being placed in highly challenging situations.<sup>72</sup>

The fourth of the five subtypes of imposter syndrome is known as the “soloist.” People who identify as “soloists” have a natural inclination to handle tasks on their own. Feelings of embarrassment are triggered whenever there is even the slightest propensity to accept aid or to seek for assistance.<sup>73</sup> Most of the time, they choose to decline assistance to establish their worth rather than assigning responsibilities to boost their mental well. They have the misconception that if they ask for help from other people, it will reveal their deception. In most cases, “soloists”

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<sup>69</sup> Hibberd, 42.

<sup>70</sup> Young, 111.

<sup>71</sup> Hibberd, 42.

<sup>72</sup> Clance, 8

<sup>73</sup> Young, 122.

put their purpose ahead of their own personal requirements, and they frequently are willing to sacrifice their health to achieve their goals.<sup>74</sup>

The final common subtype of imposter syndrome is the “superhuman.” This type is quite common among academia, students have the option to add or take away from their work-load not limited to extracurricular activities such as clubs.<sup>75</sup> Academic percussionists, particularly in larger schools, have an extensive work-load and are required to be involved in multiple ensembles along with their academics.<sup>76</sup> The “superhumans” are people who have convinced themselves they are imposters among experienced and qualified colleagues and as a result extensively push themselves to work much harder and accept more tasks to feel they are doing enough.<sup>77</sup>

“Superhumans” are often associated with the phrase “workaholics,” and are addicted to the validation that comes from other sources rather than from themselves.<sup>78</sup> They come in early and stay late to complete work occasionally to the point of completing future tasks. They also sacrifice their hobbies and extra passions for their work or careers. “Superhumans” tend to believe they must work harder because they are either the least qualified or have not truly earned their title.<sup>79</sup>

Cultural imposter syndrome is the sensation of inadequacy in participating in activities of different cultures due to a perceived lack of relevant experiences or emotions.<sup>80</sup> In music, this

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<sup>74</sup> Hibberd, 43.

<sup>75</sup> Clance, 77.

<sup>76</sup> Christian H. Bernhard. *Managing Stress in Music Education: Routes to Wellness and Vitality*.

<sup>77</sup> Young, 127.

<sup>78</sup> Ibid., 128.

<sup>79</sup> Clance, 81.

<sup>80</sup> Bonnie C. Wade. *Thinking Musically: Experiencing Music, Expressing Culture*. Oxford University Press, USA, 2009.

term can denote the act of examining music from different cultures and feeling that it may not be suitable for one to learn that music due to a lack of prior connection with the culture.<sup>81</sup> Many people are quite welcoming and receptive to outsiders who wish to learn about their culture. The risk is in appropriating culture without giving acknowledgment to their origins.<sup>82</sup> Show respect and give credit the source if you are sharing or profiting from using the techniques or practices of a culture that is not your own and give back to that culture however you can show appreciation.

It is possible for women to have imposter syndrome when they are exposed to certain environments. They are quickly sidelined when male coworkers dismiss their involvement in particular project activities because to a lack of experience in those tasks.<sup>83</sup> Talisa Lavarry, a novelist, was swiftly removed from her position as the supervisor of a corporate event by her employer due to her lack of expertise with office politics, as stated in a tale that was published in the Harvard Business Review.<sup>84</sup> There is a dichotomy created due to the social expectations of women, they are lined up to fail no matter what. They either “succeed at the role society has given them and fail to succeed at the career they desire to work in; or succeed at their career and fail at the role society has given them.”<sup>85</sup> Since social expectations are put on different genders have taught women from a young age that their successes will not come from intellect.<sup>86</sup> This means that “women tend to attribute their successes to temporary causes, such as luck or effort,

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<sup>81</sup> Ibid.

<sup>82</sup> Ibid.

<sup>83</sup> Young, 175.

<sup>84</sup> Tulshyan, Ruchika. “Stop Telling Women They Have Imposter Syndrome.” *Harvard Business Review*. Last modified August 4, 2022. <https://hbr.org/2021/02/stop-telling-women-they-have-imposter-syndrome>.

<sup>85</sup> Austin Mardon and Reinette Schabert. *Mental Health in the Music Industry*, Golden Meteorite Press, 2021: 33.

<sup>86</sup> Ibid., 33.



in contrast to men who are much more likely to attribute their successes to the internal, stable factor of ability.”<sup>87</sup>

### **Imposter Cycle**

It is important to recognize imposter syndrome. However, it is not an affliction relating to any person who fails at every task they attempt because they fall short or give minimal effort. People who pretend that they have consistently received good praise, give fraudulent performances, or are very aware of their accomplishments yet only shrug off compliments in a sense of false modesty are true imposters and do not relate to the imposter syndrome term. For imposter victims, it can be quite difficult to receive compliments. Being considered an expert based on over 15 years of education and experiences yet still feeling as though the title is undeserved is a very strong case of Imposter Syndrome. Imposter victims commonly get tied up within their own thoughts constantly worrying about all the mistakes they have made along the way rather than the many tasks that had been previously completed with ease. They worry that they may not be able to live up to the expectations they believe others have of them based on their past accomplishments. When percussionists need to perform, they are struck with doubt, worry, anxiety, and fear. “They’re so afraid they won’t be able to do well that they procrastinate and sometimes feel they’re unable to move at all toward completing the task.”<sup>88</sup> After one procrastinates and the time comes to begin the work, they must frantically complete tasks with a

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<sup>87</sup> Pauline Clance, PhD, and Suzanne Imes, PhD. “The Imposter Phenomenon Among High Achieving Women: Dynamics and Therapeutic Intervention.” *Psychotherapy Theory, Research and Practice*, vol. 15, no. 3 (1978): 241-247.

<sup>88</sup> Clance, 25.

strong sense of panic to be completed on time. Once the task is completed and they receive acknowledgement about its success they may feel a short-lived sense of relief.

Those suffering with imposter syndrome may have an opposite extreme of experiences. Rather than procrastinating, they overwork themselves or over prepare, starting far earlier than needed robbing themselves of time that could be better spent elsewhere. For percussionists, this may take form by beginning music for a performance too soon. A percussionist may begin to work on music a year or two in advance of a performance, for simpler pieces this can quickly lean to burnout and then performer might quickly grow tired and lose the motivation that led them to that piece in the first place.

Once the time comes for these procrastinators or over workers to do the same task again, these feelings reset and it starts over again, thus the imposter cycle has begun. When imposter victims go through these feelings each time they complete daunting tasks, they then feel that the only way for them to get through the task is through the same strenuous efforts as before. It is a superstitious belief but contributes strongly to why the imposter cycle is so difficult to break.<sup>89</sup>

Imposters are quite good at achieving the goals they set their minds to and they typically succeed when they work toward their goals. It is true that overworking does make one better at their job; there much more learning done which leads to successful outcomes, often to promotions. Then, when a person finally achieves a goal, they move their standards higher and even further out of reach. Since imposters are unsure of the success they are producing, feedback from others weighs more heavily. As performers gain more recognition, they become subject to a

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<sup>89</sup> Ibid., 26.

wider range of criticism and negative judgement. Increased visibility attracts more attention, which can be intimidating for someone who feels like an imposter.<sup>90</sup>

Insecurities that imposter sufferers face make them more conscientious which helps on the way toward success and that gain makes the insecurities difficult to let go of.<sup>91</sup> The danger of allowing the insecurities to push one forward is not only the impact it has on the psyche and the way an person may think about themselves, but it also downplays the accomplishments since the standards get raised with each success.<sup>92</sup> The cost of mental health is greatly affected, the amount of work the imposter feels they need to do outweighs personal health, relationships, and happiness as they struggle to keep up with everything.

“I know this is hard to believe when you’re the sort of person who feels they could always do more, but at the moment the premium is too high – it’s like overpaying your insurance – and means you never give yourself the chance to see how well you are doing. The cycle needs to change.”<sup>93</sup>

### **Relation to Percussionists**

Imposter syndrome is commonly felt by percussionists who have previously achieved professional or academic success.<sup>94</sup> Those with a bachelor’s degree in percussion have the expertise to communicate their personal experiences in the music, or academic realms, but may not feel they compare to colleagues with master’s and doctoral degrees. Professionals in the field may not face the same pressure as those within the education system, but many accomplished

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<sup>90</sup> Hibberd, 97.

<sup>91</sup> Ibid., 98.

<sup>92</sup> Ibid., 98.

<sup>93</sup> Ibid., 99.

<sup>94</sup> Clance, 1985.

percussionists find it challenging to be compared to well-known figures in their field. In the British TV series "The Beatles Anthology," an interview with Ringo discusses how he briefly quit because he felt he was not performing up to his standards. Famous musician Lewis Capaldi, known for songs like "Before You Go" and "Someone You Loved," has openly discussed experiencing imposter syndrome in several interviews as he was a rising artist.<sup>95</sup>

Percussionists with perfectionistic tendencies may experience a significant dread of criticism. Interpreting feedback about mistakes as a sign of failure rather than an opportunity for improvement might hinder progress. Young percussionists often receive criticism for playing with tension, which can negatively impact the sound of the instrument. "Perfectionists" may find that their focus on the improper aspects of practice has hindered their improvement leading to insecurities about practice. "Perfectionists" may delay performances even after extensive preparation, or when presented with the chance to perform in front of peers, they may either shun it altogether or wait until the final second.

"Expert" imposter percussionists are those who are hesitant to practice in front of others. An "expert" who does not perceive themselves as superior to the performers they are comparing themselves to is considered an imposter. In an academic context, this situation would manifest as pupils who feel uneasy about being the one person in the room who lacks the solution. This creates feelings of inferiority and leads people to believe they are the least intelligent one present, despite this not being true. Intelligence is not defined by a lack of understanding of specific concepts, but rather by one's existing knowledge.

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<sup>95</sup> Luke Chamberlain. "Lewis Capaldi Explains How Success and 'Imposter Syndrome' Have Affected His Mental Health." *Men's Health* April 2023. Accessed: March 10, 2024. <https://www.menshealth.com/uk/mental-strength/a43493642/lewis-capaldi-imposter-syndrome-mental-health/>

The “natural genius” percussionist believes that if they cannot immediately perform or comprehend a topic, they are failing and lagging. Everyone has a unique learning style, and certain concepts may be more easily retained by certain people than others. When a percussionist is learning a piece, they can discover that they are taking longer than their peers to master the music, resulting in having to dedicate a substantial amount of time to a piece they struggle with. Students studying music theory encounter numerous intricate issues that necessitate time and practice to fully grasp. The “natural genius” percussionist believes they must grasp topics immediately to be suitable for their career which is not necessarily accurate.

A “soloist” imposter percussionist has a reluctance to seek assistance when encountering challenging topics. Some percussionists may encounter intricate rhythms that they have not encountered before but refrain from asking about them due to the belief that they should already be familiar with the rhythms. When seeking assistance, percussionists may have feelings of impostor syndrome due to their lack of prior knowledge of the solution. Receiving assistance to obtain the answer does not provide the same level of satisfaction as discovering it independently. Academic percussionists, such as professors, may lack the necessary skills to manage the logistics of an event if they require assistance with its organization. Consequently, they might undertake all tasks to ensure they receive recognition.

When a percussionist is a “superhuman” impostor, they believe they should accept every chance that comes their way. Rejecting possibilities might evoke feelings of humiliation and the perception of being judged unfavorably. This can be shown in the tendency to undertake numerous tasks. This could be for future ensemble performances, or solo recital appearances. They can discover that they lack the time to maintain the necessary practice schedule for mastering the extensive repertoire of music. It is common for percussionists to be in high

demand in music schools due to the constant need for their skills. Students and professionals may easily overload themselves, leading to failure and a decrease in their outcome quality.

Percussionists are surrounded by instruments and rhythms of other cultures as they advance through their careers. Particularly in most academic percussion studies, well-rounded percussion programs do their best to incorporate world music into the curriculum. This is commonly done through steel drum bands, African percussion ensembles, and Brazilian samba, and a great deal more. Programs will bring in multiple guests that can teach authentic percussion styles of their cultures. Some percussionists do not feel comfortable playing music of cultures that are not their own and when they become successful playing that music, they feel as though they are an imposter playing another culture's music. Cultural appropriation is a real issue and percussionists must make every effort give credit to the appropriate sources.

In his work titled *The Percussionist's Art*, Steve Schick examines his own personal experience with the cultural imposter syndrome. He describes his performance of the composition "North Star Boogaloo" by George Lewis, which was composed for multiple percussion. Hip-hop rhythms are included into this piece, which also tells the story of African history. He states:

"I had a sudden flash of the image I was presenting: a white middle-aged, classically trained percussionist intently focused on accurately rendering hip-hop rhythms to a mostly white, mostly middle-aged audience... That sudden feeling of not belonging, of never being able to belong, made me feel momentarily ridiculous..."<sup>96</sup>

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<sup>96</sup> Steven Schick. *The Percussionist's Art: Same, Bed Different Dreams*. Boydell & Brewer, 2006.

The percussion field is widely recognized as being predominantly male-dominated. Women frequently experience impostor syndrome when they are outnumbered by males, especially in environments when there are just one or two females in a large studio. Men may experience a similar sentiment when they choose to pursue a career in nursing. In situations where females are disregarded, this may create feelings of imposter syndrome. However, it is important to mention the distinction between having imposter syndrome and psychological manipulation.<sup>97</sup> Psychological manipulation refers to a person who is being convinced they are imposters unwillingly or unjustifiably on purpose by those around them for the reason of getting certain desired outcomes. It is meant to change the person's perception through deceptive or abusive tactics to change the behavior or perception of others.<sup>98</sup>

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<sup>97</sup> Ruchika, 2022.

<sup>98</sup> Shelley R. Hart. "The Mask of Manipulation," *National Center for School Mental Health*. Accessed: April 13, 2024.  
[https://www.schoolmentalhealth.org/media/som/microsites/ncsmh/documents/archives/CS-1.12\\_The-Masks-of-Manipulation.pdf](https://www.schoolmentalhealth.org/media/som/microsites/ncsmh/documents/archives/CS-1.12_The-Masks-of-Manipulation.pdf).

### CHAPTER THREE: SLEEP DEPRIVATION

Keeping our mind and body functioning properly is not possible without proper sleep. Sleep plays an important role in the functionality of our bodies. As we sleep, our minds can recover from the stressful day and hormones released from the body are then able to return to normal healthy levels. Sleep closely relates to stress, and lacking in quality sleep can create short term issues, such as increased sympathetic nervous system arousal, which then releases cortisol, the stress hormone.<sup>99</sup> Discussed in the “stress management” section of this document is how stress directly effects sleep and how high levels of cortisol keeps the amygdala active, when our stress response is constantly running at high levels we are unable to get proper sleep.<sup>100</sup> This then leads to more stress due to lack of sleep, therefore a vicious cycle of stress and sleep deprivation is created. It is important to understand the levels of sleep our bodies go through during the sleep cycle and what these stages do for our health.

“Although there are around 90 distinct sleep disorders, according to the International Classification of Sleep Disorders,<sup>101</sup> most are marked by one of these symptoms: excessive daytime sleepiness, difficulty initiating or maintaining sleep, or abnormal movements, behaviors, and sensations occurring during sleep. The cumulative effects of sleep loss and sleep disorders have been associated with a wide range of deleterious health consequences including an increased risk of hypertension, diabetes, obesity, depression, heart attack, and stroke.”<sup>102</sup>

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<sup>99</sup> Medic, G. Medic, Wille, M. and Hemels, M. E. H. “Short-and long-term health consequences of sleep disruption.” *Nature and Science of Sleep*, no. 9, (2017); 151-161.

<sup>100</sup> Ibid.

<sup>101</sup> AASM (American Academy of Sleep Medicine). *The International Classification of Sleep Disorders*. American Academy of Sleep Medicine, Westchester, IL, (2005).

<sup>102</sup> Institute Of Medicine, Board on Health Sciences Policy, and Committee on Sleep Medicine and Research. *Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem*. National Academies Press, 2006.



Modern society tells us that the priority for adults is to work, produce goods, provide service, or just generally get things done.<sup>103</sup> This leads many to believe they have to choose between various aspects of their mental health, but the constant is in neglecting other aspects of our health, including sleep, for the progression of ourselves,<sup>104</sup> Studies on employees who choose work over sleep does in fact show that these employees are viewed as more dedicated to their job, however, these same studies tell us these are also the most exhausted, stressed, and prone to behavioral issues.<sup>105</sup>

Anyone could do their own test to see how lack of sleep affects the body and most of us have experienced it through the natural process of life. People who have stayed up all night to spend time with colleagues, to practice, or to play video games, referred to by many as an “all-nighter,” experience the effects that one night of losing sleep does to our functionality and cognition. It is important to understand what happens during sleep so that we can know why we need to include sleep as major aspect of our lives. To do this, we will discuss the stages within sleep, what each stage does to benefit us, and why we should try to reach all stages while we are sleeping.

### **Why We Need Sleep and Effects of Deprivation**

There are four stages of sleep, the deepest stage is called Rapid Eye Movement (REM) sleep. The three stages that are not Rapid Eye Movement sleep (REM) are simply referred to as

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<sup>103</sup> Casey, Kristen. *Insomnia Doc's Guide to Restful Sleep: Remedies for Insomnia and Tips for Good Sleep Health*. Mango Media Inc., (2023); 35.

<sup>104</sup> Ibid., 35.

<sup>105</sup> Ibid.

non-REM sleep, or N1, N2, and N3.<sup>106</sup> When our bodies are preparing for sleep, our sympathetic nervous system winds down and becomes significantly less active since we are our bodies are preparing for unconsciousness.<sup>107</sup> The parasympathetic nervous system signals become louder as we relax and move into our sleep state, this system is active throughout sleep.<sup>108</sup> During REM, the parasympathetic nervous system is most active, slowing the body's breathing and we begin mentally and physically recovering.<sup>109</sup> "This helps us engage in those restorative activities, such as repairing muscles and tissue, mental reorganization, maintaining body temperature, or restoring our bodies' energy reserve." <sup>110</sup>

It is essential for our mental and physical well-being to get enough rest to refresh and get ready for the next day. When it comes to the importance of sleep, there are numerous hypotheses. The effects of sleep deprivation on the body and mind, as well as the implications of sleep deprivation for percussionists, both students and professionals, will be discussed in this section. Depriving oneself of sleep can lead to a variety of short-term and long-term difficulties, as sleep is an essential component in the functioning of both the mind and the body. Being deprived of sleep for an extended period can lead the body to shut down, and in extreme cases, it can even result in death.<sup>111</sup>

Our bodies are better able to avoid becoming overwhelmed with information when we get enough sleep. When our bodies are in a condition of homeostasis, we can function at our

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<sup>106</sup> Dr. Casey, 72.

<sup>107</sup> G. Zoccoli, and Amici, R. "Sleep and the automatic nervous system." *Current Opinion in Physiology*, vol. 15, (2020).

<sup>108</sup> J. A. Waxenbaum, Reddy, V., and Varacallo, M. "Anatomy, autonomic nervous system." *StatPearls Publishing*. (2021).

<sup>109</sup> M. B. Miglis. "Sleep and the autonomic nervous system." *Sleep and neurologic disease*, Academic Press, (2017); 227-244.

<sup>110</sup> Dr. Kristin Casey, 59.

<sup>111</sup> Ibid.

highest level of efficiency.<sup>112</sup> When our bodies are in this stage, they are at their most stable and in a condition of equilibrium. Our bodies go through a natural process known as allostasis, which reacts to stimuli in our mind and body in a variety of different ways according to the circumstances. An insufficient amount of sleep can result in allostatic overload, which is a condition that is characterized by excessive levels of stress and poor control of the system.<sup>113</sup> Percussionists may deprive themselves of sleep as more stresses occur, when a percussionist becomes overwhelmed, this can often manifest as a lack of motivation toward the instrument they were once passionate about. Lack of sleep would cause a percussionist to quickly become burnt out with the demand required of them.

Rest is essential for our thoughts to recuperate and replenish the energy that they have expended while we are awake. During wakefulness, our minds continue to be active, even when we have the impression that we are not doing anything. During sleep, our brains continue to be active; however, the regions that are involved shift, with certain regions displaying lower activity.<sup>114</sup> Regular sleep habits have the potential to instill rhythms in the body, which may lead to the people being able to wake up without the need for an alarm. When we alter our sleep cycle for any reason, it has a major impact on the performance we exhibit throughout the day. One of the most common terms used to describe our experience of time is the "circadian rhythm."<sup>115</sup>

The circadian rhythm is the inherent sense of time that can be found in our bodies. Travel is an excellent example, because we are experiencing a change in time that is considerably different from where we live, many people feel what is known as "jet lag" when they travel

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<sup>112</sup> Bruce S McEwen and Ilia N Karatsoreos. "Sleep Deprivation and Circadian Disruption: Stress, Allostasis, and Allostatic Load." *Sleep Medicine Clinics* 10, no. 1 (2015): 1-10.

<sup>113</sup> Ibid.

<sup>114</sup> Ibid.

<sup>115</sup> Ibid.

between different time zones due to a disruption in their circadian rhythm. The circadian rhythm has a direct influence on aspects of our bodily and mental state, such as our level of alertness and our readiness to sleep.<sup>116</sup> When we don't get enough sleep, our minds and, consequently, our reflexes slow down, our awareness drops significantly, and we get tired. Allostatic overload has caused the body to fully shut down because of excessive sleep deprivation over an extended period.<sup>117</sup>

The circadian rhythm plays a crucial role in regulating hunger, digestion, and food processing. Studies have demonstrated that a short duration of sleep deprivation in young, healthy people can cause an elevation in appetite, therefore leading to an increase in calorie intake.<sup>118</sup> The rise in food consumption directly leads to elevated blood pressure, insulin, and blood glucose levels. Glucose and insulin are necessary for the proper functioning of the hippocampus, the part of our brain which stores memory and reacts to stress.<sup>119</sup> Research has shown the importance of insulin and glucose management in Type I and Type II diabetes, which are significant factors in the development of dementia.<sup>120</sup> Insufficient sleep is being investigated as a potential role in the onset of dementia.

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<sup>116</sup> Ibid.

<sup>117</sup> Ibid.

<sup>118</sup> Ibid.

<sup>119</sup> Birthe K. Flo, Anna Maria Matziorinis, Stavros Skouras, Tobba Therkildsen Sudmann, Christian Gold, and Stefan Koelsch. "Study Protocol for the Alzheimer and Music Therapy Study: An RCT to Compare the Efficacy of Music Therapy and Physical Activity on Brain Plasticity, Depressive Symptoms, and Cognitive Decline, in a Population with and at Risk for Alzheimer's Disease." *PloS One* 17, no. 6 (2022).

<sup>120</sup> Ibid.

“Allostatic mediators work as a nonlinear, sometimes reciprocating, network, meaning that too much or too little of each mediator can perturb the entire network, leading to harmful consequences.”<sup>121</sup>

Considering our physical well-being is crucial since it can directly influence our mental health. Sleep deprivation has a significant impact on the health of the cardiovascular system. Our patterns of sleep are greatly influenced by both our glucose levels and our blood pressure. Both blood pressure and glucose metabolism are critical aspects that must be maintained to keep the heart healthy.<sup>122</sup> Heart rate and blood pressure are intimately related to one another. Getting insufficient amounts of sleep can result in a rise in blood pressure, which can then lead to changes in the rate at which the heart beats. Resting allows the body to restore the energy that it has consumed throughout the day, which is necessary for the heart to beat. If we do not get enough sleep, we deprive our hearts of the vital energy that they require to perform their functions properly. The inability to get enough sleep limits the amount of energy that is available for body functions, which include all activities that require energy.

As with sleep deprivation, oversleeping can have the same or comparable effects in terms of lowering levels of vigilance in both the body and the mind. The amounts of serotonin in our bodies are also tied to it. Grogginess, backaches, and headaches are all symptoms that can be brought on by fluctuations in these levels.<sup>123</sup> Oversleeping has been linked to several negative health outcomes, including diabetes, cardiovascular disease, and cognitive decline as people get

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<sup>121</sup> Bruce, 2015.

<sup>122</sup> Janet M Mullington, Monika Haack, Maria Toth, Jorge M Serrador, and Hans K Meier-Ewert. "Cardiovascular, Inflammatory, and Metabolic Consequences of Sleep Deprivation." *Progress in Cardiovascular Diseases* 51, no. 4 (2009): 294-302.

<sup>123</sup> Aashmita Nayar. "What Happens When I Oversleep?" *Men's Health (Indian Ed.)*, 2010, Men's Health (Indian Ed.), 2010.

older.<sup>124</sup> Additionally, it has been discovered that oversleeping exacerbates depression in both younger and older populations. Even though many people experience depression at some point in their lives, many cases of depression are not treated, even though depression is a prominent mental disorder that is frequently identified.<sup>125</sup>

Unhealthy activities are frequently the root cause of sleep deprivation. Playing video games late at night before attending a class early in the morning, hanging out with friends until the wee hours of the morning, which leads to insufficient sleep before having to get up again, or balancing multiple jobs that prevent one from getting enough rest are all examples of behaviors that can be considered disruptive. To establish a sense of equilibrium in one's life, it is possible to make changes to these behaviors, which are self-generated and can be altered either quickly or gradually. Techniques that are proven to be useful in reducing sleep issues will be discussed in the final section and the appendices of this document.

### **How Sleep Impacts Memory**

Memory is significantly impacted by the amount of time spent sleeping. Finding it difficult to concentrate on new information could be a consequence of not getting enough sleep. It should come as no surprise that a lack of sleep makes it more difficult to successfully recall material when one is attending school or otherwise gaining new information. By allowing our systems to rest and rejuvenate, we give our hippocampus the opportunity to refill its energy, which enables it to acquire, store, and process information more efficiently. According to

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<sup>124</sup> Helle Nystrup Lund, Niels Hannibal, Jan Mainz, Raymond MacDonald, and Inge Nygaard Pedersen. "Music, Sleep, and Depression: An Interview Study." *Psychology of Music* 50, no. 3 (2022): 830-848.

<sup>125</sup> Nayar, 2010.

research, not getting enough sleep has a negative influence on the ability to remember new information and to remember previously learned information.<sup>126</sup>

During sleep, the stages that our minds process and store memory the most happens within the low wave state, which are stages two and three, and REM sleep. There is a myriad of memory types and having enough sleep is essential for gaining and storing new information.<sup>127</sup> Studies have shown newly created memories store during sleep rather than when we are awake.<sup>128</sup> This means we process information while we are awake and as we sleep, we store the information as a new memory.

There are four categories of memory: sensory, working, short-term, and long-term memory.<sup>129</sup> There are countless theories surrounding this topic, however these types of memory are what make the most sense in the scope of a percussionist's career. A memory happens when we experience something within our environment, our minds may manipulate the information to make it understandable based on our knowledge and experiences, then we store it within our short-term memory. Then as we sleep, this information is stored during low wave sleep and REM becoming long-term memories.<sup>130</sup>

Sensory memories are incredibly brief, they happen for a short amount of time, and it is automatically stored within our short-term, then during sleep, our long-term memory storage.<sup>131</sup>

When we are reminded of a certain sense or sound, we may not remember first-hand, however,

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<sup>126</sup> Chloe R. Newbury, Rebecca Crowley, Kathleen Rastle, and Jakke Tamminen. "Sleep Deprivation and Memory: Meta-analytic Reviews of Studies on Sleep Deprivation before and after Learning." *Psychological Bulletin* 147, no. 11 (2021): 1215-1240.

<sup>127</sup> S. Diekelmann, and Born, J. "The Memory Function of Sleep." *Nature Reviews Neuroscience*, vol 11. no 2, (2010); 144-126.

<sup>128</sup> Ibid.

<sup>129</sup> Dr. Casey, 61.

<sup>130</sup> Ibid.

<sup>131</sup> Ibid.

when we are reminded of that memory with the smell or sound rather than a mention of them, our bodies then recognize the sense.<sup>132</sup> Some people may encounter familiar senses reminding them of the past, yet are unable to pinpoint what it is or where they remember experiencing it. It is also quite important in the sense of remembering senses that may harm us, if we get a familiar scent that reminds the body and brain of some sort of danger or discomfort in the past, our bodies can have an automatic response to these senses.<sup>133</sup>

Working memory and short-term memory go hand in hand. Short-term has to do with how long we can hold or recall information upon just receiving it, typically for about thirty seconds.<sup>134</sup> After that point it gets lost and is not stored to memory. For example, when we try to remember a phone number given to us, we must write it down, if not the information gets lost unless the person is constantly reminding themselves of the memory until it is then stored in long-term.<sup>135</sup> Working memory works alongside short-term memory and is our ability to manipulate information so we can wire them into our memories.<sup>136</sup> This incredibly helpful for problem solving and critical thinking.

Long-term memory is perhaps the most important because so much of our reactions and behaviors stem from what is stored within our conscious and subconscious long-term memories. Conscious, or explicit, memories are memories we can typically actively recall, and unconscious,

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<sup>132</sup> Ibid., 62.

<sup>133</sup> Conrad, 350.

<sup>134</sup> J. Jonides, Lewis, R. L., Nee, D. E., Lustig, C. A., Berman, M. B., and Moor, K. S. "The mind and brain of short-term memory. *Annual Review of Psychology*. Vol 59, (2008); 193-224.

<sup>135</sup> Dr. Casey, 63.

<sup>136</sup> Nairne, J. S., & Neath, I. "Sensory and working memory, In A. F. Healy, R. W. Proctor, and I. B. Weiner (Eds.). *Handbook of Psychology; Experimental Psychology*, John Wiley & Sons, Inc., (2013); 419-445.



or explicit, memories relate to how we behave and react to any event.<sup>137</sup> Much of what we refer to as “muscle memory,” is stored as implicit memory. For example, when a percussionist can learn a complex multi-percussion piece, they must first learn how to move around the instruments, after a while of playing the same movements, this gets stored as implicit memory, and we do not have to think about the task as it is being completed. When we walk, we are actively balancing ourselves at every moment, however, within our implicit memory, we know how to balance, and we no longer must think about the action. Explicit memories deal with memories we are aware of, such as facts about certain composers for a recital.

This information gives great insight into why sleep deprivation negatively effects the mind. Sleep is related to the hippocampus because this is where our memory information gets stored, it is crucial for the memory storage process during low wave and REM sleep for us to be able keep information within the brain.<sup>138</sup> Giving the time and attention to be able to reach these stages of sleep are paramount in keeping mental well-being restored and fully functional. The section “the science of stress,” within this document describes in detail the importance of the hippocampus to everyday functionality.

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<sup>137</sup> D. Norris. “Short-term Memory and Long-term Memory are still different.” *Psychology Bulletin*, vol. 143, no. 9, (2017); 992-1009.

<sup>138</sup> Born, J., and Wilhelm, I. “System Consolidation of Memory During Sleep. *Psychological Research*, vol. 76, (2012); 192-203

## **How Sleep Impacts Cognition**

When the body and mind are not given the proper restorative sleep it needs, it can result in diminution cognitive functioning.<sup>139</sup> The neurons communicating within the brain become over worked, our stress hormones over generate, and mental health begins to spiral to negative areas. When we do not sleep, these neurons need to work twice as hard for activities that should be effortless.<sup>140</sup> It can result in slow reaction times, causing one to make more mistakes, and having difficulty remembering information.<sup>141</sup> These struggles can build up to a spiral of poor mental health which can become detrimental to the brain's development. "If we constantly struggle to pay attention at work, struggle to focus on the things that are meaningful to us, or struggle to remember or think about things, that truly affects our relationships, work, self-esteem, and overall life fulfillment."<sup>142</sup>

Before memory can be created or stored, we must first be able be cognitively aware of the information.<sup>143</sup> Within cognition lies a myriad of topics and research, however, they blanket term for this topic is most referred to as "thinking." This can involve perception, reasoning, and general learning.<sup>144</sup> We are not always actively paying attention to the thoughts going on in our heads, however, when we are aware of them this is referred to as metacognition.<sup>145</sup> This is the

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<sup>139</sup> Dr. Casey, 65.

<sup>140</sup> Ibid.

<sup>141</sup> E. Suni, and Dimitriu, A. "Sleep Deprivation." *Sleep Foundation*, (2022).  
<https://www.sleepfoundation.org/sleep-deprivation>.

<sup>142</sup> Dr. Casey, 65.

<sup>143</sup> Ibid.

<sup>144</sup> Encyclopedia Britannica. "Cognition." *Encyclopedia Britannica*, (no date).  
<https://britannica.com/topic/cognition-through-process>.

<sup>145</sup> Livingston, J. A. "Metacognition; An Overview." (2003).  
<https://files.eric.ed.gov/fulltext/ed474273.pdf>.

part of cognition most involved in awareness of thought and plays a majority role in learning.<sup>146</sup>

It not only includes just thoughts, but it also involves our ability to pay attention, language capabilities, and concept of mental reasoning.<sup>147</sup>

Alertness and attention are the base level of what people need to cognitively function effectively, this is also where sleep deprivation has its most drastic effects.<sup>148</sup> For healthy people, alertness typically functions quite subtly and corresponds to their circadian cycle with slight dips in the early afternoon.<sup>149</sup> Alertness is important for percussionist as it relates to motor tracking, interestingly, sleep deprivation leads to such a lack of motor tracking it has been related to alcohol intoxication.<sup>150</sup> A study was done on people to test the similarities of sleep deprivation and alcohol intoxication. The results showed immense similarities to the point that around 24 hours of sleep deprivation their performance had dropped to the same level as a person performing the same task at 0.10% blood alcohol level, this exceeds the minimum .08% requirement to be charged with a DUI charge in America.<sup>151</sup>

Sleep deprivation can lead to “wake state instability” proven through sleep-deprived performances.<sup>152</sup> The performance of a person who is sleep deprived can have quite drastic outcomes, often leading to unexpected lapses. These lapses become increasingly present at greater frequency the longer a person stays awake, in fact, these lapses can become so intense

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<sup>146</sup> Ibid.

<sup>147</sup> Diekelmann, S. “Sleep for Cognitive Enhancement.” *Frontiers in Systems Neuroscience*, vol. 8, no. 46, (2014).

<sup>148</sup> J. Lim, Dinges, D. F. “A meta-analysis of the impact of short-term sleep deprivation on cognitive variables.” *Ann NY Acad Sci*, vol. 1129, (2008); 305-322.

<sup>149</sup> Bianchi, Matt T. *Sleep Deprivation and Disease: Effects on the Body, Brain, and Behavior*. Springer Science & Business Media, (2013); 209.

<sup>150</sup> Ibid., 211.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

and so prolonged that they can be described as “functional sleep attacks.”<sup>153</sup> People are affected by sleep deprivation uniquely and some have proven to show considerable ability to resist effects of sleep loss on performances.<sup>154</sup>

### **Relation to Percussion**

There are a variety of circumstances that can cause percussionists to experience sleep deprivation. Negative behaviors have a significant impact on both the regulation of sleep and performance. Most of the time, percussionists who do not get enough sleep are doing so because of unintentional neglect, unanticipated events, or procrastination. There is a big component that contributes to sleep deprivation, and that factor is the intense workload that professionals, educators, and students are required to experience. When people are trying to accomplish something big in their personal lives, academic pursuits, or professional lives, they may choose to purposely skip sleep.

When faced with many deadlines, percussionists may experience feelings of being overwhelmed, which can result in a decline in the quality of their work. As your workload increases, the amount of time you have available for each task decreases. Percussionists in the academic world are required to maintain satisfactory grades in all their disciplines while also balancing their personal and professional lives. If each of the projects you are working on has a particular focus, then you will need to devote a specific amount of time to each individual activity, which will not have much of a link to the other activities you are working on.

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<sup>153</sup> Lin and Dinges, (2010).

<sup>154</sup> Van H. P. Dongen, Baynard, M. D., Maislin, G., and Dinges, D. F. “Systematic Interindividual Differences in Neurobehavioral Impairment from Sleep Loss: Evidence of trait-like differential vulnerability.” *Sleep*, vol. 27, (2004). 423-433.

A lack of a schedule is a negative habit that many percussionists have. When it comes to keeping track of projects and ensuring that you have sufficient time to prepare, schedules are necessary. It is recommended that percussionists who have a heavy workload always carry a schedule with them, whether those schedules are digital or physical.<sup>155</sup> When you don't have a schedule, it can be challenging to keep track of your priorities and ensure that you give yourself enough time to achieve your most critical objectives. In the section, Appendix A, the document will discuss a variety of useful scheduling tactics that can assist with the allocation of sufficient time to sleep.

Percussionists must practice to progress necessary skills for their craft and practicing is a time-consuming process. Workloads that are too heavy can have a negative impact on the quality of a practice session, which in turn can have a significant impact on performances, depending on the complexity of the piece that is being practiced. When a musician accepts several different performances and duties, the amount of time that is available for practicing or working on music is reduced. If a schedule does not include time for practice, it is possible that it will be forgotten. Just a short amount of time spent practicing does not provide the mind with enough to properly process and retain the information. In a similar vein, the mind's capacity to grasp and remember knowledge is hindered when there is insufficient time and frequency spent practicing. The European Journal of Social Psychology states that the average amount of time required to establish a habit is 66 days; however, the length of time required to form a habit varies greatly from person to person.<sup>156</sup> There was a range of 18 to 254 days, according to the study. The

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<sup>155</sup> Catherine E. Milner, and Kimberly A. Cote. "Benefits of Napping in Healthy Adults: Impact of Nap Length, Time of Day, Age, and Experience with Napping." *Journal of Sleep Research* 18, no. 2 (2009): 272-81.

<sup>156</sup> Benjamin Gardner. "Making health habitual: The psychology of 'habit-formation' and general practice." *British Journal of General Practice*, vol. 62, no. 605: 664-666.

process of training and creating muscle memory is comparable to the process of forming a habit. Considering the length of time involved to form a habit, including practice, into a routine that is executed on a regular basis will help to reinforce the knowledge that is gained during various practice sessions.

Memory is essential for percussionists as we draw from our experiences to remember how to do and understand various tasks. Percussion music requires a great deal of memorization often leading up to a fully memorized piece or sometimes full concert. Contemporary percussionist, Steven Schick, is known for performing his works memorized. Had he not been getting rest and allowing his body to recover after extensive strenuous playing, he may not have been able to memorize the extensive amount of music he does for concerts. Memory relies heavily on the hippocampus, if we are not allowing our hippocampus and stress to relax through proper sleep, then we are less likely to store important information learned as we develop as percussionists.<sup>157</sup>

These elements have a significant role in various facets of a percussionist's endeavors. People who lack a written timetable when managing duties are more likely to miss or be late for commitments such as rehearsals, practice sessions, and sleep. As previously stated in this chapter, lack of sleep can lead to problems with memory retention. Memory is crucial for percussionists who have complex parts. The process of acquiring the material and muscle memory can be negatively impacted by sleep deprivation.<sup>158</sup> Insufficient sleep can impact academic performance, particularly in challenging areas such as music theory, by hindering concentration and comprehension of new material.

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<sup>157</sup> Dr. Casey, 65.

<sup>158</sup> Matt T., Bianchi. *Sleep Deprivation and Disease: Effects on the Body, Brain, and Behavior*. Springer Science & Business Media, (2013).

## CHAPTER FOUR: STRESS MANAGEMENT

Stress, defined by Gold and Roth, is “a condition of disequilibrium within the intellectual, emotional, and physical state of the individual; it is generated by one’s perceptions of a situation, which result in physical and emotional reactions.”<sup>159</sup> The information presented here is an ideal transition into the last section, which will concentrate on preventative measures for mental health. The brain is the site of stress, which is not always a negative experience. Under certain circumstances, such as when one is giving a noteworthy performance or when one is speaking in front of a large crowd, stress can be advantageous because it can provide a rush of energy or concentration. Because it influences cognition and changes the size of the brain, chronic stress is dangerous to our minds.<sup>160</sup> It is possible for the size, structure, and functionality of the brain to be altered because of chronic stress, which can be brought on by being overworked, neglecting your well-being. It has even been related to a lack of nurturing while growing up and not allowing creation of more cortisol receptors.<sup>161</sup>

### **The Science of Stress**

Within the brain, the hypothalamic pituitary adrenal (HPA) axis is where stress first manifests itself. This procedure involves a series of interactions between endocrine glands that are in the kidney and the brain. These glands are responsible for the secretion of hormones such

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<sup>159</sup> Gold, Y. & Roth, R.A. *Teachers managing stress and preventing burnout. The professional health solution*. New York, NY: Routledge, 2003: 17.

<sup>160</sup> Cheryl D. Conrad. *The Handbook of Stress Neuropsychological Effects on the Brain*. [1st ed.]. Chichester, West Sussex, U.K.; Malden, MA: Wiley-Blackwell, 2011: 155.

<sup>161</sup> *Ibid.*, 330.

as cortisol, which increases glucose intake and helps slows functions that would be non-essential in a fight-or-flight situation.<sup>162</sup> These glands are responsible for controlling the body's response to stress, which prepares you to take prompt action in situations that are distressing. It is possible that prolonged exposure to high levels of cortisol could have negative consequences on your brain. As cortisol levels rise, it causes a decline in the quality of electric impulses in the hippocampus, while at the same time it increases the activity and number of neural connections in the amygdala, which is the part of the brain that is responsible for producing fear. A person's power to deal with stress is diminished because of the hippocampus's ability to inhibit the operation of the HPA axis.<sup>163</sup>

Before any physical reaction is made during a stressful event, such as a percussionist encountering a large audience for the first time, stress is picked up by the hippocampus searches memories and recognizes the threat sending a signal to our body's alarm system, the amygdala, to see if that event is something to be worried about or not.<sup>164</sup> When this part of our body senses danger it sends signals to your hypothalamus so that your body can be ready to respond.<sup>165</sup> This happens incredibly quickly and happens long before we have processed what we are seeing. A good example is when a percussionist strikes an incorrect note and their body flinches while they make a face involuntarily during a performance.<sup>166</sup> We do not always have control of the amygdala's response to events, "if the amygdala sees the stressful situation as a potential threat

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<sup>162</sup> Ibid.

<sup>163</sup> Ibid.

<sup>164</sup> Rick Hanson. *Buddha's Brain: The Practical Neuroscience of Happiness, Love, and Wisdom*. New Harbinger Publications, 2009; 35.

<sup>165</sup> Greenberg, Melanie. *The Stress-Proof Brain: Master Your Emotional Response to Stress Using Mindfulness and Neuroplasticity*. New Harbinger Publications, 2017: 14.

<sup>166</sup> Ibid.



to your security, status, or well-being, it puts your brain and body on high alert.”<sup>167</sup> The amygdala can essentially hijack your activity and if it senses and immediate threat, puts you into emergency mode as soon as the stressor is encountered. The Amygdala is responsible for deciding if a situation or event is emotionally important enough for a reaction.<sup>168</sup> Once the amygdala has decided if the information is important or not, the information gets pushed to the hypothalamus.<sup>169</sup>

The hypothalamus is often referred to as the “operations manager” of your brain.<sup>170</sup> It coordinates and releases hormonal responses to stress.<sup>171</sup> When the amygdala sends the message to the hypothalamus that our bodies may be in danger, it releases a small series of hormones, one activating the other, until finally our adrenal glands release cortisol.<sup>172</sup> The body needs to get out of that state through what is known as a “negative feedback loop.”<sup>173</sup> When cortisol levels get too high, your body stops producing the hormone causing the release of cortisol.<sup>174</sup>

There is evidence that cortisol can shrink the size of the brain in terms of its physical dimensions.<sup>175</sup> An excessive amount of cortisol causes a reduction in the number of synaptic connections between neurons and a shortening of the prefrontal cortex, which in turn influences activities such as concentration, decision-making, judgment, and social interaction.<sup>176</sup> Learning and memory retention are both hindered when the size of the prefrontal cortex is reduced, which

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<sup>167</sup> Greenberg, 15.

<sup>168</sup> Conrad, 386.

<sup>169</sup> Ibid.

<sup>170</sup> Greenberg, 15.

<sup>171</sup> Ibid.

<sup>172</sup> Ibid., 16.

<sup>173</sup> Hanson, 38.

<sup>174</sup> Greenberg, 16.

<sup>175</sup> Greenberg, 24.

<sup>176</sup> Ibid.

leads to a reduction in the amount of neurogenesis that occurs in the hippocampus. The development of further serious consequences, such as Alzheimer's disease and depression, may be some of the many consequences of this.<sup>177</sup>

The hippocampus is directly related to the amygdala and the hypothalamus, it stores our conscious memories and organizes them.<sup>178</sup> This also means that it retrieves memories from the past that may be related to your stressors, “your prefrontal cortex accesses these memories so that you can use past experience to inform your response to stress.”<sup>179</sup> This way, you can learn from strategies that did not help with coping in the past, when things begin to work, your brain remembers and automatically recalls that in times of great stress.<sup>180</sup> This is a great explanation as to why the imposter cycle is so difficult to break out of, although imposters typically succeed though bad habits and poor mental practices, the brain still recognizes that as succeeding in a stressful task, and will automatically recall that information the next time a similar task needs to be accomplished.

The hippocampus has a moment in times of very intense or life-threatening situations where it can shut off. This means the brain will not be able to store detailed information of the event, however, it can affect behaviors in unconscious ways.<sup>181</sup> It does this through the amygdala and makes people more reactive to future stressors. A great example is this, “if you were bullied when you were a child, your amygdala may react more strongly to criticism from your boss, even though you’re not consciously aware of the connection between those events.”<sup>182</sup> Any time you

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<sup>177</sup> Conrad, 394.

<sup>178</sup> Greenberg, 16.

<sup>179</sup> Greenberg, Melanie. *The Stress-Proof Brain: Master Your Emotional Response to Stress Using Mindfulness and Neuroplasticity*. New Harbinger Publications, 2017: 16.

<sup>180</sup> Ibid

<sup>181</sup> Conrad, 402.

<sup>182</sup> Greenberg, 16.

cope successfully and get out of a stressful situation, your body remembers it so that it is able to repeat it. When done in moderation, it allows us to be more confident when we encounter similar stressors.

All of this happens within the prefrontal cortex, this is the area where all the signals from before getting evaluated and ties our experiences so we may respond appropriately.<sup>183</sup> The prefrontal cortex can work well for us as it deals with problem solving, impulse and emotional control, and the ability to adapt to new and uncertain changes.<sup>184</sup> It is also related to our patience so that we do not lose control of our emotions and react or behave poorly as a response, it uses memories to remind of consequences of actions or why you are dealing with a certain event in the first place.<sup>185</sup> It is in charge of controlling our impulses, it prevents us from buying another percussion instrument when you do not need that instrument or do not have the money for it. It helps us prevent procrastination and complete our work.

The emotional response to stress directly connects to the amygdala and the hypothalamus.<sup>186</sup> This helps us repress our angry reactions when stressful situations are persistent. It helps us feel more centered so we can react appropriately, it directly relates to our emotions and is the cause for some of the feelings we have during stressful events. “Your prefrontal cortex is involved in responses such as compassion, shame, and guilt, which modify your amygdala-based reactivity to stress.”<sup>187</sup> All of these components work together to ensure the body reacts appropriately, especially in situations that call for a fight-or-flight type of response, having experiences of mindfulness in one’s toolbelt can set them up for success in many

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<sup>183</sup> Conrad, 330.

<sup>184</sup> Greenberg, 17.

<sup>185</sup> Ibid.

<sup>186</sup> Hanson, 38.

<sup>187</sup> Greenberg, 17.

situations in the future. The experiences calm our amygdala and eases the way we respond to stressors so we can act rationally and effectively.<sup>188</sup>

### **Why We React to Stress the Way We Do**

Thousands of years of evolutions is responsible for the way our minds react to stress.<sup>189</sup> Stress is incredibly important for our brains, yet when people hear stress, we typically attribute to a negative sense of the word. Stress is a natural and important aspect of human beings which can be incredibly helpful in many situations.<sup>190</sup> When a public speaker is getting ready for a big presentation, they may use the adrenaline associated with stress to amplify their energy and boost their confidence as they go on. Stress responses can be helpful when moments of extreme situations come up such as when a loved one is in danger, the adrenaline helps with the response and quickens responses.<sup>191</sup> A person may come across a bear in the wilderness where the freeze impulse of the fight-or-flight impulse would save their lives.

Stress has been evolving since the beginning of time, when hunters and gatherers needed to escape from predators, stress provided a fight or flight response which saved many of their lives. Soldiers at war rely on the adrenaline provided from stress for incredibly intense situations.<sup>192</sup> The way the mind and body react to stressful situations as we grow is directly related to how the mind and body react the similar situations in the future.<sup>193</sup> For example, if two children at a store had not gotten what they want, they may scream, for many parents this would

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<sup>188</sup> Hanson, 39.

<sup>189</sup> Greenberg, 9.

<sup>190</sup> Ibid.

<sup>191</sup> Conrad, 340.

<sup>192</sup> Ibid., 333.

<sup>193</sup> Ibid., 68.

not work and the child would be told no. However, some parents give the child the toy to get the child to be silent in a public space. For the child, this is a stressful situation that they were able to get out of through crying, so next time a similar situation comes up, their minds will act the way it did the last time this tactic works. The more they get away with it, the more it becomes hardwired in their minds to react in the same way each time. This can be seen in adults who have a lack of anger management, you may see people react aggressively, sometimes violently, which stems from what has worked for them in the past and has gotten them the outcome they desired.<sup>194</sup>

The brain diagnoses itself constantly, it is the reason it knows when to stop pumping the hormone responsible for releasing cortisol to the body when our bodies have too much.<sup>195</sup> It is also the reason it knows when to be in fight-or-flight mode within an instant. Our minds are incredibly adaptive, it can remember what reactions worked to get out of a stressor. However, the body only needs one factor to remember and recall what worked, that factor is if the outlet was effective or not to distract from the stressor.<sup>196</sup> What makes it dangerous is when we use unhealthy reactions, and our body remembers and therefore reacts negatively since that is what has worked in the past.

Reactions to stress is also influence by social aspects, if we see another person react to an unknown situation, our bodies go into autopilot, and we react based on the reaction we witness.<sup>197</sup> A great example of this are scare pranks found online. One of these pranks involves a willing person to pretend to be terrified about something they did not actually see somewhere out

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<sup>194</sup> Ibid.

<sup>195</sup> Robert M. Sapolsky. *Why Zebras Don't Get Ulcers: The Acclaimed Guide to Stress, Stress-Related Disease, and Coping (Third Edition)*. Holt Paperbacks, 2004: 255.

<sup>196</sup> Ibid.

<sup>197</sup> Ibid., 256.

of the view of the victim being pranked. The reaction of the willing suspect causes an unwilling reaction to the victim, as the prankster screams and panics, the victim's body goes into defense mode and reacts in a similar way, panicking and trying to get away from the situation by any means necessary. The effect is different if they are friends or strangers, we typically react greater with strangers and react less with friends,<sup>198</sup> meaning it is important to have someone close to you for support since that is a way our stressors impact us less. Having social support has been proven to lower the resting levels of cortisol, having loved ones to care for you in high levels of stress is incredibly effective in maintaining bodily reactions.<sup>199</sup>

Aspects of stress can also be genetic, studies have shown that aspects created by stress such as anxiety, depression, and high blood pressure can be passed on through genetics.<sup>200</sup> A person with parents who stress constantly may find that they have a generalized anxiety to most situations around them. Similarly, a younger person may find that their glucose levels get uncontrollably high or low in times of stress. These could all be factors passed down through their genetics.<sup>201</sup>

### **Types of Stress**

There are two main types of stress that blanket other aspects of stress. There is chronic stress and acute stress. These types of stress affect us differently with entirely separate processes between them.<sup>202</sup> Acute stress are the small stressors that only affect someone for a short period

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<sup>198</sup> Ibid.

<sup>199</sup> Conrad, 168.

<sup>200</sup> Sapolsky, 257.

<sup>201</sup> Ibid.

<sup>202</sup> Sapolsky, 257.

of time, such as a printer jamming, or the WIFI going out, or a first date. Chronic stress involves the stressors that happen for long periods of time, typically things that we are not able to control the timeline of. Stressors such as school, relationships, or work.<sup>203</sup>

Both types of stress can be helpful and damaging. Acute stress can cause temporary symptoms such as anxiety, headaches, or even stomach issues.<sup>204</sup> Yet it can also help us feel energized and ready to face challenges head on to the best of our abilities. People sometimes react to acute stressors quite intensely, when this happens, it is typically due to the small stressor keeping them from an important task, such as getting to work or seeing their loved-ones at the end of the day.<sup>205</sup> Another problem that happens often with successful or busy people, are the accumulation of acute stressors turning into a major stressor. When one small stressor happens after the other without the body having time to recover is damaging. “Our brains and bodies are wired for acute stress followed by recovery, not for a barrage of stressors!”<sup>206</sup>

Chronic stress is far more damaging, chronic stress keeps secreting hormones that cause an excess in cortisol. As discussed, cortisol is good for us in small increments, when cortisol runs through our system constantly, it has damaging and lasting effects to our physical brain and therefore, our mental state.<sup>207</sup> Long term stress is what damages our body and limits our functions the most, directly relating to our heart, weight, and immune system.<sup>208</sup> Chronic stress is known to affect our genetics as well, meaning that if a person effected by chronic stress, may pass on genetic conditions such as generalized anxiety, depression, and high blood pressure.<sup>209</sup>

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<sup>203</sup> Greenberg, 10.

<sup>204</sup> Greenberg, 10.

<sup>205</sup> Ibid., 45.

<sup>206</sup> Greenberg, 45.

<sup>207</sup> Hanson, 56.

<sup>208</sup> Greenberg, 24.

<sup>209</sup> Conrad, 70.

Managing chronic stress and creating healthy outlets for chronic stressors is paramount in preserving our mental and physical states to keep us in our best performing modes.<sup>210</sup>

Within the text *Don't Leave Your Mind Behind*, written by Dr. Keith Henschen, we are introduced to three labels of chronic and acute stress. These are types of stressors that contribute to chronic or acute stress; they are eustress, distress, and life sustaining stress.<sup>211</sup> Eustress is considered positive stressors. These are stressors that can be used as motivators, “the challenge of the competition, handling distractions during performance, or the determination to control the environment.”<sup>212</sup> For musicians, seeing a loved one in the audience may provide a sense of motivation and energy to do better. When a person is not in control and has a negative interpretation of the situation, this is what is known as distress.<sup>213</sup> This often leads the person to a downward spiral of emotions; “anger, frustration, fear, anxiety and helplessness.”<sup>214</sup> A life sustaining stressor is a neutral stressor. It is not interpreted as positive nor negative yet still required for the human development. This is directly related to our practices, while we practice as performers, we are essentially stressing ourselves to a moment where can adapt psychologically and physiologically.<sup>215</sup>

What we know about stress is that it is cumulative. Every experience we have the triggers our stress response and without an outlet to relieve that stress, it builds up and makes the body react in unpleasant and uncontrolled manners.<sup>216</sup> This is seen often with distress, which typically

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<sup>210</sup> Greenberg, 25.

<sup>211</sup> Keith Henschen, and Nicole Detling. *Don't Leave Your Mind Behind: The Mental Side of Performance*. Createspace Independent Publishing Platform, 2018; 26.

<sup>212</sup> Ibid.

<sup>213</sup> Ibid.

<sup>214</sup> Ibid.

<sup>215</sup> Ibid., 27.

<sup>216</sup> Greenberg, 9.



leads to burnout.<sup>217</sup> When people do not learn tactics, or have gotten away with using negative tactics throughout their lives, these negative habits become a part of their subconscious reactions.<sup>218</sup> People that punch holes in walls when they are upset, drivers that follow cars and scream at them from the window because of a minor inconvenience, or the teacher screaming back at students when they pushed the teacher to the breaking point. Not having an outlet for these stressors make them cumulate into often devastating outcomes.<sup>219</sup>

Aspects that contribute to stress come up from any avenue of life. The most common aspect being the small daily stressors we experience.<sup>220</sup> These are situations that are typically temporary but happen quite often, sometimes daily, such as misplacing a wallet, misbehaving children, and traffic issues. These daily occurrences directly contribute to the accumulation of stress that can blow up if there is no outlet. As the stresses build up every day, the body does not have time to recover and bring down cortisol levels keeping us anxious and stressed, our body is meant for a series of acute stressors and then time for recovery, not a constant flow.<sup>221</sup> These small stressors can accumulate much quicker in times where you are dealing with life transitions or major life events.

Life transitions are often impossible to avoid, yet they still create avenues for stress to be present. A high school student graduating and entering the workforce for the first time has many potential stressors as they navigate finding a job, paying bills, and sustaining themselves away from where they were raised. When students are going into college for the first time, the change in workflow, expectancy, and pressure all can contribute to stressors impacting the person

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<sup>217</sup> Ibid.

<sup>218</sup> Ibid.

<sup>219</sup> Sapolsky, 258.

<sup>220</sup> Conrad, 160.

<sup>221</sup> Greenberg, 45.

transitioning into this stage. Getting married, and planning a marriage ceremony, is a major life event that is a great source of stress for many people. These types of stressors occur over great lengths of time, but still bring in intense levels of stress over a small period that can contribute to symptoms of chronic stress.<sup>222</sup>

Major life events are different than that of life transitions, although transitions can absolutely be a major part of life. A major life event in this sense involves situations that evoke intense feelings of anger, fear, or sadness and require a great deal of time coping with the events.<sup>223</sup> This could be the loss of a loved one, losing a job, serious illness, or dealing with loved ones suffering from addiction.<sup>224</sup> “Major life events often involve a loss of something tangible, such as money, property, status, position, or opportunity.”<sup>225</sup> A series of major life changes at one time can decrease resistance to diseases, which makes people more susceptible to diseases including the flu and colds.<sup>226</sup>

Studies have shown that the more major life events one experiences, the more likely they are to be diagnosed with mental illnesses such as anxiety disorder or depression.<sup>227</sup> This constant amount of stress weakens the amygdala and makes us far more reactive to less stressful situations in the acute stress category.<sup>228</sup> Of course, not every person that come across major life events get afflicted in these ways, some are able to get through the events and not suffer long-

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<sup>222</sup> Greenberg, 29.

<sup>223</sup> Greenberg, 33

<sup>224</sup> K. C., Herman, & W.M. Reinke. *Stress management for teachers. A proactive guide*. New York, NY, 2015, 10.

<sup>225</sup> Greenberg, 33.

<sup>226</sup> Ibid.

<sup>227</sup> Hanson, 56-57.

<sup>228</sup> Ibid.

term issues. This is due to experiences we all encounter and ways that we have coped with our stress into the past, those experiences influence the way our brains respond to stressing events.<sup>229</sup>

The past has a heavy influence on the development of our hippocampus and therefore our reaction to stressors. This is apparent based on the reliance of memories and experiences for the amygdala and hypothalamus to draw from for information.<sup>230</sup> When traumatic events happen in childhood they become engrained within our stress responses regardless of any lack of memory towards the traumatic events.<sup>231</sup> Many studies have been done on childhood trauma's relation to adult functioning, however, one stands out as particularly intriguing. This study used both a physical test and psychological questionnaire to study seventeen thousand participants, of which, roughly two-thirds reported to have experienced at least one traumatic event as a child.<sup>232</sup> The study's questionnaire referred to these traumas as, Adverse Childhood Events (ACEs).<sup>233</sup>

Table 2 is part of the ACE questionnaire, place a checkmark next to each event you were exposed to before the age of 18:<sup>234</sup>

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<sup>229</sup> Greenberg, 34.

<sup>230</sup> Mentioned in, "the science of stress" portion of this document.

<sup>231</sup> Greenberg, 46.

<sup>232</sup> D.W. Brown, R.F. Anda, H. Tiemeier, V.J. Felitti, V.J. Edwards, J.B. Croft, and W.H. Giles. "Adverse Childhood Experiences and the Risk of Premature Mortality." *American Journal of Preventative Medicine*, vol. 37: 389-396.

<sup>233</sup> Ibid.

<sup>234</sup> Ibid.

Table 2: Adverse Childhood Events Questionnaire

#	Question	Checkmark
1.	Physical Abuse	
2.	Sexual Abuse	
3.	Emotional abuse or narcissistic parent	
4.	Physical or emotional neglect	
5.	A parent with a mental health or substance abuse problem	
6.	Parental separation or divorce	
7.	A serious ill or injured family member	
8.	Being adopted	
9.	Witnessing family violence	
10.	The death of a family member or close friend	
11.	Homelessness or poverty	
12.	Being bullied (threats, humiliation, deliberate exclusion, and so on)	

If any person falls under three or more of these categories, it is highly advised for them to learn to manage their stress if they have not already.<sup>235</sup>

### **What Stress does to our Minds and Bodies**

Behavior is directly affected when stress is not managed, making it more difficult to assess situations and form cohesive solutions before using past experiences to inform subconscious responses. As mentioned, once the amygdala receives a threat, it then automatically uses memories and experiences to react the way it has worked in the past. Some small sense of gratification may have come to some people who used anger to vent through

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<sup>235</sup> Greenberg, 47.

stressful situations, so much to when a stressor came up that was extreme, the body's automatic response is to then get angry.<sup>236</sup> Getting better starts in being aware of the reaction being made and having other tools to be able to create an outlet that can be healthy for us and those around us. It is through understanding the reasons why we react negatively and creating an active change in habits when stressors come up that we can better manage stress. When we are constantly using positive outlets in response to stressors, our amygdala will slowly begin to use these positive memories and experiences to automatically react that way in the future.<sup>237</sup>

Stress frequently leads to both anxiety and arousal.<sup>238</sup> Anxiety occurs more in those who have a more sensitive amygdala, which are people who encounter stress far more often.<sup>239</sup> There are two types of anxiety that impact people, somatic and cognitive.<sup>240</sup> Somatic anxiety are the physical experiences we can perceive, such as “butterflies” in the stomach or trembling voice during a speech.<sup>241</sup> Cognitive anxiety is a mental process and relates to excessive worrying or recurring negative thoughts.<sup>242</sup> Lack of preparation before a stressful event like a public speech could make the person not be confident with their abilities manifesting anxiety throughout the entire speech. Imposter syndrome directly relates to anxiety through the fear and uncertainty involved.<sup>243</sup>

Performance arousal is physiologically based and can lead to our best and worst performances.<sup>244</sup> Everybody is always somewhere on the spectrum of performance arousal, while

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<sup>236</sup> Ibid, 13.

<sup>237</sup> Conrad, 330.

<sup>238</sup> Henschen, 30.

<sup>239</sup> Ibid, 56.

<sup>240</sup> Henschen, 30.

<sup>241</sup> Greenberg, 15.

<sup>242</sup> Ibid.

<sup>243</sup> Greenberg, 16.

<sup>244</sup> Henschen, 34.

sleeping, while experiencing extreme shock or excitement, and even while relaxing while watching television.<sup>245</sup> Experiencing high levels of arousal are what may leave a public speaker to having poor performances such as jumbling over your words, expressing far too much energy, or choking and freezing entirely. There is a healthy balance of arousal and anxiety that must be met for our minds and bodies to respond appropriately in stressful situations.<sup>246</sup> According to Dr. Henschen, “The outlandish but traditional pep talk to a football team designed to arouse them does more damage than good... Incidentally, the reason many athletes have trouble (make mistakes early) in a competition is because they are over aroused.”<sup>247</sup> This is because when arousal increases, the ability to concentrate becomes narrowed.<sup>248</sup> since your mind is searching through memories and experiences in order to create an appropriate response to a stressful situation, the body is limited in taking in more information to make an informed decision and therefore appropriate response.

Prolonged stress disrupts the hippocampus and its memory neurons; these neurons rely on the hormone, glucocorticoid.<sup>249</sup> However, when too much stress occurs, glucocorticoid and cortisol is over produced leading to disruption in memory processes, leading to constant forgetting.<sup>250</sup> This can be seen through things like excessively misplacing items just moments after placing it down, losing track of what you were discussing while speaking, or going to a room to retrieve something yet upon arriving to the room they forget the reason for going in the first place.<sup>251</sup>

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<sup>245</sup> Ibid.

<sup>246</sup> Ibid., 35.

<sup>247</sup> Ibid.

<sup>248</sup> Ibid.

<sup>249</sup> Conrad, 91.

<sup>250</sup> Sapolsky, 215.

<sup>251</sup> Conrad, 372.

As stressors rise, the level of the stress hormone cortisol increases, making sleep difficult while the body is constantly sending signals for ways to resolve the immense stress.<sup>252</sup> “About 75 percent of cases of insomnia are triggered by some major stressor.”<sup>253</sup> Studies have shown that poor sleepers typically have high levels of glucocorticoids and cortisol within their bloodstream.<sup>254</sup> There is a process that happens in sleep known as slow wave sleep, this is where energy restoration takes place and is directly affected by these hormones. Cortisol and glucocorticoids are at high levels during stress, so when we sleep with these elevated levels, the slow wave pattern is not able to restore as much energy, thus rendering sleep not as useful.<sup>255</sup> This then creates a vicious cycle like the imposter cycle discussed in the imposter syndrome chapter of this document. Sleep no longer helps stress because stress is impacting sleep, when sleep is not working, stress has a much more damaging impact.<sup>256</sup>

### **Burnout**

Burnout is a term created to describe human service workers being overworked and became such a widespread crisis, researchers, authors, and psychologists have been writing about it for decades.<sup>257</sup> It has since expanded to include the rest of the population as many studies have come to light showing many people suffer from burnout for myriad reasons. Burnout is a state

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<sup>252</sup> Sapolsky, 236.

<sup>253</sup> Ibid.

<sup>254</sup> A. Vgontzas, Chrousos, G. “Sleep, the HPA axis, and cytokines: multiple interactions and disturbances in sleep disorders.” *Endocrinology and Metabolism Clinics of North America*, vol. 31, 2002: 15.

<sup>255</sup> P. N. Prinz, Bailey, S. L., Woods, D. L., “Sleep impairments in healthy seniors: roles of stress, cortisol and interleukin-1 beta,” *Chronobiology International*, vol. 17, 2000: 391.

<sup>256</sup> Ibid.

<sup>257</sup> R. Vandenberghe, & A. M. Huberman. *Understanding and preventing teacher burnout: A sourcebook of international research and practice*. Cambridge: Cambridge College Press, 1999.

that our minds and bodies go to when they are exhausted from excessive use and stress. It can be either physical or mental. A student writing a document for weeks, months, or sometimes years, can quickly become burnt out from staring at a screen all day and reading new material that improves their research every hour. This constant barrage of information and stress contributes to this extreme feeling of exhaustion known as burnout.<sup>258</sup>

Burnout typically effects high achievers as many of the makeups that create burnout are done every day by successful people. Some of these characteristics include being “overly dedicated, idealistic, motivated towards high achievement, people in entertainment/service professionals, highly responsible orientation, committed, or perfectionistic people.”<sup>259</sup> It is not limited to high achievers of course, anyone can be affected by burnout, it is just more prevalent among successful people. A study was done in 2016 assessed levels of burnout among 258 teachers that met three aspects, grade level taught, certification status, and within music area. This study revealed the immense burnout that teachers, particularly music teachers, face in the workforce and in academia.<sup>260</sup>

In the book, *Don't Leave Your Mind Behind*, there is a list of physical and psychological symptoms. Shown in Table 3 are two lists of symptoms, the reader is encouraged to keep track of symptoms listed below and if they resonate with three or more aspects of these two lists, then they are most likely within the burnout phase.<sup>261</sup>

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<sup>258</sup> Henschen, 123.

<sup>259</sup> Ibid., 124.

<sup>260</sup> H. C. Bernhard. “Investigating burnout among elementary and secondary school music educators: A replication. *Contributions to Music Education*, vol. 41, 2016; 145-156.

<sup>261</sup> Henschen, 125.



Table 3: Physical and Psychological Symptoms of Burnout

Physical Symptoms of Burnout	
Higher resting heart rate	
Higher blood pressure	
Elevated body temperature	
Weight loss	
Impeded respiration	
Aching muscles	
Bowel disorders	
Psychological Symptoms of Burnout	
Frequent sleep disturbances	
Loss of self-confidence	
Apathy	
Irritability	
Lack of motivation	
Higher emotionality	
Prolonged fatigue/weariness	
Lack of appetite	
Depression	
Anxiety	
Anger/hostility	
Feelings of helplessness	

There are many factors that lead to burnout. For performers it could be the length of a performing season and the monotony of performing all together, especially in groups that play the same music constantly without change.<sup>262</sup> Performers in these situations are not given the opportunity to destress and replenish their energy, therefore stress is more present leading to

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<sup>262</sup> Henschen, 125.

faster burnout. Likewise, the monotony of doing the same task over and over for an extended period is paramount within many aspects of a performer's life.<sup>263</sup> This can also quickly lead to boredom, another contributor to burnout.<sup>264</sup>

Lack of support from people of high respect can cause someone to feel they need to work twice as hard to match up to the unrealistic expectations. When a person is not getting support, this leads to a lack of positive reinforcement, necessary for maintaining consistent motivation.<sup>265</sup> This could potentially lead to feelings of helplessness and therefore high levels of stress. When the body gets stressed, it can be quite difficult to be able to accept new accomplishments since we feel that if we wanted to reproduce the same outcome, we would need to be put through the same amount of stress again. This would diminish the time and energy spent on a major task and can make a massive compliment look insignificant.

### **Typical Stressors within Professional and Academic Percussionists**

When stress occurs, it can come mildly and for a brief amount of time, or it can be recurring. These stress types, referred to as acute stress and chronic stress can bleed into aspects of percussionist's lives inside and outside the academic and professional fields of percussion. Understanding which type of stress is impacting the person, sets them up for creating helpful strategies that can mitigate and sometimes get rid of the feelings entirely.

Acute stress in percussionists can manifest when a musician becomes the center of attention during a rehearsal, causing a surge of adrenaline that quickly subsides. Another

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<sup>263</sup> Ibid

<sup>264</sup> Ibid.

<sup>265</sup> Ibid.

example may be during auditions or at the end of a semester with performance examinations when the student feels a bit of stress, or worry, before going in to be adjudicated by a panel of successful professionals within percussion. This acute stress can be healthy and contributes to energy experienced in the moment which can help propel the person forward.

Chronic stress, as opposed to acute, can be quite dangerous when left ignored. As mentioned earlier in this chapter, the effects of constant cortisol to the brain can damage it both physically and cognitively. This may present itself in percussionists who are preparing for a degree capstone, such as a recital or comprehensive exam.

Performers experience anxiety in many ways and is one of the most talked about issues facing musicians today. It can be just as helpful for the musician as it is damaging because it can either have just the right amount of anxiety to help with a successful performance or can be too much and lead to an unsuccessful performance. Take for example this quote from Dr. Keith Henschen about anxiety on performers:<sup>266</sup>

“Good performers experience a moderate, but manageable amount of anxiety prior to performing. This is a state anxiety and can be manifested either somatically or cognitively. During the performance, though, the good performers experience very little anxiety. Once the performance is over, the good ones again experience increased anxiety because they are now concerned about how others viewed their performance and are looking for ways they can improve their performance the next time. In contrast, Poor performers seem to experience little anxiety before and after performing, but a lot during the performance. A reason these individuals perform poorly is that, because of anxiety, they are unable to concentrate appropriately on what they are doing.”

Performance anxiety takes over all reasoning, the performer becomes reactive, and many performers may stop playing entirely, needing to restart or are unable to begin again.

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<sup>266</sup> Henschen, 31.

Performance arousal is often present in percussionists and is important for a successful performance. However, as mentioned previously, too much or too little arousal can result in a poor performance. Too little could make an intense snare piece look quite boring, where a person with too much adrenaline might have poor note accuracy and lose track of their place while performing. A great amount of arousal causes the brain to lose focus, which is quite essential for paying attention and continuing correctly through a piece of music.

When arousal and anxiety are correctly used and the percussionist can focus on the level of arousal they are experiencing or find ways to mitigate the feelings, successful performances can be a result.<sup>267</sup> Anxiety effects percussionists the same way it effects other musicians, giving an extra pump of energy in times of great stress like solo performance recitals, the first real gig, or major school ensemble performances.

When percussionists come across burnout this can be seen through extensive performing. Long seasons both in the professional and academic field lead to many reasons for burnout. Within the previous burnout section there was a discussion about the effects burnout has on performers including a list of possible aspects that contribute to burnout. The monotony of performing the same piece for a long period of time as well as long exposure to physical and mental stress contribute greatly to the burnout a percussionist would experience.<sup>268</sup> Percussionists experiencing burnout are recommended to seek help from a qualified therapist or councilor who can help with determining precise reasoning and methods to overcome burnout.

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<sup>267</sup> Don Greene. *Performance Success: Performing Your Best Under Pressure*. Routledge, 2012; 15.

<sup>268</sup> Henschen, 125.

Although many can do it alone, the importance of social support in the growth of motivation and lowering of stress levels is paramount.<sup>269</sup>

Stress's relation to tension is important for percussionists to understand. Tension is the enemy for percussionists. When the body is already tense, yet has constant physical stress from hitting percussion instruments with hands and sticks, it can be destructive to the joints and ligaments within the arms and hands.<sup>270</sup> When one of these parts of the body get damaged, this can lead to a major life event for a percussionist, having to stop practicing and performing for an extended period to allow the body to heal.<sup>271</sup>

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<sup>269</sup> Hanson, 121.

<sup>270</sup> Anthony Joseph Merlino. "The Percussionist Bodybuilder: Optimizing Performance Through Exercise and Nutrition." *UNLV Theses, Dissertation, Professional Papers, and Capstones*. 2196, 2014.

<sup>271</sup> Greenberg, 16.

## CHAPTER FIVE: POSITIVE MENTAL HEALTH STRATEGIES

The purpose of this section is to review researched strategies from reputable sources that suggest various methods of coping and alleviating the mental health topics discussed throughout this document: Imposter syndrome, sleep deprivation, and stress management. Reviewing these texts will help the reader learn about tactics that have helped successful people in the past. This will also help serve as a call encouraging percussionists to explore other methods, practices, and tactics meant for positive mental health and find what works best for them. Every person experiences and responds to stress uniquely, the texts mentioned within this document merely scratch the surface of available avenues to go down for positive tactics.

After extensive research I decided the two texts chosen for each section encompasses what many other texts on the same topics cover. Therefore, limiting the reviews to two texts will give enough scope to give the reader a direction for mitigating or coping with issues related to imposter syndrome, sleep deprivation, and stress management.

### **Imposter Syndrome Strategies**

Imposter syndrome, thoroughly discussed in chapter two, is the persistent feeling you will be caught as an imposter by others regardless of achievements, education, and knowledge acquired. By now, this document has given insight into what causes imposter syndrome, how we handle it, and some of the damage it can cause to our psyche. Constantly feeling like an outcast, particularly when there is no reason to, can be incredibly damaging to our self-esteem, causing immense amounts of stress, which at this point is known to end up in harmful mental issues.

The first text to be reviewed in this section is *The Imposter Phenomenon: Overcoming the Fear that Haunts Your Success*, by Dr. Pauline Rose Clance.<sup>272</sup> As the founder of the term, this text has a wealth of information regarding positive tactics. Clance states early in the text that the “key element to change is the recognition that one is the victim.”<sup>273</sup> Most victims are quite eager to be rid of these feelings for good. However, when one is unaware of what is happening under the surface then it can be much more difficult to figure out a way to mitigate the feelings.

Clance begins with explaining ways to take of what she calls “the imposter mask,”<sup>274</sup> This is the mask that imposters hide behind to look confident on their exterior, while internally, they are not sure if they truly fit in or not. She explains the first step toward recovery and change from imposter feelings is to remove this mask.<sup>275</sup> Clance suggests a notebook for the reader to further examine their imposter mask and admit its existence. This notebook is meant to be taken everywhere with the imposter victim. They are then encouraged to write down any instance possible where feelings of doubt arise throughout the day. This could be doubt of confidence, ability to cope, complete a task, or to succeed. These notes should include what internal dialogue of the moment happens so that later when there is time to review the notes, they are then able to go through the list to figure out which feelings are justified, or which feelings line up with what aspects of imposter syndrome. Clance suggest that as the notebook is being reviewed, one should keep in mind if they are approaching others with projects naturally, or do you feel that you need to change aspects of yourself to look as if you are not an imposter.<sup>276</sup>

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<sup>272</sup> Clance, Pauline Rose. *The Impostor Phenomenon: Overcoming the Fear That Haunts Your Success*, (1985).

<sup>273</sup> Ibid, 29.

<sup>274</sup> Ibid, 129.

<sup>275</sup> Ibid.

<sup>276</sup> Ibid., 133.

Dr. Clance's next suggestion revolves around breaking the imposter cycle, discussed in the "imposter syndrome" chapter of this document. She offers two exercises that have been helpful for her clients and students with breaking the imposter chain. For the first exercise, lay out all projects that are coming up, particular the ones that one may be feeling self-doubt from. Pick an activity that has proven to be successful in the past, if this is something which is typically a worry for four to five days in advance of the event, make a conscious decision to only worry about it for one or two days. As thoughts inevitably arise earlier, force the mind to switch to a different topic. Clance recognizes this is much easier stated than executed, however, being firm is the key to making the change. The goal of this is to show the mind and body it can succeed in a task, not with less worry, but in a smaller amount of time with much less agony during the process.<sup>277</sup> If this worked, then shorten the next worry time even more and experiment with lowering the time further.

This partners well with her section on changing a frenzied work pattern. Many may find they have quite a bit to worry about at many points of the day, this can be due to a perfectionist's need to be excessively prepared without regard towards major or minor tasks.<sup>278</sup> Clance suggests an experiment for those that may follow under the category of overpreparing. Chose a task within your daily schedule that is not crucial to your job, school, or life, then deliberately spend less time on the activity. This may be limiting the amount of time spent on preparing for certain classes, amount of time spent on a simple sheet of music, or time spent getting ready in the morning.

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<sup>277</sup> Ibid., 135.

<sup>278</sup> Ibid., 136.



The key is to be honest with the time, when the allotted time on this chosen activity is up, force yourself to move on. The goal of this exercise is to see if the task can be done just as well without having to overprepare. Adjusting to be sure just enough time is needed is important as it will help with other tasks as well and may even create some free-time. Overcoming perfectionism has the same process of examining the activities throughout the day and how much time is spent on them. The difference is rather than picking a task to do for less time, pick a task and focus just enough to do it adequately and efficiently and not perfectly. “Remember that it’s fine for you to maintain your standards of excellence in the important aspects of your job and life. The key is to determine where those high standards are really needed.”<sup>279</sup>

Clance has an excellent section about trusting praise and positive feedback. Provided are methods for allowing the mind to accept compliments and positive feedback from others. “[Imposter syndrome] victims are ingenious at negating or denying the objective evidence that they are indeed bright and successful.”<sup>280</sup> These people may not be aware they are brushing off or denying compliments or evidence toward success. According to Clance, she asked a great deal of clients that if they were left in a room alone with 200 participants, 199 of which are screaming compliments and praise, while the single person left is screaming negative criticisms, her clients admitted they would most likely dwell on the criticism of the one person.<sup>281</sup> Clance suggests for people who are keeping a notebook to keep record for a full week of any positive feedback or compliments received. Make note of the verbal and physical response, then try to remember what was being thought, perhaps it matched what was said out loud, or perhaps it completely goes against what was said out loud.

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<sup>279</sup> Ibid.

<sup>280</sup> Ibid., 139.

<sup>281</sup> Ibid.

Once this information is put down, mark if there are any repeated reasons for rejecting positive feedback. Clance then states, “ask yourself, ‘what will happen if I accept the positive feedback as representing the truth?’”<sup>282</sup> Then pause for a bit and see what response comes up, determine if the reasoning is being afraid of coming across as arrogant or complacent or that others may be jealous or dislike them for the praise. After this process, Clance suggests experimenting with behavior towards positive feedback. This time around, accept the compliment or feedback and do not attempt to minimize it or reject it. Repeating this process will be a helpful steppingstone toward accepting the idea of not being an imposter.

Perhaps the most difficult thing for an imposter to do is learn to say no. Imposters are constantly trying to prove themselves yet have no feeling they are getting better or fitting in. This often leads to imposter victims continually saying yes in hopes that if they complete all of these tasks, they will be favored. There is some truth to this statement, many employers do notice the employee more who is around the office far more often than the others. However, this person often experiences burnout and are in a constant state of mental exhaustion. They may be experts at putting up a mask, but deteriorating mental health presents itself physically at some point if nothing is done to mitigate it. Most employers will take as much as a person can possibly give without concern about mental health. The danger is “other people will keep giving you work as long as you accept it.”<sup>283</sup> This makes it quite easy for a person to be manipulated into working far more than is possibly needed, yet when they become overwhelmed and fall short, it is noticed since they are involved in so many activities. This also makes them noticed by those around them, who if ignorant to the circumstances, will only look at the person as slacking or not pulling

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<sup>282</sup> Ibid.

<sup>283</sup> Ibid., 176.

the weight they said they could pull. Clance suggests asking the following questions in Table 4 to determine if a task needs to be agreed to or not:

Table 4: Task Importance Questionnaire

Question	Answer
How Important is it that I do this?	
What is likely to happen if I don't?	
What will I have to give up if I accept it?	
Do I really have the time to take it on?	
If not, is there something else that can be dropped?	
What will happen if I accept the responsibility and delegate much of the work?	

Doing the activities mentioned in Clance's book will not work right away. The key is to be consistent and honest about the changes, and trying the tactics more than once rather than doing it once and assuming it could never work. There is a strong learning curve involved with breaking imposter feelings and accepting positive thoughts.

The next text is, *The Imposter Cure: How to Stop Feeling like a Fraud and Escape the Mind-trap of Imposter Syndrome*, by Dr. Jessamy Hibberd. Dr. Hibbard's text is a significant imposter syndrome resource recently published. This book goes over many similar aspects mentioned within Dr. Clance's book, they both deal with changing the mindset to combat imposter feelings, however instead of being written as a series of exercises, it takes us through a series of what Dr. Hibbard believes to be invalid arguments and she attempts to dismantle the

arguments in her book through discussion. There are three theories discussed within Dr. Hibbard's text that are important. The first is the belief that self-criticism is necessary to keep ourselves from lazy habits, the second is the pressure to be perfect, and the third is a discussion of seven myths believed by imposter victims and why they are wrong.

Dr. Hibbard discusses self-criticism and its damaging effects on our minds. According to Hibbard, imposters typically tend to do one or more of the following things: "See things in black and white rather than in shades of grey, ruminate repeatedly over your mistake, fear failure intensely, always feel that you could have done more, self-scrutinize and overanalyze, or imagine that others are judging or thinking negatively about you."<sup>284</sup>

Imposters who use self-criticism may feel they need to rely on self-criticism to maintain motivation in the future. However, constant negative thoughts about themselves can put them at higher risk of stress and depression therefore rendering coping strategies less effective.<sup>285</sup> To combat self-criticism, Hibbard offers the idea of self-compassion stating, "self-compassionate people are more resilient and bounce back more easily from setbacks."<sup>286</sup> They are also more likely to respond positively to harsh criticism and more likely to learn from their mistakes taking steps to improve themselves without as much of a fear of failure.<sup>287</sup>

Self-compassion is the concept of positive feedback and an understanding of the necessity of failures. Being self-compassionate means being understanding and patient with oneself, rather than thinking negative thoughts after making mistakes, more positive thoughts are used. Statements such as, "I tried my best and was not able to complete this task very well, now I

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<sup>284</sup> Dr. Hibbard, 124.

<sup>285</sup> Ibid., 125.

<sup>286</sup> Ibid.

<sup>287</sup> Ibid.

know what needs to be done better for next time!” Or “this was an incredibly difficult task; it is okay that it was not done perfectly because I had a limited amount of time to finish this complex task.” Another reason someone may criticize themselves is when they need to say no.

When one has to say no, many feelings of self-doubt begin to arise attached to the assumption that saying no will cause them to be perceived as not able to handle much on their plate.<sup>288</sup> Discussed in Dr. Clance’s text is the benefit of learning to say no. Dr. Hibbard divides self-compassion into three components. The first is “recognizing when we’re stressed or struggling without being judgmental or overreacting,” the second states, “being supportive, gentle and understanding to ourselves when we’re having a hard time,” and the third, “remembering that everyone makes mistakes and experiences difficulties at times.”

Imposters who suffer from perfectionism tendencies would benefit from Dr. Hibbard’s ninth chapter discussing the pressure to be perfect and the unrealistic standards created by setting unrealistic goals. Creating goals that are unmanageable or unattainable create severe feelings of self-doubt as you could never reach the goal you set out to accomplish.<sup>289</sup> Positive reinforcement has been proven to work more than negative reinforcement in countless studies. This is a form of classical conditioning created by behavioral psychologist B. F. Skinner.<sup>290</sup> This is the concept of using positive rewards for completing tasks that a person may not want to do. For example, a percussionist may reward themselves with a fun personal task as a reward for completing work or having an effective practice session. This in turn would encourage them to continue completing tasks and practicing because the reward is more validating when there is an effort. .

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<sup>288</sup> Ibid., 131.

<sup>289</sup> Hibbard, 157.

<sup>290</sup> Murray Sidman. “The Distinction Between Positive and Negative Reinforcement: Some Additional Considerations.” *National Institute of Health*, vol. 29, no. 1: 135-139.

Hibbard first goes through the damages of perfectionist tendencies to set up the methods she believes would help best to combat these feelings. Hibbard's suggestion to combatting these feelings is through learning the difference between "healthy conscientiousness and unhealthy perfectionism."<sup>291</sup> It is possible to work diligently without having perfectionist goals.

A consistency between all texts about imposter syndrome is that there is no such thing as perfection. Many facts produced and proven through science has some group of people strongly disagreeing. A popular example among percussionists involves when to use the two common grips used for keyboard percussion, Burton's grip versus Stephen's grip and which should be used for various reasons. Many argue that Burton's is for vibraphone and Stephen's is for marimba, however, many others believe if you can produce a good tone then it does not matter what grip is used. Our minds are our own worst critics, making a conscious effort to think positively about your mistakes and understanding they are moments that can be learned from is one step toward combatting imposter feelings.<sup>292</sup>

One of Dr. Hibbard's final sections discusses seven myths related to imposter feelings. The first myth is that luck plays a role in most situations, Dr. Hibbard elegantly states,

"Is luck really involved when you put yourself in situations which might give you opportunities? Does luck play a part in giving yourself a better chance by doing these things, when many others could do the same, but choose not to? Is luck involved in saying yes to meeting a contact or putting yourself in situations where you might meet people who can make a difference to your career? Is it luck when you do these things, even when you don't always feel like it? If you didn't really want to go, but you went anyway, is that luck? Or is that a sign that you are driven and determined – two key ingredients to doing well?"

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<sup>291</sup> Ibid., 164.

<sup>292</sup> Dr. Hibbard, 169.

Luck may play a role in many aspects, but not when it comes to situations that have been worked at for a long period of time. Luck applies to situations we do not have control over such as wonderful weather making a percussionist's tambourine sound great. However, luck does not apply to situations where we can be actively engaged in such as the examples mentioned in the above quote.<sup>293</sup> The second myth is that a person's success is an accident, something must have been overlooked when choosing this person for a particular position. This mindset puts people out of the controlling zone and gives fault to something else for experiencing feelings of self-doubt. The definition of a fluke according to Dr. Hibbard is "an odd occurrence that happens accidentally and is unlikely to be repeated, rather than being planned or arranged."<sup>294</sup> Earning a position through a rigorous hiring process or landing a spot with a major orchestra are not able to be obtained without extensive experiences. These are situations that can absolutely be repeated. Exerting significant effort to achieve a specific position does not imply that it is a stroke of luck.

The third myth of "it's just because I worked really hard," discounts success and is linked to the idea that if they worked hard and did well, then anybody can do it.<sup>295</sup> While there may be some truth to this statement, it negates the achievements made, the person still worked incredibly hard and earned the achievement they have attained. Keeping this persistent thought is dangerous as it is a negative mindset that can lead to many self-doubt issues.

The fourth and fifth myths go hand-in-hand with the second myth of just being a fluke, the fourth is being in the right place at the right time and the fifth is the idea that of only getting a position because they liked their personality. These are harmful thoughts because they imply rather than getting the position through experience and achievement, they were fooled into being

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<sup>293</sup> Ibid., 187.

<sup>294</sup> Ibid., 188.

<sup>295</sup> Ibid., 189.

won over through charm.<sup>296</sup> The right place, right time approach is also negative as it gives relevance and feeds into the myth of accomplishments being a fluke.<sup>297</sup>

The sixth and seventh myth are related to dismissing achievement through being helped by others. Myth six is dismissal through believing it would not have been possible without the team and the person would not have possibly achieved alone. So does the seventh, however the difference is dismissal of achievement because somebody they know helped get them “an in,” otherwise they would not have made it.<sup>298</sup> Hibbard’s suggestion is to review how they got to their achievements in the first place, review what they have done and determine if one of these myths is actually the reason, or would they be where they are if they did not go through the training or experiences necessary for these achievements.<sup>299</sup>

Much of combating imposter syndrome is within changing the mindset, accepting achievements as they come in rather than creating excuses for why they could have happened. These constant negative thoughts eat away at the psyche and create a false belief that one is not able to succeed without help or would not be able to repeat the success they have gained.

### **Sleep Strategies**

Creating healthy habits that ensure our bodies go through a natural sleep cycle is essential for maintaining proper cognition throughout our lives. We know that sleep deprivation can often lead to spiraling mental health concerns. Lack of sleeping creates stress, pumping out more glucocorticoids and leading to excess cortisol in the brain. Too much cortisol in the amygdala

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<sup>296</sup> Ibid., 191.

<sup>297</sup> Ibid., 192.

<sup>298</sup> Ibid., 194.

<sup>299</sup> Ibid., 197.



puts the body into a state of fight or flight making sleep incredibly difficult, and thus the spiral continues.

Two reputable texts, *Insomnia Doc's Guide to Restful Sleep: Remedies for Insomnia and Tips for Good Sleep Health*, by Dr. Kristen Casey, and *Why We Sleep: Unlocking the power of Sleep and Dreams*, by Dr. Matthew Walker, have a wealth of information regarding sleep. The strategies discussed have shown great success for many people. Dr. Kristen Casey and Dr. Matthew Walker are leaders in the field of sleep research and both are active in the professional and educational field of psychology.

Dr. Kristen Casey's text includes a myriad of information backed by studies and other reputable sources. To discuss the strategies she suggests, we must first examine the myths she presents about sleep. These are myths that many people believe to be fact and base much of their sleep choices around the myths.<sup>300</sup> Allowing these five myths to influence choices for our body's sleep cycle can be quite harmful to the necessary parts of sleep we need.

The first myth that could prevent reaching all stages is that we need eight hours of sleep. The truth is most doctors do not give an exact time to any patient for recommended sleep, it is typically a range, for adults this range is seven to nine hours of sleep.<sup>301</sup> Each person reacts differently to various amounts of sleep. Some may function quite well on six hours of sleep, while others feel groggy if they are unable to get a full nine hours. Some people have a genetic

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<sup>300</sup> Kristen Casey. *Insomnia Doc's Guide to Restful Sleep: Remedies for Insomnia and Tips for Good Sleep Health*. Mango Media Inc., (2023); 105.

<sup>301</sup> Consensus Conference Panel, Non-participating Observers, and American Academy of Stress Medicine Staff. "Recommended amount of sleep for a healthy adult: A joint consensus statement of the American Academy of Sleep Medicine and Sleep Research Society." *Journal of Clinical Sleep Medicine*, vol. 11, no. 6, (2015); 591-592.

predisposition for shorter sleep. However, this is a rare condition so a doctor should be consulted before deciding to sleep less.<sup>302</sup>

Keeping note of how one may feel while waking up is a good way to tell which sleep schedule is right. If cognition feels good and there is not any much feeling of grogginess, then take note of the amount of sleep taken and try to be consistent about the sleep each night. Just be sure the sleep is quality sleep. Dr. Casey explains that quality of sleep is far more important than quantity.<sup>303</sup> Dr. Casey talks about “sleep architecture,” which are the stages necessary to go through during sleep so we can restore our cognition and store our memories.<sup>304</sup> Going through every stage of the sleep cycle is necessary as most of this restoration happens within deeper stages of sleep. For some, reaching the deeper levels of sleep comes quite easily and they may not need as much time to sleep, while for others, they may need more time to be able to spend an appropriate amount of time in these deeper levels of sleep.<sup>305</sup> More physically or mentally active days may need more sleep for our minds and body to be able to recover and store memory.

The second myth is the possibility to catch up on sleep. Dr. Casey mentions often that the key to proper sleep is through consistency, missing hours or sometimes entire nights of sleep still have damaging effects on the mind. Getting well rested after not resting throughout the week is still good to do, however, nothing is being caught up, the body is simply restoring itself to full functionality.<sup>306</sup> A person may feel sufficiently rested after 12 hours of sleep on Friday night, however, the rest of the week their body is likely struggling to function well on just a few hours

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<sup>302</sup> Y. He, Jones, C. R., Fujiki, N, Xu, Y., Guo, B., Holder, Jr., J. L., Rossner, M. J., Nishino, S., and Fu, Y. “The transcriptional repressor DEC2 regulates sleep length in mammals.” *Science*, vol. 325, no. 5942, (2009); 866-870.

<sup>303</sup> Dr. Casey, 109.

<sup>304</sup> *Ibid.*, 38.

<sup>305</sup> *Ibid.*, 109.

<sup>306</sup> *Ibid.*, 119.

of sleep. Researchers found that attempts to compensate for sleep missed throughout the week does not restore the body and mind in the same way consistent quality sleep does.<sup>307</sup> Naps can be helpful, but Dr. Clance recommends not sleeping in the afternoon as this can affect our sleep cycle when it is time to go to bed.<sup>308</sup> If a nap is needed, the best time to do that is between late-morning and mid-day. 30-minute naps are known to temporarily restore a small amount of functions, at least enough to get through the remainder of the day.<sup>309</sup>

The third myth is the idea that if there are no awakenings throughout the night, then it must be good sleep. This is where having a sleep tracking device can be handy, many modern Fitbits or smart watches are able to roughly calculate when and how long our bodies reach each stage of sleep. Just because we are sleeping all night does not always mean they mind is getting to the necessary stages.<sup>310</sup> Most people experience short-lived awakenings overnight, most are unconscious and may be sparked by anything, it may wake up the body, but it can keep the mind out of our deeper stages of sleep.<sup>311</sup> Conscious awakenings are much more obvious, such as needing to get up and use the bathroom. This myth goes into deep discussion over the use of medication for sleep, the overall outcome of what Dr. Casey expresses for each medication is to discuss with a doctor what the right method is for better sleep may be for them rather than self-medicating.<sup>312</sup>

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<sup>307</sup> D. Leger, Jean-Baptiste, R., Collin, O., Sauvet, F., and Faraut, B. “Napping and weekend catchup sleep do not fully compensate for high rates of sleep debt and short sleep at a population level (in a representative nationwide sample of 12,637 adults.) *Sleep Medicine*, vol. 74, (2020); 278-288.

<sup>308</sup> Dr. Casey, 120.

<sup>309</sup> Ibid.

<sup>310</sup> Ibid., 122.

<sup>311</sup> Ohayon, M. M. “Nocturnal awakenings and comorbid disorders in the American general population. *Journal of Psychiatric Research*, vol. 43, no. 1, (2008); 48-54.

<sup>312</sup> Dr. Casey, 150.

The fourth myth is that our body gets used to less sleep. As discussed, everyone has a particular amount of sleep their bodies respond to best. “If you’re only sleeping a few hours per night, your body will take it, but it doesn’t restore your functions to their full capacity or potential with less time. In fact, depending on how much sleep you’re losing, this can be detrimental to your health.”<sup>313</sup> Having a few nights without quality sleep is fine, but when it becomes a chronic deprivation is when it becomes a major issue.

The final myth is that laying down in bed will expedite the process of falling asleep. Our minds will not go to sleep unless it is tired. Not being able to fall asleep can cause anxiety and stress further keeping us from being able to sleep. Dr. Clance recommends only going to bed when our minds begin to feel symptoms of being tired. Lying in bed causes our minds to associate that space with negative feelings which could affect the ability to fall asleep in the same space in the future.<sup>314</sup> If after 20 minutes the mind is unable to fall asleep, Dr. Clance suggests leaving the bed and doing a relaxing activity until the mind feels sleepier.<sup>315</sup>

Dr. Clance offers three steps to recognizing and managing sleep expectations. Step one is acknowledging what is going well. This involves being honest with how the body feels after waking up, if it feels rested, make note of what went well and try to repeat it in the future. Step two is to identify where growth is needed. Discovering what is keeping a person from getting quality sleep is paramount in creating tactics to help. The final step is to focus on the data you have received from the last steps. Adjust the sleep schedule accordingly when things go well or not, making note of these processes and creating changes to remedy the issues is where progress

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<sup>313</sup> Ibid., 151.

<sup>314</sup> Ibid., 154.

<sup>315</sup> Ibid.

is made the most.<sup>316</sup> Keeping a sleep journal is a great way to keep track of progress and visualize what needs to be done for improvement.

The next book reviewed are strategies within the text, *Why We Sleep: Unlocking the power of sleep and dreams*, by Dr. Matthew Walker. The last section before the appendix within this text discusses where technological advances are headed and how that progress could potentially be used to further understand sleep and its effects on the person rather than a broad group. He also discusses the advancements being beneficial for future education and understanding of the subject for the public.

Within his appendix, he includes twelve tips that will help towards gaining healthy sleep. Tip one is sticking to a sleep schedule, allowing the body to keep its circadian rhythm by going to bed at a similar time each night would help greatly. Consistency partnered with quality sleep is key. Dr. Walker suggests setting an alarm for when it is time to prepare for bed. We set one for when it is time to get up, yet not when it is time to go to sleep. Setting an alarm will keep people honest and consistent.

Tip two suggests avoiding exercise too late in the day, when we work out the body late in the day or close to when we want to sleep, it can take a while for it to calm back down. Exercising just before bed can inhibit our ability to reach the necessary sleep stages for restoration.<sup>317</sup> The body needs an appropriate amount to relax, unwind, and become sleepy before the mind can properly fall asleep and reach every sleep stage.

Avoidance of nicotine and caffeine before bed is recommended in tip three as well as avoiding alcohol before bed as tip four. Caffeine and nicotine stay in the body for roughly eight

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<sup>316</sup> Ibid., 230.

<sup>317</sup> Walker, Matthew. *Why We Sleep: Unlocking the Power of Sleep and Dreams*. Simon and Schuster, (2017); 341.

hours and smoking or drinking coffee in the afternoon can lead to frequent awakenings throughout the night. These are both stimulants, causing the mind to only be able to sleep lightly, therefore not allowing the body to reach necessary sleep stages for restoration and memory retention.<sup>318</sup> Alcohol works similarly, keeping the body in lighter stages of sleep. It also can cause frequent awakenings when the effects begin to wear off.

Tip five suggests avoiding large meals before bed. A snack is fine, however, a large meal can lead to indigestion. Remember, the body focuses on specific restoration processes when deep sleep occurs, the body digests slower throughout the night which can lead to an upset stomach. Likewise, drinking too many fluids before bed can cause frequent awakenings due to having to constantly urinate.

Tip six is avoiding medicines that could be delaying or disrupting sleep. Common over the counter medicines for cough, flu, or allergies can disrupt sleep patterns.<sup>319</sup> Talking to a doctor or pharmacist will give clearer answers as to the effects these drugs will have on people uniquely. Tip seven suggests not taking naps after 3 p.m., as discussed previously, taking naps later can throw off our sleep cycle and take longer to fall asleep when the time comes, leading to inconsistencies. Inconsistent sleep does not allow our body to properly restore itself.<sup>320</sup>

Tip eight, relaxing before bed and tip nine, taking a hot bath, can go together. A warm bath for most people can be quite relaxing. Including a time to relax within a busy day's schedule can help ensure that proper importance is given to the necessary wind-down time needed before bed. Staying away from technology screens is beneficial as constant exposure to LED lights

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<sup>318</sup> Ibid.

<sup>319</sup> Ibid., 342.

<sup>320</sup> Ibid.

effect sleep.<sup>321</sup> A warm bath is beneficial as the drop in body temperature after the shower can help the body feel sleepy as well as the shower itself being quite relaxing and slowing down the body for sleep.<sup>322</sup>

The tenth tip suggests getting rid of any distractions within the bedroom. Similar to findings by Dr. Clance, our minds associate what is around our bed to sleep time, if we have a chaotic room with a lot of lights, laundry everywhere, and warm temperatures all contribute to the body not reaching deeper stages of sleep. It is recommended to keep cool temperatures when sleeping as it makes it more likely to reach every stage.<sup>323</sup> If electronics like cellphones are kept in the room, make sure they are left on “do not disturb” as constant notifications will not let the body reach deep sleep stages.

Proper sunlight exposure is suggested by tip 11, rather than covering up windows completely, allow space for light to get inside. Sunlight is essential for regulating sleep cycles and our circadian rhythm. Sleep experts recommend either waking up with the sun, or using bright lights throughout the house so the body knows it is time to be awake and alert.<sup>324</sup> Likewise before bedtime it is recommended to turn have less light exposure throughout the house an hour before bed.

The last tip was mentioned by Dr. Clance as well, this is to not lie in bed awake at night. Lying in bed awake for more than twenty minutes makes the body anxious, and as we know, anxiety keeps us from being able to sleep appropriately. Both Dr. Clance and Dr. Walker

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<sup>321</sup> Ibid.

<sup>322</sup> Ibid.

<sup>323</sup> Ibid.

<sup>324</sup> Ibid.

recommend that if a person is not feeling tired after 20 minutes of attempting to sleep, people should get up and do relaxing activities outside of bed, such as reading or listening to music.

Overall, the key seems to be consistency and quality of sleep. Doing whatever it takes to ensure the body is able to reach the deep stages of sleep, particularly REM sleep is essential for bringing our bodies and minds back up to their full capabilities. Keeping a schedule and a sleep journal will help keep one honest with themselves ensuring that proper practices and methods are being done to prepare for bedtime. Keep track of what works and what does not so that each week gets better than the last and soon quality sleep will be consistent.

These suggestions are not cures for insomnia, talk to a doctor to see what methods would be beneficial and if medication or further help is necessary. The methods within this document should not be used to replace recommendations made by medical doctors, but merely as a resource for a look into methods that have worked for people in the past.

### **Stress Management Strategies**

Stress is incredibly damaging to the body and mind, neglecting to manage how we receive and react to stress for most people is a choice and a mindset. Most strategies involved within the management of stress deal with changing the thought process so reacting to stress is purposeful and positive rather than uncontrollable, irrational, and negative. This type of change is incredibly difficult, much more difficult than changing sleep habits. Sleep can be regulated through external interventions, such as alarms. Managing stress is mostly internal and requires being honest with oneself including admitting mistakes and flaws, staying consistent, and following through with chosen strategies.



Being reviewed within this section are *The Stress-Proof Brain: Master your Emotional Response to Stress Using Mindfulness and Neuroplasticity*, by Dr. Melanie Greenberg, and *Don't Sweat the Small Stuff*, by Dr. Richard Carlson. Both texts include excellent strategies on both managing stress and creating strategies to follow through with that can significantly impact stress levels therefore leading to a healthier, and hopefully, a longer life.

Dr. Greenberg's book has a wealth of information on the impacts of stress on the body and mind. Particularly chronic stress. As discussed in a previous section, stress is important for our growing and development, however, chronic stress and excess amounts of stress hormones pumping through the body has long-term impacts on important mental factors such as cognition and memory. Without allowing the body to shut off the stress response hormones, it does not give the us a chance to recover since it is constantly in a "fight or flight" mode.

The first step suggested by Dr. Greenberg is to train the amygdala. This is the part of the brain that recognizes and reacts to stressors. The amygdala decides how to react to an event and how much stress hormones may be necessary to handle it properly. According to Dr. Greenberg, mindfulness is the strongest way to train the amygdala from panicking and create rational responses.<sup>325</sup> Changing the mindset sounds much easier than it is being done, this takes time and commitment as well as realizing when one is losing control in the moment and actively choosing to change the way one thinks about their approach or reaction.

As we learned, the more we react and get results based on these reactions, the more the amygdala will be trained to react similarly in the future.<sup>326</sup> The human body has the ability to develop negative responses, and if it achieves a desirable outcome, it will retain that experience

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<sup>325</sup> Dr. Greenberg, 57.

<sup>326</sup> Ibid.

and utilize it in future instances of encountering stressors. An example may be a percussionist gets angry in the practice room, they may hit something with their sticks or lash out in some other way angrily. If this is consistent and they are able to succeed in what they are practicing, they will then remember this has worked and the amygdala will draw from this experience automatically reacting in a similar way since it worked in the past.

The mind does this subconsciously in adults as well, for example, some adults lash out and act angrily when they do not get what they want. If others give into the person's anger and give them what they are angrily requesting, they will only learn to continue the same trend in the future since they got the desired results. These are extreme examples and in many cases these reactions can be subtle but still negative like disassociating every time one gets criticized, this way they do not have to hear the comments that, as they perceive, are negative perceptions. Percussionists would greatly benefit from learning to train the amygdala, as many of the responses in music are based on emotional reactions, this being evident in many performers who may experience sensations of shaking uncontrollably after intense moments.

Dr. Greenberg mentions part of Buddha's teachings mention that mental pain may be inevitable, however, mental suffering is not. As difficult as it may be to believe, the way we interpret stressors can be controlled and can be either ignored when the criticism is meant with ill-intent or criticism can be used to better the self and learn from the experience. Beginner percussionists often get criticism and may interpret an abundance of feedback as an indication of poor performance. Changing the mindset in this case would mean an active change in thought process after receiving feedback. It may start with actively interrupting negative thoughts and thinking, "I will use this information to better myself in the future." Deciding to use criticism and

develop from them in the practice room rather than dwelling on what could have been done can be advantageous for positive mental health.

Dr. Greenberg's text discusses how mindfulness can manifest, and one way is through an observance stance.<sup>327</sup> Some may react immediately rather than taking a moment to process and generate a thoughtful response. Taking a moment to think allows time for a conscious analysis and decision of a potential reaction.<sup>328</sup> Over time this will help the person gain control of their reaction to stress and gain control over behavior. This relates very closely with the next mindfulness state, and this is the process of slowing things down. The amygdala naturally acts wants to act quickly, the first step in being mindful is through slowing things down so we have time to appropriately react to a situation.<sup>329</sup> This is also helpful to decide between an emergency and a non-emergency, since this is done through thinking of solutions and adapting to changes, that means the process is done through the prefrontal cortex.<sup>330</sup> This will help move the brain from an acting mode into a watching and thinking mode.

The next state is focusing on the present moment. Although mentioned within Dr. Greenberg's text, the book, *Why Zebras Don't Get Ulcers*, by Robert Sapolsky discusses this exact mindset throughout the text. Zebra's do not get ulcers because they are not worried about the past or the future, they live in the present. When a Zebra gets attacked, they stress for that moment and once they know they are free from the danger, they quickly go back to a relaxed state and go back to their business.<sup>331</sup> If only it were that easy for humans. Our minds are far more complex, and we have far more awareness of the world around us, however, it is possible

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<sup>327</sup> Ibid., 64.

<sup>328</sup> Ibid.

<sup>329</sup> Ibid.

<sup>330</sup> Ibid.

<sup>331</sup> Robert Sapolsky, 10.

to train our minds to think about the present. Using mindfulness, this is done through actively changing thoughts or turning negative thoughts into positive and constructive ones.<sup>332</sup>

The next stage is to replace fear with curiosity. Fear keeps us from experimenting and taking risks, it keeps us from being able to reach our full potential. This is a huge step in learning from our failures, taking more chances means opening ourselves up to more failures, but through mindfulness we can learn to take failures in a positive light and learn from them in the future. When percussionists are first learning how to engage and show emotion on stage, a lot of that can translate into being quite excessive and distracting from the performance. Many performers fear making a fool of themselves in front of friends, colleagues, and family therefore never really commit to showing much emotion making it difficult to incorporate emotion in the future.

Perhaps the most difficult two stages of mindfulness according to Dr. Greenberg, the first being openness and nonjudgment, then the second one being letting go of needs.<sup>333</sup> Having the openness to let go of what we feel is needed, however, things we feel we “need” are typically actually things that we “want.” The difference between these two words is that things that would drastically change an outcome if not included would be “needs,” while “wants” are not necessary for an outcome. For example, the need to control every situation, when percussionists perform, particularly in an ensemble situation, there will be many things they will be unable to control. It can be quite stressful when we are not able to control situations, using mindfulness, we are able let go of that need and realize it is ok not to have full control. Reacting to uncontrolled factors has an important role in stress.<sup>334</sup>

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<sup>332</sup> Dr. Greenberg, 65.

<sup>333</sup> Ibid.

<sup>334</sup> Ibid.

The last stage involves mentally being in the moment rather than actively engaging in the moment.<sup>335</sup> Mindfulness allows us to relax and rest our bodies as we think, and it teaches us to not worry about the future or past and to just exist and enjoy the present moment.<sup>336</sup> This is much easier said than done, however, the goal is consistency in mindset. Actively turning away negative reactions and allowing healthy and productive reactions to come through instead.

These stages set up the remainder of the book and much of the text revolves around it until the end. However, one section stands out as being particularly important, especially for percussionists. This section is about becoming gritty. This relates to determination and mental toughness. Research shows that resilient people have three important qualities; commitment, challenge, and control.<sup>337</sup>

“Commitment involves having a passion for what you do that allows you to stick with it when things get rough. Challenge involves viewing your stressors as a challenge, rather than a threat (which helps your amygdala calm down and generates positive emotions, such as hope and excitement). Control involves investing your time and energy in changing the things you can control, rather than trying to change the unchangeable.”

Being gritty involves striking a healthy balance between being willing to tolerate discomfort in order to reach an important goal, and the willingness to stand up for needs in the moment to ensure a positive outcome of the situation.<sup>338</sup> A percussionist should be able to get through uncomfortable situations with the mindset of gaining valuable experience through the process, however, they should also be aware of limitations and realistic goals. Learning

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<sup>335</sup> Ibid., 66.

<sup>336</sup> Ibid.

<sup>337</sup> Kobasa, S. C. “Stressful Life Events, Personality, and Health: An inquiry into hardiness.” *Journal of Personality and Social Psychology Review*, vol. 33, no. 6, (1979), 1-11.

<sup>338</sup> Dr. Greenberg, 185.

percussion instruments, we may not have an interest in still contribute to a well-rounded percussion experience and that knowledge can often be translated to many other facets of music. A percussionists should not be afraid to make decisions based on what is best for themselves as long as it is not negatively impacting those around them. For example, taking extra time before a rehearsal to warm-up and being able to say, “no,” to starting early or moving on so the person can properly mentally and physically be prepared.

Each book about stress read by the author to prepare for the writing of this document has a section relating to the importance of sleep on stress. Earlier in the document was a discussion about the downward spiral sleep deprivation creates. Sleep deprivation causes a lot of anxiety and therefore stress, leading to the secretion of stress hormones, which further prevents the ability to get quality sleep. Quality sleep is incredibly important and hitting deeper stages of sleep is essential for the ability to store memory and restore the body to full capabilities.

The text, *Don't Sweat the Small Stuff*, by Dr. Richard Carlson is written as a list of strategies, methods, and mindsets that has helped others in the past. It is a combination of a handful of books with the title *Don't Sweat the Small Stuff*. For example, *Don't Sweat the Small Stuff: In Love*, or *Don't Sweat the Small Stuff: About Money*, among a few more. This book is strongly recommended by the author of this document as it is a small handbook with readily available stress strategies. This book is helpful because constant small stressors without a way to release often leads to negative mental health outcomes.

The first strategy is perfect for this document as it relates to imposter syndrome, this is to make peace with imperfection.<sup>339</sup> Quite a difficult task, however this goes along with being able

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<sup>339</sup> Richard Carlson, Ph.D. “Don't Sweat the Small Stuff: and It's All Small Stuff.” *Hatchet Book Group*, New York, NY, (2017).

to let go of things we have no control over. Understanding that there is no such thing as perfect takes stress off the expectancy for perfection in every task. Dr. Carlson says this is done through recognizing when we fall into a habit of trying to control every outcome and accepting that everything is okay the way it currently is.

Another relates to the downward mental health theme of this document; this is awareness of the snowball effect our thinking has. Being aware of how quickly negative thinking can spiral out of control will help create the ability to control the thought process and create more positive thoughts. This comes through thwarting the negative thoughts before they have time to manifest and grow.<sup>340</sup> As a person is busy, filling their minds with thoughts about how busy they are and how stressed they are will create a snowball effect leading to far more stress than necessary. Interrupting these negative thoughts and countering with positive thoughts is an excellent and helpful exercise toward positive mental health.<sup>341</sup> This type of mindset also includes being more patient.

Dr. Carlson suggests everyone to consider the sentence, “will this matter a year from now?” This helps put into perspective the importance of a particular stressor and whether it deserves attention.<sup>342</sup> This is a great exercise for handling a stressor and can give validation to or discredit certain feelings, either way, knowing whether an issue is important or not will help prioritize future steps. Some may find they tend to dwell and think constantly about stressors that affected them throughout the day, with this mindset of thinking about the future it can take the scope of a small issue and put it in a broader scale. This can help make decisions on if a stressor

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<sup>340</sup> Dr. Carlson, 14.

<sup>341</sup> Ibid.

<sup>342</sup> Ibid., 45.

is worth the time or effort, typically the answer is no, but when it is, now they are able to make a conscious and informed decision about how to progress.

The next suggestion is particularly important for percussionists. Most people experience stress throughout the day, and this may involve a lot of noise with little time to analyze and react to stressors. This suggestion is to set aside quiet time every day. Quiet time allows us to reflect on the day and relax from the constant noise. Percussionists are around excessively loud noises daily, adding to the myriad of stressors already experienced. This helps take a moment each day to sit in silence and appreciate the present. This can be done quickly as well for those with immensely busy schedule, Dr. Carlson suggests taking a moment to pull over just before getting to work or getting home and just focus on breathing.<sup>343</sup> This helps slow things down and create a sense of relaxation.

The next suggestion involves choosing battles wisely.<sup>344</sup> This goes in line with a topic mentioned in the previously reviewed text about stress, which is being a bit grittier. Being able to say no when necessary and getting through uncomfortable situations for the progression of oneself. This is also a matter of knowing when a good time is to argue, when a good time is to sit back and listen, and when a good time is to walk away. Creating small battles over little stressors will only contribute to an overall negative mental health.

Dr. Carlson states there is nothing wrong with arguing for limitations. Creating limitations is important for creating and establishing boundaries and prevent others from pushing you into a stressed state when it is not necessary.<sup>345</sup> This is another process of knowing when to say yes and being able to say no. Setting up these boundaries can help prevent stressors from

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<sup>343</sup> Ibid., 71.

<sup>344</sup> Ibid., 77.

<sup>345</sup> Ibid., 121.



taking over. Likewise, deciding that a certain goal is unattainable or out of reach, puts a limit in our minds on what we are and are not able to achieve. This can quickly create a barrier of limitations that makes a person feel as if they are not capable of certain goals.

Another important mindset is resisting the urge to criticize. Being critical contributes to feelings of anger and distrust in others.<sup>346</sup> Being critical to be helpful is far different from being critical to be negatively judgmental. Dr. Carlson states that being critical is not a reflection of others but shows a reflection of the criticizing people and tells the world, “I have a need to be critical.”<sup>347</sup> The solution, similarly to past strategies is to be aware of these thoughts and change them in the moment, create positive thoughts in place of the negative judgements.<sup>348</sup>

“Remember that you become what you practice most.”<sup>349</sup> Each person is a result of their experiences and reactions to past stressors. How they react to and perceive a situation directly relates to future decisions and stress reactions. Constantly using frustration as a response to stress will then create a pattern of using frustration to deal with future stress. Choosing to react with compassion, patience and kindness will help set up similar processes later. The key is being consistent with catching and quickly changing the negative mindsets.

An incredibly important strategy in the text is to redefine what is considered a meaningful accomplishment.<sup>350</sup> Constantly setting unattainable goal creates negative responses when we are inevitably unable to reach these goals. It also deals with placing levels of importance on accomplishments. For example, rather than reaching for an accomplishment of a perfect performance or earning praise, aim for accomplishments like staying calm all day or reacting

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<sup>346</sup> Ibid., 123.

<sup>347</sup> Ibid., 124.

<sup>348</sup> Ibid.

<sup>349</sup> Ibid., 171.

<sup>350</sup> Ibid., 215.

rationality to harsh criticism. This not only puts reward into being positive but also creates a sense of self-control. Create meaningful accomplishments that align with future goals, for percussionists, this can be getting through certain pieces or having goals of positively responding and learning from criticisms.

## CONCLUSION

The goal of this document was to review mental health topics that many percussionists experience, and review strategies for mitigating these issues. The topics within this document were chosen because these have appeared to be prevalent in professionals and with percussionists in the academic environment. Knowledge of what is affecting our minds and bodies is the first step to being able to make a positive change. Without knowing where issues are coming from, there is no way to know what issue may or may not work. The methods discussed within this document are common methods used by professionals who have had success with these tactics.

Imposter syndrome impacts many high achieving people without them realizing there is even a name for the feelings. For this the main aspect that help a person to begin to accept they are not an imposter is the realization that countless highly successful and respected people experience these same feelings. Upon learning this, you can come up with strategies to combat the struggles associated with imposter syndrome.

Keeping a positive mindset about feedback, including criticism, can help with steps toward no longer feeling like an imposter. It is natural to fail, we learn from these failures and get better when similar situations arise, this is the natural way we learn and process information. Being afraid to fail leads to taking less chances, therefore missing out on countless learning opportunities.

Likewise, keeping a strong relationship with healthy sleeping habits is paramount to preparing the mind for the inevitable stressors that come our way. Percussionists have a myriad of stressors in and out of academia. Not learning to push through them and learn from them can lead to issues extensively discussed within the stress portion of this document. Mental and

physical health spirals are created from lack of sleep, and lack of sleep makes us more prone to stress. Therefore, secreting more glucocorticoids and cortisol for our bodies to be prepared for reacting to this stress, which in turn does not allow the body to go into necessary deep sleep stages to restore the body to its full capabilities.

Keeping a schedule and a journal for sleep is strongly recommended by many professionals. This way you can physically see what is working or not and is then able to adjust and make healthy changes to find the right way to sleep that is unique for them. Limiting distractions and allotting appropriate time for the body to relax before bed is paramount in paving the way for our bodies to reach deep sleep.

Perhaps the most important takeaway of this document is the importance of managing and reducing stress. Chronic stress is highly damaging to our mental and physical health as discussed in this document. For stress, the largest takeaway is adjusting our mindset. This not only involves staying positive and doing our best not to let stressful events get to us, typically through having a healthy outlet, but it also involves ensuring stressors do not enter our lives, such as saying yes to too many tasks and becoming burnt out quickly.

Each section, imposter syndrome, sleep deprivation, and stress management have a common suggestion for mitigating negative effects. This is the concept of mindset, changing the way we think and react to certain events and actively choosing how to react. Our mindsets are a choice, deciding to be negative will create negative habits that are difficult to get out of in the future. The key for each of these mentioned exercises is to stay consistent with the strategies and be honest with the outcomes. Nobody can tell what a person is truly thinking, and we certainly are not able to force a person to believe or think a particular way. It is up to the person to make

changes within themselves and honestly track their progress to adjust and get better as time goes along.

This document is meant to be a resource for percussionists to understand what these mental health issues are, and why they are important to keep in mind and schedule time for within our lives. This can help percussionists navigate the complexities of being in academia or being an extensively busy gigging musician while maintaining proper focus on helpful and positive mental health.

## APPENDIX A: OTHER HELPFUL STRATEGIES

Each person adheres to a distinct assortment of techniques and principles that may specifically assist them. The objective of this section is not to diminish the value of other approaches, but rather to evaluate and discuss useful resources that have been consistently present and advantageous in the author's life. While acknowledging that different individuals may find alternative approaches more advantageous, this document might serve as a reference for anyone seeking additional ways and practices that may be more suitable for their needs..

### **Personal Experience**

I embarked on my journey of learning and comprehending mental health at a relatively early stage of my life. Prior to my adoption, my mother fulfilled the role as my therapist when I was in foster care. She not only rescued my brother and me from a dreadful circumstance but also ensured our well-being until she made the decision to officially adopt us. She instilled in us a profound sense of self-awareness and immersed us in the realm of mental health as we matured. The enduring positive presence of mental health in my life can be attributed to my mother's extensive interest in the field and her career as a social worker.

During childhood we often make many mistakes and having a therapist as a mother meant not simply experiencing a time out and moving forward without further reflection. Frequently, we were prompted to scrutinize our behaviors, articulate the rationale behind our decisions, and devise strategies to avoid repeating the same erroneous choices in the future. This has provided me with a vast array of resources to utilize when necessary and this has been beneficial throughout my academic endeavors at the university level. Comprehending the reasons

behind my emotions, identifying detrimental patterns that hinder my achievements, and being conscious of how my behavior might impact myself and people who are part of my life will help with creating strategies to change my behavior.

At the beginning of my master's degree, I embarked on studying and acquiring knowledge about the intersection of mental health and music. This pursuit commenced with a course titled "Psychology in Music." This course delved deeply into the psyche of numerous musicians and facilitated the comprehension of the way in which they frequently encounter substantial mental health issues, as well as the underlying causes behind them. This piqued my curiosity and motivated me to investigate the topic of mental health in music more seriously.

I have been fortunate to have professors who incorporated elements related to mental health in their classes. During my studies with Dr. James Doyle III at Adams State University, I was exposed to several publications on enhancing productivity in the arts. Additionally, I learned about mental health techniques commonly employed by professionals in the music industry from the book *The Savvy Musician*, by David Cutler. Under the guidance of Dr. Timothy Jones at the University of Nevada in Las Vegas, I was exposed to a plethora of literature about positive mental health. This included an introduction to the works of Don Greene, who has authored many books and conducted seminars on mental well-being. We explored several materials recommended by Dr. Jones during his classes.

I have a persistent interest in mental health, and I am aware that there is still much more for me to learn in this field. I am eager to continue my involvement with music as it provides me with the opportunity to do further study and gain a deeper understanding of the relationship between the mind and music. I aspire to conduct research and compose scholarly works on

several subjects pertaining to percussionists. I am committed to advocating for a conducive mental health atmosphere for both myself and my students.

### **Time Management**

Efficient time management is important for achieving success, particularly as our schedules become increasingly hectic. Several approaches have been beneficial during my study, particularly during my pursuit of a doctoral degree. These are strategies that have enabled me to maintain concentration and optimize my time management while prioritizing mental well-being. These strategies can be advantageous for percussionists, as they have assisted me in successfully completing numerous tasks both in school and beyond. I offer these ideas for you to try and execute as a way to provide an additional set of constructive strategies that you can consistently utilize.

The pomodoro technique is my preferred method for enhancing productivity and effectively managing my time. This is derived from kitchen timers shaped like tomatoes that are powered by the spring wind mechanism. This strategy incorporates a routine consisting of 20 minutes of work followed by 5-minute rests. Maintaining integrity with your timer, by diligently working when it is running and genuinely taking breaks, can result in heightened productivity. After a period of utilizing the approach, I no longer require it. Instead, I enter a state of productivity and work continually until I feel the need to pause. Subsequently, I employ a timer to ensure that I promptly resume my productivity in the event that I have not completed my assignment.

During my study for this paper, I came across a checklist called "one-day-at-a-time" that was developed by a small company called Inner Guide. It not only covers the typical features of



daily scheduling planners, such as "to-do" lists, appointments, and goal setting, but it also addresses elements related to mental health and mindfulness. There is a designated section for a "wellness check-in" that consists of a compilation of mindfulness and positive health activities. Individuals have the ability to mark a checkbox next to the statements they have actively engaged with or attempted during the course of the day. Phrases like "overcame procrastination," "meditated or quieted my mind," and "reset myself when stressed" contribute to increasing self-awareness regarding one's thought processes. Additionally, there is a mindfulness chart available for you to indicate the specific areas in which you experienced a significant sense of connection to your life, such as nature, health, and relationships. The long-term goals area facilitates individuals in establishing and monitoring their long-term objectives on a daily basis.

### **Mindset**

An overarching theme throughout the tactics outlined in this document is the significance of mindset. The influence of mentality on our responses and actions makes it highly significant in determining how we choose to interpret and handle different circumstances. Our response to unfavorable stimuli is within our control, and we have the ability to generate positive results through adopting optimistic mindsets. Pessimistic attitudes generate a significant amount of superfluous stress, and prolonged stress has a detrimental impact on our psychological well-being.

By focusing on oneself and being mindful of one's reactions, and therefore making proactive adjustments to one's conduct consistently, individuals can enhance their awareness of necessary activities to foster positivity and sustain a healthy mentality. Surrounding oneself with others who possess a positive or motivated disposition can enhance one's outlook and serve as a

source of motivation. Exploring the coping mechanisms and perspectives of your mentors can provide valuable insight into the universality of stress and the strategies they employ to overcome negative thought patterns. This can help you realize that you are not alone in experiencing stress and that even those you admire face similar challenges and develop ongoing techniques to manage stress.

Warren Koontz, a former Army comrade of my father, now does breathing exercises with individuals who experience diverse ailments or simply seek to unwind, cultivate awareness, and attune to their inner thoughts. The group utilizes beats and rhythm as a focal point to aid in calming their thoughts, facilitating the passage of these ideas and enabling easier contemplation of the significance and pertinence of different stressors. Upon completing the exercise, I experienced a significant reduction in stress and achieved a state of mental tranquility that enabled me to effectively address some of my prevailing fears. This is akin to a practice known as sound bathing, which involves using resonant percussion instruments such as singing bowls or gongs to focus on ambient noises. It serves as a sort of meditation that aids in relaxation.

Over time, if you consistently adhere to your selected strategies or adapt your approaches to maintain a positive mindset, it will eventually become a habit. Breaking patterns can be exceedingly challenging; hence it is crucial to consciously recognize the habits you are developing and their potential effects on your mental well-being. I urge you to be cognizant of your response, conduct, and thinking when faced with stressful circumstances and actively strive to generate favorable results from them. I also urge you to allocate greater intervals of rest and make efforts to obtain restful sleep. A optimistic thinking elicits positive responses.

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## CURRICULUM VITAE

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“Imposter Syndrome Among Percussionists.” *Percussive Notes* 61, no. 1 (2023)

“Magnesium Sulfate: Benefits of Epsom Salt for Percussionists.” *Percussive Notes* 31, no. 1 (2023)

### Doctoral Document Title:

Psychological Pitfalls of the Modern Percussionist: A Survey of Coping Mechanisms for Downward Spirals in Mental Health.

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