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Mindfulness and Musicians: An Overview

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HONORS PROJECT

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Mindfulness and Musicians: An Overview

The concept of *mindfulness* has recently gained significant traction within the field of health of wellness. In fact, interest in mindfulness has steadily increased over the past thirty years (Smalley & Winston, 2010). From its origins in Eastern religion, mindfulness has traversed continents and cultures to make its way into mainstream Western culture, medicine, and even education (Williams & Kabat-Zinn, 2011). Many professional fields are learning to integrate mindfulness into their workplace, including the world of professional musicians (Anderson, 2015). But what exactly is mindfulness? Where does it come from? How is it used to the benefit personal wellness?

Mindfulness is “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zinn, 1994, p. 4). The practice is characterized by “attention to the present experience with a stance of open curiosity” (Smalley & Winston, 2010, p. xvi), and it is used to “exercis[e] our innate capacity to pay attention” (Kabat-Zinn, 2015, p. 4). Research on mindfulness, though relatively new, is still extensive, and extends to a variety of disciplines, such as medicine, law, and business (Williams & Kabat-Zinn, 2011).

Mindfulness can be considered either a trait (i.e., something that remains constant over time) or a state (i.e., something that comes and goes like hunger or happiness (Smalley & Winston, 2010). For example, someone who is often attentive and/or aware could be considered generally mindful the same way someone who is often cheerful could be considered generally happy. Conversely, someone who is practicing mindfulness at any given moment could be called mindful in the same way that a person who just ran ten miles could be considered tired.

Meditation is one way through which one practices and achieves mindfulness. While one is meditating, one experiences mindfulness as a state in an attempt to, over time, transform it into

a trait. Far from passive sitting, “[m]editation involves increasing awareness of the body (sensations), emotions, thoughts, the mind, and mental qualities (e.g., turgid, clear, focused). With practice, the aim is for this awareness to be increasingly non-reactive though more acute to events and experiences” (West, 2016, p. 1). In fact, although many styles of meditation encourage a seated posture, one can meditate while standing, lying down, or doing simple tasks like walking, doing the dishes, or other basic movements (Kabat-Zinn, 1994; Nhat Hanh, 1998; Smalley & Winston, 2010). To better understand the connectivity between meditation and mindfulness, however, it is important to explore the background of each practice.

History of Mindfulness and Meditation

Mindfulness is historically a Buddhist practice, and its beginnings trace back about 2,500 years (Biernacki, 2016). However, mindfulness is not exclusively an Eastern concept. Similar practices have been applied in the early religions of African, South American, Indonesian, Siberian, and Japanese traditions (Benson, 1975). There are even instances of mindfulness in the Christian tradition (Butler, 1924; Osuna & Giles, 1981). Although the tradition of mindfulness is ancient, its methods have proven to be of interest in modern times. In recent decades, there has been an exponential increase in papers published concerning mindfulness in relation to medicine, health psychology, neuroscience, primary and secondary education, higher education, the law, business, and leadership (Williams & Kabat-Zinn, 2011), to name a few.

The history of mindfulness is therefore a global expedition. As was mentioned previously, mindful practices in one sense or another have been present in Eastern, African, South American, and European cultures. Although many traditions have mindful elements, the “mindfulness” that has been applied successfully in Western cultures (specifically within the practice of medicine) was adopted from that of Buddhism (Kabat-Zinn, 1994). Because of the

connection between meditation and mindfulness in Buddhist practice, exploring mindfulness must exist alongside an examination of the evolution of meditation.

As mentioned previously, meditation is any period of formal mindfulness practice during which attention to real time experience is crucial. The first systems of meditation originated in early Hinduism, Buddhism, and Jainism (Biernacki, 2016). In all of these iterations, meditation revolved around examining the individual's sense of self. These practices also utilized similar tools such as visualizations (i.e., imagining phenomena that aren't actually present), mantras (i.e., repeated words or phrases), and body awareness (i.e., focused attention on aspects of one's physical form.) However, the practices themselves were different in their interpretations of the effects of such tools (Biernacki, 2016). For example, visualizations may have been of different images, mantras may reference different inspirational sources (i.e., deities), and body awareness may or may not involve movement.

The writings of the Vedic period (1500-500 BCE) are the earliest written account of Indian meditation, although, in practice, they may not be recognizable to modern meditation practitioners. The religious ceremonies of the time boasted boisterous, intense activities which contrast the still, more quiet aspects of modern meditation. Complicated rituals dedicated to fire, which could last for many days using as many as sixteen priests, were usual occurrences. However, texts from the *Rg Veda*, one of the canonical Hindu texts (Witzel, 1997), describe images that appear similar to the altered states of consciousness brought about by meditation. For instance, one meditative figure is described as “the light of the stars, seen in heaven, in all space, girdled with the wind, who goes where the gods have gone,” (GRETIL, N.D.).

The externally involved ritual practices of the early Vedic period eventually gave way to a philosophy that focused more on introspection. This change occurred around the eighth century

BCE with the Upanisads, another Hindu text. The Upanisads brought about what can be considered meditation proper through the concept of *bandhu* (Biernacki, 2016). *Bandhu* is the idea that a person contains within his/herself the entire cosmos (Biernacki, 2016). If one can harness this inner potential, so the teaching goes, one will have control over external phenomenon. Olivelle (1996) captures this concept by explaining, “That self of yours who is present within but is different from the fire, whom the fire does not know, whose body is the fire, and who controls the fire from within--he is the inner controller, the immortal” (p. 88). This harnessing of the “inner controller” marks the turning point from external ceremony to introspection. Since the key to wisdom and insight resides within the individual, the complicated rituals gave way to a gathering of knowledge through individual means: meditation. This harnessing of the “inner controller” marks the turning point from external ceremony to introspection. Since the key to wisdom and insight resides within the individual, the complicated rituals yielded to gathering knowledge through individual means: meditation.

Psychologically, this shift from external to internal practices reflects the shift in awareness that is synonymous with meditation. Instead of a focus on external objects, awareness is redirected to a “pervasive, if elusive, sense of subjectivity as the basis of knowledge” (Biernacki, 2016, p. 17). A subjective source of knowledge that comes from within an individual can, logically, only be excavated by introspection or meditation. However one tries to define it or conceptualize it objectively, one faces the impossible. In the Upanisads, the self is described as a perceiver which itself is unable to be seen (Olivelle, 1996). This evasive nature of the self supports the proposition that meditation is a means to understanding one’s own psychology that rational inquiry cannot alone accomplish.

There is another noteworthy proposition put forth in the Upanisads: the idea of a *transcendent self*. The concept of a transcendent self seeks to eliminate “the subject-object polarity into an essential monism” (Biernacki, 2016, p. 31). In other words, the doctrine of the transcendental self asserts the unity of the action with the agent, the thinker with the thought, and the experiencer with the experience. This idea that the self is pervasive and omnipresent becomes a central point of debate for later Indian philosophies.

Jainism emerged shortly after the writing of the Upanisads. Like Buddhism, Jainism rejected the early Vedic practice of ritual sacrifice and adopted a code of nonviolence. Jain tradition turns nonviolent beliefs into an penchant for austerity, especially in food choice (Biernacki, 2016). Austerity is not limited to food in Jainism, it applies to speech and even motion. Valley (2012), in an entry for *The Encyclopedia of World Religions*, writes:

The ideal life is one lived in a state of vigilance, no word spoken or gesture made without consideration of the impact it might have on the multitude of co-dwellers of this world—the living beings, many of which are invisible, that occupy the world with us. One eats only to sustain the human form only so long as it serves the purpose of liberation; if it becomes an encumbrance, then abandoning it is the proper action. (p. 691)

Used together, austerity and meditation are used to attain *kaivalya*, a state of heightened isolation or “aloneness [*sic*]” (Biernacki, 2016). The goal of Jain meditation is to “isolate the mind from all earthly desires and suffering and to put it in a state of quietude” (Glasenapp, 1999, p. 55). In this sense, Jain doctrine is not *monist*. It does not deny a duality between the self and the environment. Instead, it seeks to separate the self from the material. However, one may say that the goal of Jain meditation, “aloneness”, is to bring about a state of that “essential monism” or a transcendent self, in which the self is sequestered from the ever changing nature of matter

(Biernacki, 2016).

Lastly, there is Buddhism. Buddhism, like Jainism, rejected the ritual sacrifices of the Vedic tradition and instead preferred a commitment to nonviolence. Unlike Jainism, Buddhism favored an approach to life that values moderation over extreme austerity. Through what is called the middle way, one avoids a life of both austerity on one end and indulgence on the other (Nhat Hanh, 1998). In another contrast to Jainism, Buddhist doctrine teaches a different view on the transcendental self. In fact, Buddhism rejects the notion of a transcendental self all together. The Buddha's *no self* doctrine "asserts that any notion of a self is driven by our *desire* to posit a stable sense of self persisting through time" (Biernacki, 2016, p. 17). Since no transcendental self exists, *no self* is permanent and capable of providing respite from suffering. Instead, Buddhist philosophers taught escape from suffering through meditation on the Four Noble Truths.

The Four Noble Truths are considered the cardinal principles of Buddhism. They are: (1) the existence of suffering, (2) the acknowledgement of the causes of suffering, (3) the recognition of methods to cease suffering, and (4) the path that follows the methods identified previously (Nhat Hanh, 1998). The Fourth Noble Truth is divided into eight sections and is aptly named The Eightfold Path. This path is what Buddhists dedicate their lives to following with the intention of reaching enlightenment or, in other terms, liberation from suffering.

Mindfulness is one of the steps along the Eightfold Path, the method by which Buddhists attempt to refrain from causing suffering by attaining enlightenment (Nhat Hanh, 1998). From a Buddhist standpoint, attention is divided into two types: appropriate and inappropriate. Appropriate attention is rooted in the present moment and inappropriate attention is not (Nhat Hanh, 1998). For instance, attention to the road on which one is currently operating a motor vehicle is *appropriate*, while attention to the memory of the road one used the day before is

inappropriate. Mindfulness is, then, the means by which one maintains *appropriate attention*.

The Buddhist religion changed after its inception to include three distinct denominations: Theravada, Mahayana & Vajrayana (Whittemore, 2003). However, the concept of mindfulness has remained largely consistent since its beginnings 2,500 years ago.

The Cognitive and Physiological Effects of Meditation

In a Buddhist context, mindfulness blends together with the other seven steps of The Eightfold Path: Right View, Right Thinking, Right Speech, Right Action, Right Livelihood, Right Diligence, and Right Concentration to bring one to enlightenment (Nhat Hanh, 1998). However, MM (mindfulness meditation) has been extracted from its religious context as a standalone, secular tool, without the need of dogma. This tool has been studied and researched in academia for decades. The results of those studies are the focus of this next section.

To examine these effects, it is helpful to group meditation practices under two classifications: *focused attention* and *open monitoring* (Cahn & Polich, 2006). Depending on which classification is used, different effects can be observed. Focused Attention (FA) refers to practices in which “attention is focused on a given object in a sustained manner” and Open Monitoring (OM) is the practice of non-reactive observation of present experience (Waelde and Thompson, 2016). The difference here might be spending a meditation concentrating intently on the flame of a candle, which would be FA, or simply observing any stimuli the brain happens to register, like passing traffic or the hum of an appliance, making no effort to direct the attention in any specific occurrence, which would be OM.

In FA meditation, it is possible to enter what has been called a *blank out state*. The blank out state is a concept coined by Ornstein (1972) to describe a sort of *mental blindness*. Ornstein likens this state to the effect of preventing one’s eye from scanning between objects and instead

compelling it to focus on a fixed image. Such an experiment is made possible by placing an image on a contact lens situated over the retina, which allows the image to remain centered in the viewer's center of vision. After a short time, the image actually becomes invisible to the viewer.

Cognitively, the idea transfers. Instead of an image, however, the blindness affects consciousness. Ornstein (1972) proposes that if the attention is focused on a constant source of stimulation such as the breath, one may momentarily shut off their consciousness of external world. After such an experience, a meditator may experiences a “renewed sensitivity to stimuli” (Woolfolk, 1984 p. 184). This is often describe as “seeing colors more clearly,” “hearing sound more sharply,” or “sensing the world more vividly” (Ornstein, 1972, p. 82).

OM meditation, unlike FA, does not require focused attention on a single point. Instead, it employs a nonjudgmental, passive approach to whatever is transpiring in the present moment. Attention is not directed to or from anything. The mind is free to notice whatever presents itself (Raffone, 2016). When one practices OM meditation, stimuli are noticed but not reacted to. Raffone (2016) points out that neuroimaging studies suggest that just this act of verbal labeling (e.g., *I am hot*) can increase activation of the prefrontal cortex, the area of the brain associated with personality development and social interactions (Dahlitz, 2017). And simultaneously reduce activity in the amygdala, the area of the brain associated with fear and anxiety (Allison & Rossouw, 2013). In behavioral studies, OM meditators hove been found to have more distributed attentional focus (Valentine & Sweet, 1999), enhanced conflict monitoring (Tang et al., 2007), and more efficient resource allocation for cognitive tasks (Slagter, Lutz, Greischar, Nieuwenhuis, & Davidson, 2009).

The distinction between FA and OM meditation carries only so far. Ultimately, the two boil down to the same concept: the controlled orientation of attention. In fact, it is possible to do

both FA and OM meditations at once (Kornfield, 1993). Meditation, either FA or OM, assists the body to decrease states of stress and anxiety. During meditation, the body and mind enter a state of “profound rest” (Woolfolk, 1984). After about thirty minutes of meditation, one’s rate of oxygen consumption can be lowered to levels typical after six to seven hours of sleep (Wallace, 1970). Respiration and heart rates are also lowered (Allison, 1970). These two facts suggest that meditation can lower stress levels. The increased electrical resistance of the skin that has been observed during meditation indicates a lowered level of anxiety (Wallace, 1970).

As for the mind, the activity of the two hemispheres of the brain balances during meditation (Banquet, 1973). The left hemisphere, which is responsible for sequential, verbal, linear thought abdicates its usual neurological dominance while the right hemisphere, which is responsible for intuitive, imaginative thinking, increases its levels of activity (Woolfolk, 1984). During meditation, the brain oscillates between between emitting alpha waves and slower, sleep related waves in a manner which effects an oscillation between alertness and drowsiness for the practitioner (Wallace ,1970). Paradoxically, this suggests that one finds both qualities of sleep and careful attention in meditation.

Interestingly enough, the restful state brought about by meditation differs greatly from similar states attained through the use of drugs, either clinical or recreational. Drug use may stifle reaction times and impair linear thought, but meditation does neither (Woolfolk, 1984). In fact, compared to controls, meditators have been found to have faster reaction times (Appelle & Oswald, 1974), to complete perceptual motor tasks more quickly and accurately (Rimol, 1978) and to be more acutely perceptive to auditory stimuli (Pirot, 1978).

Clinical Applications of Mindfulness

The interest and acceptance of mindfulness and meditation (MM) among medical

professionals has been steadily increasing for several decades (Williams & Kabat-Zinn, 2011). Of over 2,000 North American psychotherapists surveyed, more than 20% taught MM or similar techniques to over 50% of their clients (Cook, Biyanova, Elhai, Schnurr, & Coyne, 2010). There is a correlation between the utilization in the professional sphere and the increased interest of academia. The number of papers annually published about MM increased from 80 in 1990 to over 600 annual publications by the year 2000 (Smalley & Winston, 2010). This section gives examples of some of the purposes MM has served since its adoption into the sphere of Western medicine and culture.

MM has been successfully used to lower anxiety in a majority of patients in a clinical setting (Carrington, 1977). Another study by Glueck (1973) complements this finding. Glueck found that meditation could be used to reduce and even eliminate entirely the need for psychotropic drugs (i.e., drugs that affect mind, mood, or behavior) and/or sedatives for psychiatric patients. MM not only reduces stress, but it has ameliorating effects on stress related illnesses. MM has been linked to an improvement of breathing patterns in those who suffer from bronchial asthma (Honesberger & Wilson, 1973), lowered blood pressure in hypertensive patients (Benson, 1977), reduced sleep-onset insomnia (Miskiman, 1978), and reduced stuttering (McIntyre, Silverman, & Trotter, 1974) among others. One is also likely to experience an increase in productivity after practicing MM. Thus, it has been used to help patients with low energy and/or writer's block (Woolfolk, 1984).

In long term meditators (e.g., people who have been meditation continuously for a year or more), there is a trend of decreased use in non-prescription drugs (Benson & Wallace, 1971) such as cannabis, amphetamines, and LSD (Woolfolk, 1984). In fact, a majority of long term meditators have ceased consumption of such substances all together. This trend is paralleled in

cigarette smokers and alcohol abusers as well (Shafii, Lavelly, & Jaffe, 1976). Patients experiencing mild chronic depression may experience a significant, positive increase in mood after meditating (Carrington, Collings, Benson, Robinson, Wood, Lehrer, Woolfolk, & Cole, 1974).

In short, MM has found a place in the clinical world. It is widely used for an array of clinical disorders ranging from anxiety to addiction. The benefits of MM are not exclusively for the clinical patients, either. Although those with clinical needs may have the most to gain, the effects of MM still offer the same possibilities for those without a diagnosed clinical condition

Mindfulness in Education

There have been several pushes in recent decades to incorporate mindfulness into mainstream schooling (Jones, 2011; Killoran, 2017; & Langer, 1993). However, due to the growing public acceptance/interest, the large scale development of mindfulness into school curriculums is even more recent. Although there are many mindfulness programs designed for school settings, they all share the common goal of increasing the student's capacity to pay attention to the present moment with open minded curiosity (Weare, 2016).

Mindfulness for school students has a unique obstacle to overcome: the curse of the captive audience. Unlike courses for adults who have the agency to decide whether they would like to participate in such a course, school students are compelled to undergo whatever ordeals their school deems necessary. As a result, students may have little to no interest in learning about mindfulness and may only derive motivation from the same source that fuels the completion of much homework: Not failing.

To address this issue, mindfulness for students needs to pique student interests in ways other than the traditional data presentation that convinces most adults (Kaiser-Greenland, 2009;

Weare, 2016). The UK's Mindfulness in Schools Project uses props, varying medias, and activities besides the traditional practices of mindfulness to engage students (Mindfulness in Schools, 2014). Other organizations also design programs to deal with the high energy of youth. The Holistic Life Foundation (Holistic Life Foundation, 2014) uses yoga, tai chi, music, visual arts, and contact with nature to harness student engagement.

Although the results of current research are promising, the existing studies lack sufficient methodological strength (Weare, 2016). In a review of mindfulness and the young, Greenberg and Harris (2012) note the weaknesses in the extant literature. Studies are generally small and exploratory. Often, studies follow a before and after model without any controls. Few studies employ appropriate follow ups, measurement is underdeveloped, many studies rely exclusively on self-report and lack any objective measurement system. and single studies will cover a diverse range of demographics with scant replication which makes difficult any sort of generalizability.

However, what hard evidence has been acquired suggests that the efforts of such studies has been worthwhile. Interventions are frequently considered "acceptable" or popular with participants, with no observed harmful effects (Weare, 2016). In line with the acceptability, the results tend to parallel those of mindfulness intervention in adults. For instance, research indicates that mindfulness is beneficial in ameliorating the effects of mental illness on the young just as in the case of adults (Baer, 2006; Ma & Teasdale, 2004). In both universal and targeted interventions (i.e., interventions applied to the general population versus specific populations, respectively), mindfulness has been shown to have double the effect on mental illness than on other measured outcomes such as learning or wellbeing (Zoogman, Simon, Goldberg, Hoyt, & Miller, 2015).

The distinction and relationship between universal and targeted intervention deserves more attention, since the two approach mental health from near opposite ends of the spectrum. Universal interventions, as the name suggests, are applied to the general population regardless of psychological needs. Their targeted counterparts, on the other hand, single out those with the most need. For example, a *universal* intervention would be assigning a mindfulness program to an entire class. Regardless of individual need, every student in the class would be subjected to the program. A *targeted* intervention would only focus on students who have been labeled as in need of the intervention, for reasons related to behavior or other factors.

Universal interventions are the consequence of a shift in the field of mental health to away from treating illness exclusively to also include promoting wellbeing (Huppert, 2014). This shift has been called many names: positive psychology, flourishing, wellbeing, resilience, and capacities, to name a few (Weare, 2016). Universal methods have been observed to help people who would be considered psychologically healthy while also providing the greatest the benefit to those with the sharpest need (Adi, Killoran, Janmohamed, & Stewart-Brown, 2007; Huppert 2014; Weare & Nind, 2011). Since many children are never exposed to clinical interventions for emotional disorders (Farrell & Barrett, 2007), providing universal mindfulness interventions may reach those who otherwise would go without help.

Universal interventions also resolve the issue of stigma which is attached to targeted interventions on occasion (Weare, 2016). Students with the most need are given help at the expense of being singled out as a *problem child* to the class. If everyone is receiving treatment, then the risk of humiliation is much less for those who would rather suffer silently than heal publicly.

Although the stigma concern is valid, there is ample reason to employ targeted interventions. Practically, targeted interventions employ less resources and do not detract entirely from class time. In the same vein of efficiency, targeted interventions are likely more effective. For example, targeted approaches to mindfulness interventions in schools have been shown to have a significantly greater impact than universal ones (Shucksmith, Summerbell, Jones, & Whittaker, 2007; Weare & Nind, 2011). This follows the notion that those who need the most help benefit the most from the intervention. Compared to non-clinical samples (i.e., those without a diagnosed mental illness), clinical patients may be affected as much as double the amount by mindfulness intervention (Zoogman et al., 2015).

So, while there is indeed a surge in the application of MM in educational settings, the arc has reached its zenith in neither quality nor quantity. The methods which are currently applied have issues to be resolved and the potential for human development is as of now partially understood at best.

Mindfulness and Music Teaching, Learning, and Performing

In general, MM is gaining traction not only in clinical and educational settings but also in professional working environments (Bond & Bunce, 2003; Bond & Flaxman, 2006; Donaldson-Feilder & Bond, 2004). Professional musicians, be they educators, performers, or composers, have also been influenced by MM. The incorporation of MM into musicians' lives does not stop at the professional level, either. Reduced stress and increased performance is, of course, desirable in one's personal life as well. Amateur musicians and lay listeners alike can be impacted by the integration of mindfulness into their musical experience.

Along with the more general applications found across the board in educational settings, research exists that suggests the specific usefulness of mindfulness to music educators. For

instance, researchers have demonstrated that mindfulness improves the quality of music listening (Anderson, 2015; Diaz, 2010, 2011; Falter, 2016). Clearly, music teachers have something to gain from elevating their students' listening skills. Mindfulness also supplies teachers with an assortment of activities to cultivate mindful qualities within their students, such as the Raisin Activity (Baer 2006,) simple visualizations to inspire improvisation, or classic breath awareness to facilitate airflow in young wind players (Falter, 2016.) These activities provide more structure to the young minds than “just sit there” and, in the latter two cases, directly relate to the subject matter.

Mindfulness is not for only young musicians. Much research has been conducted at the collegiate level. One area of intense interest is that of performance anxiety. Stage fright, as it is more casually known, is any fear inspired by the requirement to complete a given task for an audience (Kenny, 2011) and can, for obvious reasons, greatly hinder the growth of music students. In a study of 62 college music majors across the Southern United States, mindfulness and performance anxiety were shown to have an inverse relationship (Clevenger, 2015). In other words, the higher students scored on Mindful Attention Awareness Scale (Brown & Ryan, 2003,) the lower they scored on the Kenny Music Performance Anxiety Inventory (Kenny, 2004). MM has been adapted even more specifically to assist vocalists. A Mindfulness based system called Mindfulness for Singers has been used to improve vocal technique, musculoskeletal awareness, vocal tone, and problem solving in collegiate vocalists (Czajkowski & Greasley, 2015). The course used the Five Facet Mindfulness Questionnaire to gather qualitative data supporting the claims made above.

Music learning, like mindfulness, is often developed by practice. Music listening is learned through repeated listenings; composition through multiple attempts; mastery of a musical

instrument takes hours of daily practice. To maintain health and assist technique, relaxation is essential to any practicing musician (Agnes 2016; Bruser, 1997; Pino, 1980; & Stein, 1958). In her book, *The Art of Practicing*, Madeline Bruser recommends brief meditative periods as preparation to musical practice (Bruser, 1997). She does not call for the 45 minutes sits like some clinical methods (Kabat-Zinn, 1994). Instead, what she suggests is a basic awareness of breath for only a minute or two immediately prior to practicing. Although this could hardly be considered a form of MM, the purpose of the exercise and the means of fulfilling that purpose are identical to what is seen in MM: an augmentation of current awareness, an increase in “Presence” (Bruser, 1997), and an intention of focusing on the present moment. Although this is significantly less involved than any of the applications of MM found in clinical or educational settings, the brevity and simplicity of the exercise may make it highly accessible to the common musician.

Structured MM practice has also worked its way into the music field, especially as a way of alleviated the perceived pressure caused by performance anxiety. For example, an article published by the Oregon Music Education Association recommends longer sessions of 10-15 minutes to ameliorate the effects of performance anxiety (Diaz, 2014). During these sessions, the musician visualizes situations in which performance anxiety is likely to occur. While maintaining a calm, open mindset, the participant then – without any attempt to stifle their consequent responses – labels each occurrence as it comes. For instance, as each sensation arises, one may think “feeling a knot in my stomach,” “pressure in my head,” “palms begin to sweat,” etc. without any attempt to intervene with the situation. Throughout the session, the practitioner reminds themselves that they are safe and what is experienced is brought about only by mental means.

The use of mindfulness in the music field is to date an under-investigated possibility. There is very little research which focuses explicitly on the integration of the two and what does exist requires further bolstering to achieve the level of integrity attained in other fields of research. The results that have been gathered are, in the vast majority of cases, gathered through self-reported means. This means that the subjects themselves report how they *feel* mindfulness has affected them. Naturally, this method of research is concerning because an individual's perception of an effect may be very different from the actual effect.

Discussion

Given the success mindfulness has seen in the clinical setting, it is clear that people dealing with mental, emotional, and physical distresses/disorders can benefit from mindfulness. Specifically, those with anxiety (Carrington, 1977; Glueck, 1973), depression (Glueck, 1973), addiction (Benson & Wallace, 1971), and even asthma (Honesberger & Wilson, 1973), have been reported to experience condition specific, positive affects when subjected to a treatment involving mindfulness. Additionally, many clinical cases have found side effects which seem to occur regardless of the patient's specific clinical condition. For instance, decreased non-clinical levels of anxiety/stress (Woolfolk & Cole, 1980), increased reaction times (Appelle & Oswald, 1974), and increased productivity (Rimol, 1978) seem to occur when anybody, including nonclinical participants, practices mindfulness regularly.

The worlds of business and education have already applied these findings. Each realm, in its own way, has recently started incorporating some form of MM into its professional routine. In business, MM is applied to increase the productivity and contentment of working adults. In education, similar effects are sought for both the working adults and learning youth. Collegiate

music, on the other hand, has so far left the possibilities for growth provided by mindfulness largely unexplored.

As was mentioned, there has been a very recent outpouring of research dedicated to mindfulness and its specific application to the collegiate musician. The research discusses areas of interest from performance anxiety to practice room behavior. But what exactly does the research say? And in what ways do musicians apply mindfulness?

The research so far suggests only that regular MM practice lowers music performance anxiety (Diaz, 2018). Other than this, little has been *found* scientifically that specifically concerns MM and collegiate music students. However, there have been several attempts to *demonstrate* what mindfulness might look like after it has been imbedded into a musician's routine. What does that routine include? Obviously, musical practice is on the list. No matter what avenue of practice the musician is taking (e.g., practicing performance, composition, education, and so on) there is a way to do so mindfully. Take, for instance, a practice session on an instrument. A mindful approach might include setting attainable, specific short term goals for the session. After those goals have been set, the musician may then constantly refer to them to make certain that the actions taken (e.g., playing a scale, humming the line, or score study) clearly reflect the goals that have been established. Of course, these methods are promoted through other systems of thought, so what does mindfulness have to offer that is unique? Once the difficulty arises, it is easier to distinguish the mindful approach from other strategies.

Since the overwhelming majority of collegiate music students are imperfect, their plans for musical excellence may occasionally go awry. When this happens, the student may be faced with frustration and/or confusion. Why can't I play this passage? What will I do for my next lesson? What if I'm not good enough? Using a mindfulness based approach to practice, the

music student can – once these feelings emerge – recognize them for what they are: temporary, conditional feelings, not facts. Since mindfulness emphasizes attention to the present moment, the student could identify each of these feelings and any other distressing (or pleasing, for that matter) emotions or thoughts as they occur in real time. Naturally, the smaller the time between the occurrence and the observation, the easier the task of discovering the root of the unpleasant thoughts and, consequently, the task of reconciling them.

Mindfulness, of course, is not restricted to the practice room. It could also prove highly effective during private lessons. Instead of producing value judgement after value judgement (e.g., “That was a mistake,” “My professor is going to tear me apart for this,” “Why can’t I get it right?” and so on), the student could recognize the tangential tendencies of their inner monologue and instead divert their attention to what may be the most valuable portion of the lesson: their teacher’s words. Identical steps could be taken for ensemble rehearsals.

Additionally, students are not the only ones who have the potential to use mindfulness to increase their quality of life. Teachers and administrators also have the opportunity to implement mindfulness in their classes/curriculums. In fact, some schools, such as Indiana University, The University of Illinois at Urbana-Champaign, Bowling Green State University, and Michigan State University have already started. In these institutions, formal mindfulness training directed towards collegiate music students is offered in some capacity whether in the form of a class, summer clinic, or campus club. It seems that these may be the early signs of a far more widespread embrace of mindfulness among the musical community.

Clearly, MM cannot solve every musician’s issues. In fact, it may not be of any help at all. Like with any tool, method, or idea, if mindfulness is improperly applied, it will do very little good indeed. In fact, in nearly all of the research available, one of the qualifying conditions for

the studies was *regular* mindfulness practice. That means, just like in music, practice done periodically. Although a single instance of mindful practice can possibly effect change, the results are shown to be much more dramatic and lasting with consistent, intentional practice.

What is the best way to use mindfulness as a collegiate musician? Based on what is already known, that question has yet to be answered. Whether mindful principles are best applied in the classroom, practice room, performance hall, some combination of these places or somewhere else entirely is as of now unexplored.

Does mindfulness have any long term effects on the musicians who use it? Many studies done in other areas (especially those concerned with physiological responses of the body to meditation) refer constantly to groups of “long time meditators.” This term is used to refer to people who have practiced MM consistently for several years or more. However, in the study of collegiate musicians and mindfulness practitioners, there has yet been an examination of long time mindful collegiate musicians. Likely this is due to the infancy of the integration of the two fields. In the future, it may be of interest to the musical community to examine the effects of MM practice in collegiate musicians over periods of time spanning several years or more.

The use of mindfulness in the music field is to date an under-investigated discipline. There is very little research which focuses explicitly on the integration of the two and what does exist requires bolstering to achieve the level of integrity attained in other fields of research. The results that have been gathered are, in the vast majority of cases, gathered through self-reported means. In the end, there is still much to learn about MM and its potential use in the lives of collegiate musicians. Indeed, many of the working theories of the relationship between mindful practice and musical practice need to be further bolstered by additional research. Still, it is clear

that a successful partnership is promising, and, based on the other areas which have created one already, possible.

So what does this mean for musicians? As it stands, the direct academic interaction between musicians and mindfulness is significantly less than that of mental health and education. If these other have benefited so greatly from the implementation of mindfulness into their milieu, is the music sphere missing out? Does the elevation of mood, increase in productivity, and ameliorating effects on anxiety have a place in professional musicianship? If so, how are these methods best implemented?

These questions are all left to be researched further. It would seem that, since mindfulness has been used so effectively in other areas, mindfulness meditation may very well have a significant role to play in the music profession. While there is no research to definitively state either “yes” or “no,” what does exist is promising. It would appear that, in as many ways as other professional fields which have applied mindfulness to their praxis are similar to the music, mindfulness has benefits to offer if only musicians would take a moment to be.

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