Exploring violin students' experiences of a mindfulness meditation-based stress reduction intervention for combating music performance anxiety

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Declaration of originality

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Title of study: Exploring violin students' experiences of a mindfulness meditation-based stress reduction intervention for combating music performance anxiety.

I, Elizabeth Schaap, declare that this study is my own original work. Where secondary material is used, this has been carefully acknowledged and referenced in accordance with university requirements.

I understand what plagiarism is and am aware of university policy and implications in this regard.

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January 2022

Date

Ethics statement

The author, whose name appears on the title page of this mini dissertation, has obtained, for the research described in this work, the applicable research ethics approval.

The author declares that she has observed the ethical standards required in terms of the University of Pretoria's code of ethics for researchers and the Policy guidelines for responsible research.

Abstract

Music performance anxiety (MPA) is a problem common to musicians around the world. Given the ubiquity of MPA, musicians have a need for interventions to combat maladaptive MPA. The popularity of mindfulness in the western world has skyrocketed in recent years, but there is a paucity of research regarding mindfulness and meditation as a treatment for MPA. The primary aim of the study was to explore mindfulness meditation-based stress reduction (MMBSR) as a treatment for MPA in three university-level violin students by means of an intervention. The study followed a qualitative research approach and was designed as a multiple-instrumental case study which assumed elements of a quasi-experimental research approach. The sample included three university-level violin performance majors and a MMBSR intervention was executed with guided meditation courses on the *Headspace* smartphone application. The study was carried out in three phases and data collection consisted of two one-on-one semi-structured interviews with each participant, as well as solicited diary entries from the participants during the nine weeks in which the intervention took place. The data was analysed through the process of thematic content analysis. The main finding of this research suggests that MMBSR may be a promising treatment for MPA by facilitating increased levels of focus, mental alertness, and the sense of being present in every moment free from distraction or judgment, which may decrease student violinists' MPA during performance.

Keywords: intervention, meditation, Mindfulness Meditation-Based Stress Reduction (MMBSR), Music Performance Anxiety (MPA)

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Chapter 1: Introduction and background

In the following introduction chapter to this dissertation, a background to the study is provided. Thereafter, the aims of the study are discussed, and the main and secondary research questions are provided. This chapter also debuts an initial overview of the study's methodology.

1.1 Background to the study

Music Performance Anxiety (MPA) is a problem common to musicians around the world. Kenny (2011a) proposed the following definition for MPA:

> MPA is the experience of marked and persistent anxious apprehension related to musical performance that has arisen through specific anxiety conditioning experiences and which is manifested through combinations of affective, cognitive, somatic and behavioural symptoms. (p.12)

Although a certain level of MPA can assist musicians to give their best performance, it often becomes crippling. Most performers are negatively influenced by having to perform under the conditions of high adrenaline flow, social pressure, fatigue, and anxiety. No categories of performers are exempt from experiencing MPA, whether a professional or an amateur musician, a solo player, an ensemble player, an instrumentalist, or a singer (Kenny, 2006). However, Cox and Kenardy (1993) found that music students generally experience the highest levels of MPA during solo performances, whereas auditions are likely to produce the most MPA for orchestral musicians (Spahn et al., 2016). Several famous musicians and composers reported experiences of MPA, including Frederic Chopin, Luciano Pavarotti, Sergei Rachmaninoff and Vladimir Horowitz (Papageorgi et al., 2007). Therefore, the matter that even successful musicians experience MPA attests that it does not stem from being untalented or unequipped to perform (Lehmann et al., 2007).

Given the ubiquity of MPA, musicians have the need for interventions to combat MPA (Chang et al., 2003). There are various treatment methods for MPA and the most common ones discussed and studied are: cognitive therapy (Kendrick et al., 1982, Kenny, 2005, 2006; Lehmann et al., 2007; McGinnis & Milling, 2005; Patston, 1996; Sweeney & Horan, 1982; Wilson, 2002;), behavioural therapy (Kenny, 2005; Kirchner, 2004; Lehmann et al., 2007; Roland, 1994; Shoup, 1995; Sweeney & Horan, 1982; Wesner et al., 1990), cognitive-behavioural therapy (Brugués, 2011b; Kendrick et al., 1982; Kenny, 2006; Sweeney & Horan, 1982), the Alexander technique (Kenny, 2005, 2006; Lehmann et al., 2007; Valentine, et al., 1995), mindfulness and meditation (Chang et al., 2003; Lin et al., 2008; Xu, 2010) and pharmacotherapy (Berens & Ostrosky, 1988; Brugués, 2011b; Kenny, 2006; Kenny et al., 2014; Lehmann et al., 2007; Matei & Ginsborg, 2017; Nubé & Musicobgy, 1991).

The popularity of mindfulness in the western world has skyrocketed in recent years (Sacchet, 2017), but there is a paucity of research regarding mindfulness and meditation as a treatment for MPA, seeing as the above-mentioned studies are the only studies that could be found on it as treatment for MPA. The term mindfulness refers to both a meditation practice as well as a desired psychological state (Speca et al., 2000). Mindfulness is derived from primarily Buddhist religious/spiritual practices but has been divorced from its spiritual roots in the contemporary era and adapted for secular purposes due to its widely noted benefits for health and wellbeing. Although mindfulness shares a long history with the Buddhist religion, anyone can enjoy the benefits of mindfulness regardless of their religion and spirituality (Headspace, n.d.-c). Meditation, and therefore mindfulness, involves self-regulatory practice in training a person's attention to ultimately bring mental processes like thoughts and opinions under voluntary control (Kenny, 2006). The practice of meditation can allow a person to develop greater calmness and clarity, so as to face life experiences and situations by turning them into opportunities for learning (Lin et al., 2008). Mindfulness is both a

meditation practice as well an important outcome of meditation and it allows people to better understand why they feel or think in a certain way, which often results in a healthier perspective on life. Fruzzetti and Erikson (2010), as cited in Czajkowski and Greasley (2015), stated that increased body and breathing awareness due to mindfulness practices facilitates learning new skills, which is beneficial for musicians, for whom the learning of new skills through practice is a daily exercise. Although there is little evidence that mindfulness might affect aspects of music training like practice or instrumental lessons, it has been proposed that the heightened physical consciousness, concentration, and attention brought on by mindfulness may help musicians improve their instrumental practice (Czajkowski & Greasley, 2015; Steinfeld & Brewer, 2015; De Felice, 2004; Hribar, 2012). Musicians may be able to cope with both physical and mental challenges onstage if they cultivate improved moment-to-moment awareness. Mindfulness can thus bring a clear perception to the art of performing, allowing the artist to concentrate and feel more secure in the spotlight. Eventually, it could give the performer the ability to shape the performance in a way that is preferable to them (Xu, 2010).

In 1979, Jon Kabat-Zinn, a molecular biologist and active meditator, created the Mindfulness-Based Stress Reduction (MBSR) scheme for people he saw struggling with chronic depression, anxiety, and stress (Czajkowski & Greasley, 2015). According to Czajkowski et al. (2020), MBSR is one of the most popular and acknowledged mindfulness courses. This type of mindfulness is defined operationally as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally” (Kabat-Zinn, 1994, p.4, as cited in Czajkowski et al., 2020). It involves practical tasks that are intended to help participants encounter “being” in the current moment without any judgment in order to observe their experience. The tasks include, for example, being conscious of moment-by-moment breathing experiences (breathing awareness), perceiving the body (Body Scan

technique) and, later on, being guided to become aware of thinking patterns (sounds and thoughts) and applying mindfulness techniques to painful memories (exploring difficulties) in anticipation for use when appropriate (Czajkowski et al., 2020). MBSR has been widely researched within a therapeutic context as a treatment for anxiety disorders and depression and has been recognised as a suitable intervention for these disorders (Hofmann et al., 2010; Shapiro et al., 1998; Speca et al., 2000; Tacón et al., 2003).

In 2004, Mindfulness Meditation (MM), a technique for brain activity manipulation acquired by oriented practice, in which people can regulate the neurology of their emotions by reducing negative emotions and increasing positive ones, was suggested by Maluh Guarino De Felice as a new treatment for MPA. MM involves focusing one's awareness on how life unfolds moment-by-moment and thereby facilitates the sense of being present in every moment, free from distraction or judgment (De Felice, 2004).

The mindfulness meditation used as an intervention in this study does not cohere to all the aspects involved in MBSR or MM but does incorporate some of the aspects mentioned in both treatments. Therefore, the mindfulness meditation used as an intervention in this study to reduce the stress associated with MPA will henceforth be referred to as Mindfulness Meditation-Based Stress Reduction (MMBSR). The intervention is described in more detail in Chapter 3.

1.2 Aim of the research

Primarily, this study aimed to further explore MMBSR as treatment for MPA in three university-level violin students by means of an intervention. The reason for the choice of MMBSR as an intervention was because meditation is a technique that has the potential to help the individual to achieve the desirable performance state in which the performer's levels of arousal are reduced to an optimal level, but that the performer also experiences a controlled state of deep concentration and alertness (Chang et al., 2003). The secondary aim

was to investigate the self-reported experiences of MPA amongst university-level violinists. The overarching aim of the study was to provide violin students with a low-cost, effective solution for MPA.

1.3 Research questions

The main research question is:

- What are violin students' experiences of a mindfulness meditation-based stress reduction intervention in combating music performance anxiety?

The secondary research questions are:

- What are the participants' experiences of music performance anxiety?
- How effective is a mindfulness meditation-based stress reduction intervention in combating music performance anxiety?

1.4 Methodology

The study followed a qualitative research approach and was designed as a multiple-instrumental case study which assumed elements of a quasi-experimental research approach. The ontological and epistemological views of this study focused on acquiring subjective opinions, therefore it is fitting that the study drew on elements of ethnography and phenomenology. The approach to phenomenology that was used is psychological phenomenology.

The sample included three university-level violin performance majors. The participants ranged from the age of 20 to 24 and are all females. The sampling strategy was both purposive and convenient. The following criterion was used to select the participants:

1. They should have been students at the University of Pretoria, studying BMus with violin as a first instrument or MMus (Performance) in violin, at the time the study was conducted.
2. They should have been suffering from MPA at the time the study was conducted.

The MMBSR intervention was executed with guided meditation courses on the *Headspace* smartphone application. The participants were instructed to do five 10-minute sessions a week from the 'Basics' meditation course for the first two weeks, five 15-minute sessions from the 'Managing Anxiety' course in the third week, and then five 20-minute sessions per week from the 'Managing Anxiety' course for weeks four to nine of the intervention period.

Two one-on-one semi-structured interviews were conducted with each participant: one before the intervention period and one after the intervention period. These interviews were audio-recorded. The participants were also required to keep a solicited diary during the nine weeks in which the intervention took place. The research procedure consisted of three phases:

Phase 1 (Pre-intervention data collection): The participants did a concert performance of approximately fifteen minutes in the Musaion hall at the University of Pretoria (henceforth herein referred to as the First Performance), whereafter the first semi-structured interview was conducted with each participant.

Phase 2 (Intervention period): Due to uncertainty regarding the continuation of the study because of COVID-19 restrictions, the intervention period only commenced on 27 July 2020 and continued for nine weeks for every participant. During the nine weeks the participants were required to keep a solicited diary.

Phase 3 (Post-intervention data collection): After the intervention period, the participants did another concert performance of approximately fifteen minutes in the NG Waterkloof church hall (henceforth herein referred to as the Second Performance). The Second Performances could not take place in the Musaion hall because, unfortunately, the hall was not available at the required time after the intervention period due to COVID-19 restrictions. The second semi-structured interview with each participant was done after and on the same day as their Second Performances.

The recordings of each interview were transcribed verbatim. Thereafter, a thematic content analysis (TCA) of the six interview transcripts and the 27 solicited diary entries was done after the initial coding process. The coding process included *a priori* coding.

I ensured validity and reliability of the research through the process of reflexivity and the submitting of the final analysis of the data to the participants for feedback. The interviews also led to in-depth and accurate information because of the repeated contact between me and the participants.

The research conforms to the ethical standards of the University of Pretoria. Prior to the interview process, letters of consent were signed, and the participants were informed that their participation was completely voluntary. The research is published with the use of pseudonyms to ensure the confidentiality and anonymity of those involved.

1.5 Chapter Outline

Chapter 1: Introduction and background. In this chapter an introduction and background to this study is provided and the research aims are discussed. The main and secondary research questions are listed. This chapter also provides a short overview of the methodology used in this study.

Chapter 2: Literature review. In this chapter a literature review of relevant research that have already been done on the research topic is provided. The aspects of MPA discussed are factors that influence MPA, symptoms of MPA and treatments for MPA, with the latter focusing on MMBSR.

Chapter 3: Methodology. This chapter explains the research methodology for this research report including the research approach and design, sampling strategy, research procedures, data analysis techniques, validity and reliability, and ethical considerations of the study.

Chapter 4: Results. This chapter contains the findings from the TCA of the pre-intervention and post-intervention interviews with the participants, as well as from the solicited diaries. It supplies the subjective perceptions of the participants.

Chapter 5: Discussion. In this chapter the findings of the data analysis are discussed in relation to the literature review.

Chapter 6: Summary and conclusions. In this chapter the research questions are answered, the limitations of the study are discussed, and recommendations for further research are provided.

Chapter 2: Literature review

This chapter provides a deeper understanding of the phenomenon of MPA. The chapter is divided into three main sections. Firstly, it discusses the factors that influence MPA as identified in the existing literature. Secondly, it discloses the symptoms of MPA that have been identified in participants of relevant studies. Lastly, it divulges more information on researched treatment methods for MPA, including some of the results of relevant studies.

2.1 Factors that influence music performance anxiety

Papageorgi et al. (2007) developed a conceptual framework of MPA drawing on a wide range of research. They divided the factors that influence MPA into three categories. These three categories are similar to Barlow's (2000) model of anxiety, as cited in Kenny (2006), where Barlow proposes three types of vulnerabilities that influence an individual to develop an anxiety or mood disorder, as can be seen in Table 2.1:

Table 2.1

Categories of factors that influence MPA, and vulnerabilities that influence the development of anxiety.

Categories	Papageorgi et al. (2007)	Barlow's model of anxiety
Category 1	Factors influencing a performer's susceptibility to experience MPA.	Generalised biological vulnerabilities.
Category 2	Factors influencing task-efficacy.	Vulnerabilities based on earlier experiences of maintaining control over important events.
Category 3	Factors relating to the performance environment.	Vulnerabilities whereby anxiety is associated with certain environmental factors through learning processes.

The three categories set out by Papageorgi et al. will be used for the purpose of better organising the content in this review of the literature.

2.1.1 Factors influencing a performer's susceptibility to experience music performance anxiety

Kenny (2011b) suggests that genetic factors influence people's susceptibility to MPA. Lehmann et al. (2007) agree, adding that causes for MPA can come from the musicians themselves, whether from a predisposition for anxiety (genetic factors) or unrealistic thinking about the performance (perfectionism). Papageorgi et al.'s (2007) first category of factors (i.e., factors influencing susceptibility) are divided here into two sub-categories: intrinsic factors and extrinsic factors.

2.1.1.1 Intrinsic factors. The intrinsic factors that can influence a performer's susceptibility to experience MPA are gender (Kenny & Osborne, 2006; Ryan, 2004), age (Kenny & Osborne, 2006; Lehmann et al., 2007; Kenny, 2000; LeBlanc et al., 1997), perfectionism (Papageorgi et al., 2007; Mor et al., 1995; Kawamura et al., 2001; Lehmann et al., 2007; Kenny et al., 2004; Kenny et al., 2014; Sinden, 1999), trait anxiety (Craske & Craig, 1984; Kenny, 2006; Lehmann et al., 2007; Papageorgi et al., 2007; Ryan, 2005) and self-esteem (Dweck, 2000; O'Neill, 2002; Sinden 1999).

Gender. Females are more susceptible to maladaptive MPA and are also more prone to higher levels of MPA (Papageorgi et al., 2007). Kenny and Osborne (2006) did a study on 381 adolescent musicians specialising in performing arts and found that females scored significantly higher than males on their Music Performance Anxiety Inventory for Adolescents (MPAI-A) scale. Ryan (2004) found that females and males respond differently to MPA in her study on 26 children of 12 years of age. By examining the heart rates of the children, she found that the females experienced more anticipatory anxiety than the males as the performance approaches, but the males' heart rates were higher than the females' during

the performance. However, the males showed more anxious behavioural symptoms before and during the performance than the females. In LeBlanc et al.'s (1997) study on 27 children aged 14 to 18, they discovered that female participants performed better, but reported considerably higher anxiety levels than the male participants in two of the three performances they had to play.

Age. Kenny and Osborne (2006) state that MPA is particularly problematic in adolescents, but professional performers' experience of MPA indicate that MPA is also problematic for adults. They added that MPA increases from childhood to adulthood due to changes in our inherent disposition, improved cognitive ability, self-reflective function, trait anxiety, technical abilities and mastery, and other influences. According to Kenny and Osborne (2006), MPA is uncommon in very young children. They seem to love audiences and performing and are unaware of the flaws in their performance. However, Lehmann et al. (2007) disagrees with this and states that MPA may start at an early age for musicians when emphasis is put on achievement by teachers and parents from early on. Kenny and Osborne (2006) also found that there is an increasing level of MPA in adolescents during their early high school years. The more adolescents are committed to music, the more they expect of themselves regarding their performance. Furthermore, the increase of the cognitive formal operational thinking skills (i.e., logical thinking, deductive reasoning, problem solving and systematic planning) in adolescents is thought to increase their anxiety and self-criticism (Kenny, 2000), increasing their susceptibility to MPA.

Research by LeBlanc et al. (1997) found that adolescents experience MPA in much the same way as older performers. In a survey by Shoup (1995) on high school music students, about 55% of participants reported experiences with MPA. However, MPA is also a widespread problem amongst adult professional orchestral musicians. A survey done by the International Conference of Symphony and Opera Musicians National US on 2212 musicians

found that 24% of musicians frequently suffered from MPA, while 13% experienced acute anxiety and 17% experienced depression. A Dutch study on musicians in symphony orchestras reported that 59% experienced MPA to such an extent that it interfered with their professional and/or personal functioning (Kenny, 2006). Wesner et al., (1990) researched students and faculty members at the University of Iowa School of Music and found that 21% of the participants experienced MPA and 16.5% claimed that it had negatively impacted their careers.

Role of perfectionism. Perfectionism as a personality trait may also cause a higher probability of MPA (Papageorgi et al., 2007). Perfectionism is a personality trait described as "striving for flawlessness and setting exceedingly high standards for performance, accompanied by tendencies for overly critical evaluations" (Stoeber, 2011, p. 128). There have been several debates on whether perfectionism is a strictly negative characteristic that encourages self-defeating results and dysfunctional behavioural habits that can lead to negative performance effects (Flett & Hewitt, 2005). Stoeber (2011) refined the idea of perfectionism into two primary concepts: perfectionistic strivings and perfectionistic concerns. Perfectionistic strivings are correlated with aiming toward high success levels (Stoeber, 2011), optimistic attitudes (Kaye et al., 2008), and performance-enhancing motivation (Stoeber & Becker, 2008). Perfectionistic concerns, on the other hand, are correlated with peer assessment, performance anxiety, reaching personal goals (Stoeber, 2011), and apprehension of failure (Sagar & Stoeber, 2009).

Kenny et al. (2014) stated that 'pressure from self' is one of the three main causes of MPA reported by musicians. Sinden (1999) conducted a study on 138 university-level instrumental music students and found that there was a significant relationship between the level of perfectionism and MPA. Being a performing musician requires a high level of fine motor dexterity, coordination, attention, and musical interpretation. Reaching a high level in

these skills involves years of solitary practice and self-evaluation. Musicians often strive to achieve excellence and perfection in their performances. Therefore, there are two standards of perfectionism that often apply to musicians. Personal standards of perfection, for example musicians feeling that they must always work to their full potential, and social standards of perfection, where it is perceived by musicians that everyone around them expects them to succeed (Kenny, 2006). Kawamura et al. (2001), Kenny et al. (2004), Lehmann et al. (2007), and Mor et al. (1995) concluded that performers who had higher personal and social levels of perfection suffered greater anxiety than those who did not. Musicians' perfectionism is often manifested as unwarranted concern about minor mistakes during a performance and the tendency to fixate on what is wrong instead of what is right. Minor performance errors, ironically, may not spoil the experience for most audiences, but a performer's preoccupation with these minor faults will preclude them from achieving an expressive performance, which is more important to the listener (Lehmann et al., 2007).

Trait anxiety. When assessing human anxiety, it is critical to make the distinction between state and trait anxiety. State anxiety is characterized as a temporary emotional state consisting of feelings of fear, nervousness, and physiological associated symptoms such as increased heart rate and respiration and can be assessed by a variety of indicators established in the past. Trait anxiety is a reasonably stable personality-related trait. Whereas, sometimes, anyone may experience state anxiety, there are significant variations between individuals in the frequency, length, and intensity. The experience of very frequent state anxiety, paired with a general perception of the environment as threatening and risky, is seen as an indicator of trait anxiety (Wiedemann, 2001). There is a relationship between trait anxiety and how prone a person is to experience anxiety in general, and state anxiety (the level of anxiety experienced in a particular situation) (Lehmann et al., 2007; Papageorgi et al., 2007). Additionally, Kenny (2006) adds that young performers run an extra risk of MPA symptoms

being triggered when they have a high trait anxiety and are in a home environment where expectations of them are high but support to achieve excellence is low and evaluations or self-evaluations are frequent. Once triggered by an imminent performance, performers shift into a self-evaluating mind-set, critically appraising their own abilities as inadequate. Those who perceive the imminent performance as most threatening will experience the most anxiety and perceive the performance conditions as more threatening (Kenny, 2006). A study by Ryan (2005) conducted with 173 children, aged 8-14, reported that the children's anxiety levels were substantially higher on the day of a school concert in comparison to a normal school day, and that this was also linked to their levels of trait anxiety. The mean state anxiety levels were lowest for children in the low trait anxiety category, average for the moderate trait anxiety group, and highest for the high trait anxiety group across both monitoring days (one week before the concert and on the day of the concert). Craske and Graig (1984) reported that musicians who are less susceptible to anxiety in general (low trait anxiety) encountered only the physiological symptoms of MPA, whereas highly anxious performers (high trait anxiety) indicated increased levels of psychological symptoms of MPA, such as worry and distraction, as well as behavioural symptoms and physiological symptoms (Lehmann et al., 2007). Therefore, as people with high trait anxiety perceive situations as more threatening and challenging, people with higher trait anxiety experience higher levels of MPA (Papageorgi et al., 2007).

The anxiety that performers experience, which is characterized by a preoccupation with how people will perceive them, can be classified as a social phobia (Lehmann et al., 2007). Wilson (1999), as cited in Sinico et al. (2012), stated that musicians with a degree of social phobia (otherwise known as social anxiety disorder) experience significantly more anxiety in a solo performance than non-socially phobic musicians. MPA is often associated

with social phobia in that MPA sufferers often experience anxiety in other social situations as well (Cox & Kenardy, 1993; Steptoe & Fidler, 1987).

2.1.1.2 Extrinsic factors. Some extrinsic factors that can influence a performer's susceptibility to experience MPA include level of experience, and previous performance experiences (Papageorgi et al., 2007). Kenny (2011b) mentions that a lack of previous performance experience might also underpin maladaptive MPA. According to Wilson (2002), more experienced performers are more exposed to performance situations and consequently feel less threatened by their physiological arousal. When a performer is inexperienced, pre-performance anxiety builds and peaks during the performance, which usually leads to detrimental effects. Negative previous performance experiences cause the performer to dread the next performance, which further increases the possibility for MPA. Conversely, a positive previous performance experience gives the performer extra confidence for the next performance (Papageorgi et al., 2007).

2.1.2 Factors that influence musicians' task-efficacy

According to Lehmann et al. (2007) and Wilson and Roland (2002), another source of MPA is a musician's sense of mastery of the music to be played (i.e., task-efficacy). According to Papageorgi et al. (2007), the factors that influences a musician's task-efficacy are the difficulty level of the repertoire, the amount of work the musician is able to put in, commitment to the process of preparing for a performance, and motivation. Kenny et al. (2014) lists 'inadequate preparation' as one of the three main causes of MPA reported by musicians. A notable factor associated with MPA is the perceived level of difficulty of performers' repertoire (technical, musical, and memorisation) and this will influence their expectation of success (Valentine, 2002).

Performers need to prepare through practice but also prepare psychologically for an imminent performance. Individuals need to use practice time wisely to fine-tune their

fingering, bowing, or breathing to what they are most comfortable doing, in order to minimize any technical problems during performance and prevent increased nervousness (Papageorgi et al., 2007). Mastering a piece's technical demands can also occupy all of musicians' rehearsal time, leaving them unprepared for the emotional expression of the music in a performance (Lehmann et al., 2007). MPA is likely to be less if the performers engage in task-efficacy, thereby transforming a difficult work into a work that the performer is familiar with, and the technical challenges have been overcome. Hamann (1982), and Hamann and Sobaje (1983) discovered that for musicians with high task-efficacy, MPA is a motivating factor that improves performance quality.

Atkinson's (1964) achievement motivation theory, as cited in Papageorgi et al. (2007), proposes that everyone is motivated to succeed and has the tendency to want to avoid failure. A performer's motivation can be influenced by parents and teachers, but it is vital for the performer to be intrinsically motivated to achieve success (Papageorgi et al., 2007).

2.1.3 Factors related to the performance situation

Kenny (2011b) mentions that certain environmental stimuli can cause MPA. Factors related to the performance environment includes the presence of an audience, the performer's perception of self-exposure and unsatisfactory performance conditions (i.e., a cold or unlit room/stage) (Papageorgi et al., 2007). Performers' perception of self-exposure, in the sense of feeling vulnerable during a performance, is related to various factors including the presence of peers and critics, solo vs. group performances, and playing difficult or inadequately prepared works (Wilson, 1997, as cited in Papageorgi et al., 2007). LeBlanc et al. (1997) studied 27 musicians with MPA and found that their self-reported anxiety was higher in the performances where an audience was present. They also showed that the performers' MPA increased with a larger audience size. According to Lehmann et al. (2007), an audience of unknown faces in a packed concert hall poses the same degree of anxiety to the performer as

a smaller audience of the performer's friends and family, music professionals, and adjudicators. LeBlanc et al. (1997) also found that 63% of their participants experienced the most MPA when performing in front of their peers. The fear of negative evaluation can trigger MPA, and certain people's judgments may carry more weight than others (Lehmann et al., 2007). According to Craske and Graig (1984), auditions, juries, and competitions induce the most anxiety in performers. Musicians' perception of the significance of a performance determines how they prepare for the performance, which in turn influences the amount of MPA that they experience (Lehmann et al., 2007).

Performers in the Western concert tradition may experience higher levels of MPA because of the performance conventions. This concert tradition is often marked by psychological and physical separation of the performer from the audience and is carried out in more formal venues than jazz performances, for example (Kapersen & Götestam, 2002). Western classical musicians, according to Papageorgi et al. (2013), experience higher levels of MPA. In the Western concert tradition, the performer is regarded as a professional specialist to be appreciated from afar by the crowd, some of whom may be fans, and others may be critics (Lehmann et al., 2007). Another determinant of the amount of MPA experienced is the number of co-performers on stage. Cox and Kenardy (1993) found that musicians experience greater levels of MPA in solo performances than in group performances.

Therefore, it is recommended that situational stress should be considered when incorporating helpful strategies into performance preparations (Lehmann et al., 2007).

2.2 Symptoms of music performance anxiety

The symptoms of MPA can be divided into three categories: physiological, behavioural, and psychological symptoms. These different symptoms are also interrelated (Lehmann et al., 2007).

Physiologically, the body reacts to MPA in the same manner as it does to being threatened or scared. The body's emergency system, which is a sympathetic branch of the autonomic nervous system, is activated by the brain. The nerves activate the adrenal glands in the stomach, causing them to emit adrenaline hormones into the bloodstream, affecting organs in the body. This physiological state of arousal is also characterized by increased brain response, which is why a certain amount of arousal (optimal arousal) is necessary for a high-quality performance (Lehmann et al., 2007). This is referred to as adaptive MPA and is marked by enhanced performance because of the performer's increased alertness and concentration. On the other hand, too little or too much arousal will also make it difficult to perform well. This is referred to as maladaptive MPA and is marked by minor slips that are detrimental to a well-prepared performance (Papageorgi et al., 2007).

Too much arousal can produce physiological symptoms that hinder musicians from performing at their optimal level. Some of these symptoms that have been reported by participants in studies include sweaty palms (Kivimäki, 1995; Lehrer, 1987), pounding chest or increased heart rate (Kivimäki, 1995; LeBlanc et al., 1997; Lehrer, 1987; Neftel et al., 1982; Wesner et al., 1990), shortness of breath (Wesner et al., 1990), dry mouth (Kenny, 2011a; Lehrer, 1987; Wesner et al., 1990), shaking hands (Kendrick et al., 1982; Kenny, 2005; Kivimäki, 1995; Lehrer, 1987; Spahn et al., 2016; Wesner et al., 1990), nausea (Burin & Osório, 2017; Lehmann et al., 2007, Valentine, 2002), diarrhoea (Burin & Osório, 2017; Valentine, 2002,), feeling light-headed (Valentine, 2002) and tension in the muscles (Kendrick et al., 1982; Kenny, 2005; Kivimäki, 1995; Lehrer, 1987). However, the optimum degree of arousal is determined by a number of variables, including the nature of the task at hand. Higher physiological arousal would likely be more enabling for a rock and roll drummer than for an orchestral violinist (Lehmann et al., 2007). These physiological symptoms can influence musicians to alter their performance behaviour. This is then referred

to as behavioural symptoms (Lehmann et al., 2007). Behavioural symptoms of MPA are the unwelcome aberrations and other performance mistakes that occur as a result of MPA which negatively impact a performance (Kenny, 2006; 2011a; Kenny et al., 2014). For example, violinists who are experiencing shaking hands may cut long notes short because their tone production is suffering, which could be interpreted by the audience as rhythmic mistakes. A violinist's tone production will suffer as a result of muscle tension, and shaky hands and blurry eyesight will interfere with reading music.

Psychologically performers may be affected by their fear of the performance, or they are mentally preoccupied by negative thoughts of their performance (Lehmann et al., 2007; Matei & Ginsborg, 2017). This causes their working memory to be occupied by interfering worries, which lessens the attentional resource's ability to focus on the task at hand (Matei & Ginsborg, 2017). Poor concentration was one of the most commonly reported symptoms of MPA in the study by Wesner et al. (1990).

2.3 Treatments of music performance anxiety

There are various treatment methods for MPA. The most common ones discussed or studied in various research are mentioned in the introduction to this study. The review of the literature discusses all the mentioned treatments.

2.3.1 Cognitive, behavioural and cognitive-behavioural therapies

Kenny (2006) states that cognitive, behavioural and cognitive-behavioural therapies are the most researched of all the psychological interventions to combat MPA and are also considered to be most effective for anxiety and depression. These therapies teach the performer to cope with the symptoms of MPA, involve out-of-session activities, and can be combined with pharmacotherapy, biofeedback, and counselling (Kenny, 2005). Biofeedback training makes performers aware of their MPA-related physiological reactions through the use of monitoring devices and visual displays. When they then employ coping strategies, they

have the benefit of seeing how those strategies positively decrease physiological symptoms. Biofeedback training has successfully reduced the tension in the left-hand thumb of some violinists and violists as well as facial muscles of woodwind and brass players (Lehmann et al., 2007). Cognitive, behavioural and cognitive-behavioural therapies are based on the same principles but use the various therapeutic techniques in different ways (Kenny, 2006).

2.3.1.1 Cognitive therapy. Cognitive therapy aims to change faulty thinking patterns that result in maladaptive behaviours (Kenny, 2006; Lehmann et al., 2007). These maladaptive behaviours, according to Kenny (2006), include inadvertent muscle stiffness, avoiding the dreaded situation, and compromised performance. Performers learn cognitive restructuring through this treatment (Kenny, 2006; Lehmann et al., 2007). Cognitive restructuring is the process of replacing pessimistic and unproductive thoughts with more realistic and effective means of understanding the dreaded situation. People are taught to reassess the feared situation in order to make dealing with the situation more manageable (Kenny, 2006). Kendrick et al. (1982) offered pianists "attention training", in which they were trained to substitute negative self-talk with constructive self-talk phrases like “I’ve learned the music thoroughly and am well prepared”. The pianists’ symptoms were significantly reduced after two three-hour sessions and five weeks of implementing the training in practice performances. Sweeney and Horan (1982) produced similar results and found that their treatment group showed significant improvement in their anxiety, heart rates and performance quality. Wilson (2002) summarised the three most effective goals in cognitive restructuring to deal with MPA: (a) to learn to accept a degree of MPA and minor performance errors that can occur, (b) to learn to appreciate the process of the performance rather than just focusing on the evaluation by the audience, and (c) to learn to use task oriented positive self-talk over critical thinking (Lehmann et al., 2007).

2.3.1.2 Behavioural therapy. Behavioural therapies employ standard relaxation techniques and systematic desensitisation (Kenny, 2005). Systematic desensitisation is a technique developed by Joseph Wolpe based on the principle that anything that has been learned can be unlearned and has been shown to be effective in reducing anxiety and other panic states. The technique involves a person imagining him/herself in a fearful situation and then using relaxation strategies that compete with feelings of anxiety (Ankrom, 2020). Kenny (2005) showed that these strategies include deep breathing techniques, progressive muscle relaxation and behavioural rehearsal.

Behavioural rehearsal. Behavioural rehearsal in the context of MPA means to practice the art of performing (i.e., mock performances, or self-recordings). Lehmann et al. (2007) states that situational stress needs to be considered when incorporating helpful strategies into performance preparations. Kendrick et al. (1982) investigated the benefits of behavioural rehearsal and cognitive-behavioural treatments on MPA in student pianists relative to a control group. The participants in the behavioural rehearsal group had three sessions with a therapist. In the first session the therapist explained how repeated practice in front of an audience may be justified as a treatment for MPA. The participants were then asked to perform a piece of music for each other after the therapist demonstrated how to go about it. Other participants' comments were positive and welcoming. Participants were asked to perform for family members and score their anxiety levels as well as the standard of their performances at home. Sessions two and three were somewhat identical, but in each session, participants were encouraged to expand their audience size to incorporate non-family members while performing at home. The results of this study were that both the cognitively based treatment and the behavioural rehearsal treatment proved effective for reducing MPA and improving the quality of participants' performance. Kirchner (2004) also recommends behavioural rehearsal and is of the opinion that this will increase the performer's confidence

level and will allow the performer to become more secure with the music by, for example, identifying weak spots while performing. She also recommends having these rehearsals in the performance venue to enable the performer to become more secure in the performance space.

Other behavioural therapies. According to Wesner et al. (1990) the most common relaxation techniques used are deep breathing and muscle relaxation exercises. Roland (1994) found that 71% of his participants used deep breathing before a performance and Shoup (1995) also indicates deep breathing as a popular coping strategy for MPA. Deep breathing allows the body to draw in the necessary amount of oxygen when in a state of arousal (Lehmann et al., 2007). Muscle relaxation techniques involve contracting and relaxing the muscles one by one. Typically, the procedure begins with the extremities, such as the fingertips and toes, and then extends to greater muscles. Once the person can manage their anxiety while imagining fearful events, the technique can be applied in real life (Ankrom, 2020). Sweeney and Horan (1982) studied 49 music students with MPA and found that cue-controlled relaxation improved their participants' anxiety, heart rates and performance quality.

2.3.1.3 Cognitive-behavioural therapy. Cognitive-behavioural therapy is a combination of cognitive and behavioural therapies. It aims to change both negative thinking patterns and maladaptive behaviours. This therapy is more action-oriented and involves the patient's active participation in application and evaluation of the treatment and record-keeping (Kenny, 2006). Kendrick et al. (1982) did a study on student pianists by dividing them into three groups and comparing the effects of behavioural rehearsal and cognitive-behavioural treatments on MPA. The cognitive-behavioural group showed a greater improvement on their Performance Anxiety Self-Statement Scale (PASSS), which showed that cognitive-behavioural therapy is superior to behavioural rehearsal in treating measures such as self-efficacy and physiological signs of anxiety.

There is some argument in the choice of simple behavioural or cognitive treatments, or the combination of cognitive and behavioural treatments. Sweeney and Horan (1982) showed that cognitive-behavioural therapy was not significantly more effective in improving their participants' anxiety, heart rates and performance quality than simple behavioural treatment. However, Brugués (2011b) reviewed 26 studies and concluded that cognitive-behavioural therapy can be especially effective in treating MPA, while McGinnis and Milling (2005) reviewed nine studies and concluded that a combination of cognitive restructuring and behavioural rehearsal is more effective in treating MPA than either of the individual treatments.

2.3.2 Alexander technique

The Alexander technique is a process created by Frederick Matthias Alexander, an Australian actor (Lehmann et al., 2007), in which the patient learns to lessen tension in areas of the body for ease of movement. It aims to improve the alignment of the patient's head, neck, and spine for a more natural posture (Kenny, 2005; 2006). It focuses on these three body parts because they are associated with balance, strength, and coordination. Patients learn more conscious control over their postures and movements to prevent involuntary muscle tension that may interfere with smooth performance (Kenny, 2006; Lehmann et al., 2007). For performers, this means to become aware of sensations of tension, effort, and weight (Kenny, 2006). This technique was not developed as a treatment for MPA but is widely used by musicians to attempt to combat MPA (Lehmann et al., 2007). According to Kenny (2005), this technique has only been investigated as a treatment for MPA in one study by Valentine et al. (1995). In this experiment, they offered 15 Alexander technique lessons to a group of music students. The group who attended these lessons demonstrated modest increase in musical and technical quality from pre- to post-treatment, as well as a greater pre- to post-treatment decrease in anxiety and a more optimistic outlook toward the performance

than the control group. According to Kenny (2005) however, this study does not provide sufficient evidence of the effectiveness of the Alexander technique in treating MPA because of the inadequate sampling number, and because the participants were not selected based on their high levels of MPA.

2.3.3 Mindfulness Meditation-Based Stress Reduction

MMBSR is used in this study as an intervention for MPA. Mindfulness in music has been enjoying increasing attention in the last few years and has been explored in musicians in contexts other than MPA including music listening, music therapy, and the psychological well-being of music students (Langer et al., 2009; Rodríguez-Carvajal & de la Cruz, 2014; Steyn, 2013). Despite the suggested benefits of MMBSR for dealing with anxiety, there are not many studies on MMBSR as a treatment for MPA; however, four were found which will now be discussed in more detail.

Chang et al. (2003) investigated the effects of meditation on MPA in 19 university-level music students between the ages of 18 and 41. The students were randomly assigned to the intervention group and the control group. The intervention group received eight meditation classes over the course of eight weeks and the control group received no training in meditation. At the end of the eight-week period all the students performed a concert. The results of the study showed that performance anxiety decreased in the intervention group but not in the control group. There were no significant differences in the post-performance state anxiety and the concentration during the performance between the participants who received the intervention and the control group. They concluded by stating that meditation may be a useful tool for performers to combat their MPA.

Lin et al. (2008) investigated the influence of Chan (Zen) meditation on musical performance anxiety and musical performance quality in a sample of 19 music conservatory students. The participants were randomly allocated to one of two groups: intervention or

control. The intervention group ultimately had nine members, while the control group had ten. Each intervention group participant was invited to an eight-week meditation class. After eight weeks of meditation practice, members from both groups performed a solo concert in front of a live audience. According to the findings of Lin et al. (2008), meditation was associated with a reduction in musical performance anxiety but there were no substantial discrepancies in the performance qualities of the intervention and control groups.

Xu (2010) reviewed a wide range of research on MPA and Zen meditation and explained the techniques and concepts of Zen meditation, speculating on how Zen meditation's thought and behaviour styles can be used to address problems of MPA. According to Xu, Zen meditation has the benefit of concurrently addressing the physical, emotional, and behavioural elements of MPA. The author states:

> Zen meditation is a powerful technique, especially for musicians. It trains the mind to be attentive, and also teaches the body to be relaxed so that it can produce challenging technical passages and maintain muscle flexibility. When the mind is more aware and alert, the likelihood of memory slips and blanks is lowered. (Xu, 2010, p.44)

Czajkowski et al. (2020) provided music conservatory students with eight-week MBSR/ Mindfulness Based Cognitive Therapy (MBCT) courses, over a span of two years. The research was conducted with 25 students from the Guildhall School of Music and Drama who completed two pre- and post-mindfulness tests. Their findings indicated that the level of mindfulness in all the participants has improved over the duration of the experiment and the participants reported many benefits of the intervention, including the positive effect of mindfulness on the participants that reported a high level of MPA. Some participants reported elevated levels of MPA and spoke extensively about the beneficial effects of mindfulness on MPA. Eight of the participants exercised pre-performance mindfulness by breathing, and three others used this mindfulness technique on stage when they became nervous.

Participants reported decreases in pre-performance MPA symptoms such as calmer breathing, slower heartbeat, and less clammy hands, after practicing mindfulness. The findings of this study corroborated previous studies that found higher levels of mindfulness correlate with lower levels of MPA (Diaz, 2018; Farnsworth-Grodd, 2012). Hribar (2012), and Steyn et al. (2016) also found that mindfulness treatments have been shown to have a beneficial effect on the MPA symptoms of student musicians.

2.3.4 Pharmacotherapy

Pharmacotherapy refers to the use of drugs and other substances to manage effects of MPA. The use of beta-blockers has become increasingly popular amongst performers (Lehmann et al., 2007). Beta-blockers suppress the physiological symptoms caused by adrenaline in the bloodstream. When beta-blockers are taken, its chemical agents in the bloodstream bind to beta receptors in organs, effectively blocking adrenaline from bonding to those beta receptors (Lehmann et al., 2007). A survey by ISCOM found that 27% of 2122 musicians use beta-blockers to combat their anxiety before a performance and that 19% used beta-blockers on a daily basis (Kenny, 2006; Matei & Ginsborg, 2017). Of the 27% of those 2122 musicians, 96% reported that using the beta-blockers had been effective in reducing MPA. Kenny et al.'s (2014) survey showed that 31% of respondents used beta-blockers to combat MPA. According to Brugués (2011b), Kenny (2006), Nubé and Musicobgy (1991), and Papageorgi et al. (2007), beta-blockers are effective in managing the physiological symptoms of MPA but not the psychological symptoms. According to Kenny (2006), a study by Berens and Ostrosky (1988) also found that the use of beta-blockers improved performance quality but not self-reported anxiety. Beta-blockers can also have adverse effects on performers, especially when taken in large amounts. Berens and Ostrosky (1988) reported that at least 10% of beta-blocker users reported to have experienced bradycardia, hypotension, cold extremities, gastrointestinal upset, sleep disturbances, and muscle fatigue.

Brugués (2011b) also added that the use of beta-blockers increases salivation, therefore beta-blockers might interfere with singers' and woodwind players' performance. According to Lehmann et al. (2007), taking beta-blockers before a performance may dampen the performer's emotional involvement with the music. Brugués (2011b) recommends taking beta-blockers cautiously and combining them with psychological treatments for MPA.

2.3.5 Combined interventions

According to Kenny et al.'s (2014) poll, their respondents frequently used deep breathing, constructive self-talk, mock performance rehearsal (behavioural exposure), familiarizing oneself with the performance venue, and medicine. Spahn et al. (2016) investigated the effectiveness of a combination of behavioural exposure, group discussion, expert input, and cognitive techniques in combating MPA and found that the intervention produced lower scores of MPA and state anxiety in the participants. Lehmann et al. (2007) recommends treating the physiological symptoms of MPA through bodily training, behavioural therapy, and medicinal remedies, and the psychological symptoms through cognitive restructuring.

2.4 Summary

This review of the existing literature indicates that there are various factors that influence a musicians' MPA. These factors include gender, age, level of perfectionism, trait anxiety, level of performance experience, previous performance experiences, sense of task-efficacy, the audience, the performer's perception of self-exposure, and unsatisfactory performance conditions. This review also shows that the symptoms related to MPA are not only physiological but also behavioural and psychological. Currently there are various treatment methods for MPA that have been researched; cognitive, behavioural, and cognitive-behavioural therapy being the most popular. Other treatments include the Alexander technique, pharmacotherapy, and meditation. However, there is a paucity of the research on

meditation and/or mindfulness as a treatment for MPA, although a few studies propose that meditation may be a useful tool for performers to combat their MPA.

Chapter 3: Methodology

The following chapter provides an explanation of the methodological process followed in this study. It explains the research approach and paradigm, research design, sampling strategy, data collection techniques, data analysis technique, and the validity and reliability of the study. The manner in which ethical considerations were treated are also explained.

3.1 Research approach

A qualitative research approach was used for this study to explore the problem of MPA and the effectiveness of MMBSR as a method for combating MPA. Qualitative research is often done when a problem needs to be explored and the researcher wants to provide a more detailed understanding of the research topic. It involves an interpretive, naturalistic approach, which means that the objects of investigation are studied in a natural setting which is sensitive to the people or places that participate in the study, and the researcher attempts to interpret the phenomena in terms of the meanings people bring to them. The final written report of a qualitative study includes these meanings from participants. This can be done by talking directly to the participants of a study (i.e., conducting interviews) and observing their behaviour in context (Creswell & Poth, 2016).

3.2 Research paradigm

Qualitative research begins with assumptions and the use of theoretical frameworks (Creswell & Poth, 2016). It is beneficial for readers to understand how these assumptions relate to researchers' chosen methodologies and findings (Scotland, 2012). The research paradigm consists of the ontological and epistemological assumptions of the researcher.

The ontological position for this research was relativism. Relativists believe that humans are inevitably bound up with the events of the world, meaning we are all influenced by our experiences and viewpoints. Relativists believe that no matter how established facts are, they are only human interpretations of reality and can change over time and be

understood differently by people of different cultures. This ontological position is relevant when studying anything to do with human society (Walliman, 2004).

The epistemological position for this research was subjectivism. Subjectivists believe that the world does not exist independently from humans' knowledge of it, and that meaning is not discovered but rather constructed by the interaction between consciousness and the world (Scotland, 2012). To experience the world means to participate in it, simultaneously creating and encountering it (Heron & Reason, 1997).

3.3 Research design

This study employed a multiple-instrumental case study research design; however, due to the intervention, it also assumed elements of a quasi-experimental research design. Quasi-experiments are often conducted to evaluate the effectiveness of a treatment or intervention (Price et al., 2015). The ontological and epistemological views of this study focused on acquiring subjective opinions, therefore it is fitting that the study drew on elements of ethnography and phenomenology.

Case study research involves studying the case/cases in a real-life context, over time, using multiple sources of information (i.e., interviews, observations, or reports) (Creswell & Poth, 2016). This study was a multiple case study and three cases (participants) were studied. A multiple-case study enables the researcher to explore differences within and between cases, but multiple cases are often selected to show different perspectives of the issue at hand. In a multiple case study, the design often uses replication, which means that the researcher replicates the procedures for each case (Creswell & Poth, 2016). An instrumental case study is used to provide insight into an issue or helps to refine a theory, meaning the case is of secondary interest and plays a supportive role in promoting the understanding of something else (in this research paper the cases further provided insight into the phenomenon of MPA) (Nieuwenhuis, 2007b). In a case study research design the case that is selected becomes the

basis of a comprehensive and thorough exploration of the aspects that the researcher wants to develop a deeper understanding of (Kumar, 2014). Implicit in this case study is an element of ethnography in that I, as researcher, and the performers were completely immersed in the performance situation.

Phenomenology is a design used in qualitative research to describe the experiences of several individuals of a concept or phenomenon (Fouché & Schurink, 2011; Nieuwenhuis, 2007b). In this study, the participants' experiences of MPA and the effects of MMBSR in combating MPA are described and compared. Phenomenology as an approach was used to reduce the individual experiences of a phenomenon to a description of the whole concept or phenomenon; in other words, a complex description of the experience for all of the individuals. In phenomenological research the researcher does not attempt to explain the phenomenon, but rather to develop descriptions of the phenomenon (Creswell & Poth, 2016). However, phenomenology is more than just a description; it is also an interpretive process in which the researcher interprets the significance of the participants' experiences (Creswell & Poth, 2016). If a phenomenological approach is used in research, it is required of researchers to set aside their personal judgments and preconceptions (Fouché & Schurink, 2011; Nieuwenhuis, 2007b), striving to describe the phenomenon accurately and as objectively as possible from the viewpoints of the participants (Fouché & Schurink, 2011). Creswell and Poth (2016) is of the opinion that objectively evaluating the phenomenon without referring to personal experiences may be difficult because the data is interpreted inadvertently by the researcher, and this process may lead to the incorporation of the assumptions and opinions of the researcher on the phenomenon.

The approach to phenomenology that was used in this research is psychological phenomenology. According to Moustakas (1994), as cited in Nieuwenhuis (2007b), psychological phenomenology is less focused on the interpretations of the researcher and

more on the description of the participants' experiences. This approach helped to de-emphasize my own experiences with MPA, ensuring a higher degree of objectivity in the analysis.

3.4 Sampling strategy

The sample included three university-level violin performance majors. The sampling strategy was both purposive and convenient and participants were selected according to the following criteria:

First, the participants were required to be students at the University of Pretoria, studying BMus with violin as a first instrument, or MMus (Performance) in violin. This would ensure that the participants are familiar with doing solo performances in the Musaion, as their practical exams are carried out in this hall. Participants must have been above the age of 18 because then individuals have a certain degree of independence and can therefore relate to and reflect on personal experiences.

Secondly, the participants must have suffered from MPA at the time the study was implemented. The participants were required to complete the Kenny Music Performance Anxiety Inventory (K-MPAI) to confirm this. The K-MPAI (see Appendix D) is a 40-item inventory developed to assess self-reported anxiety and emotion related to a music performance. Questions are answered on a seven-point Likert scale (0=strongly disagree to 6=strongly agree). Higher scores indicate higher anxiety levels and psychological distress.

All students studying BMus or MMus at the University of Pretoria with violin as first instrument were recruited telephonically and via e-mail, whereafter the participant information and consent form (Appendix A) were sent to all willing potential participants. Three participants consented to take part in the study. The sample of participants were relatively homogenous apart from their K-MPAI scores. The participants fell in the age range of 20-24 and were all females. The participants were given pseudonyms to protect their

anonymity. Gretchen was a 21-year-old second year BMus student at the time the study was conducted. She scored 146/240 on the K-MPAI. Catherine was a 20-year-old second year BMus student at the time the study was conducted. She scored 137/240 on the K-MPAI. Tiffany was a 24-year-old MMus (Performance) student at the time the study was conducted. She scored 105/240 on the K-MPAI.

I had no relationship with Catherine or Gretchen prior to the study, however Tiffany had been a close friend for six years prior to the study. Extra caution was taken to not have my personal relationship with Tiffany impact the research process.

3.5 Intervention

The MMBSR intervention was executed with guided meditation courses on the *Headspace* smartphone application available on both the Apple App-store and Google Play store. The participants were sent two blog posts from the *Headspace* website which gave them more information on how meditation works, the experience of meditation, common obstacles for beginners, and practicalities of meditating to prepare them for the intervention period. The intervention period was nine weeks in duration. According to Headspace (n.d.-d), it has been scientifically proven that meditation helps mitigate stress after eight weeks of consistent practice. The participants were instructed to do five 10-minute sessions a week from the ‘Basics’ meditation course for the first two weeks, five 15-minute sessions from the ‘Managing Anxiety’ course in the third week, and then five 20-minute sessions per week from the ‘Managing Anxiety’ course for weeks four to nine of the intervention period. It is recommended to start with 10-minute sessions and to later move to 15-minute and 20-minute sessions as one grows more accustomed to meditation and disciplining the mind (Headspace, n.d.-b). The subscription to the application for each participant was paid for by me for the months in which the application was used by them.

3.6 Data collection techniques

A qualitative study usually involves gathering multiple forms of data rather than relying on just one data source (Creswell & Poth, 2016). The data collection in phenomenological research usually consists of multiple interviews and other forms of data can also be collected in the form of observations, journals, poetry, and other forms of art (Creswell & Poth, 2016). In this study, data was collected through one-on-one, semi-structured, in-depth interviews and solicited diaries from the participants.

One-on-one semi-structured interviews were conducted with each participant because these types of interviews are based on many characteristics that underpin the philosophy of qualitative and phenomenological research. Qualitative research is flexible, and the researcher has freedom in terms of the structure (Kumar, 2014). Semi-structured interviews are also flexible in their structure and the researcher is free to deviate from its predetermined course in the light of the participants' responses (Smith & Osborn, 2004). Consistent with the nature of qualitative research, the interviews conducted in this study focused on understanding the participants' perspectives of their experiences and situations as expressed in their own words (Taylor & Bogdan, 1998).

Two interviews were done with each participant; one before the intervention period, which focused on acquiring information about the participant's previous experiences with MPA, and one after the intervention period, which focused on the experiences and views of the participants with the MMBSR intervention and the effect of the intervention on their MPA. All interviews with participants were audio-recorded.

During the semi-structured interviews, I had a set of questions on an interview schedule, an idea of some questions to pursue and an overall notion of what the interview might cover, but the questions only served as a guide to the interview rather than a fixed schedule. The participants' responses steered the direction of the interviews, but I indicated

the general direction and provided cues when the participants required a prompt. The advantages of semi-structured interviews are that they facilitate rapport and allow for greater flexibility of areas to cover, thereby allowing an interview to go into novel areas that researchers might not have considered (Smith & Osborn, 2004). These semi-structured interviews were also in-depth interviews. In-depth interviews are repeated (i.e., more than one) one-on-one encounters between the researcher and participants (Kumar, 2014).

The participants were also required to keep a solicited diary during the nine weeks in which the intervention took place. In these diaries they recorded their experiences with the intervention. Solicited diaries are diaries that individuals are requested to complete for research purposes. These types of diaries may be used for quantitative or qualitative research. Structured diaries lean more to quantitative data, while open solicited diaries can provide rich qualitative data. The diaries for this research paper were therefore open solicited diaries. The benefit of collecting data using this strategy was that the recording of participants' activities, behaviours, thoughts, and feelings was closer to the time of the intervention, minimizing the effect of time on memory, and providing me with access to data that might not have come forth in the interviews at the end of the intervention period (Kenten, 2010). The solicited diaries were self-reflective, and participants were to complete an entry after every week of the intervention period. Therefore, nine diary entries were completed by each participant. The diaries contained prompts to help the participants record their experiences (see Appendix C).

3.7 Research procedure

This study was carried out in three phases.

Phase 1 (Pre-intervention data collection):

- Participants did a concert performance of approximately 15 minutes in the Musaion hall (First Performance).

  - Gretchen's First Performance was on 10 February 2020. She played for 14 minutes. Five audience members were present.
  - Tiffany's First Performance was on 06 March 2020. She played for 11 minutes. Five audience members were present.
  - Catherine's First Performance was on 11 March 2020. She played for 13 minutes. Five audience members were present.
- The first semi-structured interviews with each participant were done after, and on the same day as their First Performances.
  - Gretchen's first interview was 30 minutes long.
  - Tiffany's first interview was 40 minutes long.
  - Catherine's first interview was 13 minutes long.

Phase 2 (Intervention period):

- Due to uncertainty regarding the continuation of the study because of COVID-19 restrictions, the intervention period only commenced on 27 July 2020 and continued until 27 September 2021 (nine weeks) for Catherine and Tiffany.
- Gretchen, unfortunately, misunderstood that the intervention period was only going to be four weeks in duration and therefore stopped the guided meditation sessions after 23 August 2020. When I became aware that she stopped the sessions, she resumed the sessions on 18 September 2020 until 23 October 2020 (five weeks). Therefore, her intervention period was interrupted for approximately four weeks.

Phase 3 (Post-intervention data collection):

- After the intervention period, the participants did another concert performance of approximately 15 minutes in the NG Waterkloof church hall (Second Performance). The Second Performances could not take place in the Musaion hall because,

unfortunately, the hall was not available at the required time after the intervention period due to COVID-19 restrictions.

  - Gretchen's Second Performance was on 23 October 2020. She played for 12 minutes. Five audience members were present.
  - Tiffany's Second Performance was on 29 September 2020. She played for 18 minutes. Five audience members were present.
  - Catherine's Second Performance was on 29 September 2020. She played for 14 minutes. Five audience members were present.

- The second semi-structured interviews with each participant were done after, and on the same day as their Second Performances.
  - Gretchen's second interview was 20 minutes long.
  - Tiffany's second interview was 45 minutes long.
  - Catherine's first interview was 14 minutes long.

3.8 Data analysis

A thematic analysis of the data was conducted for this research. The data to be analysed were the six semi-structured interviews and the 27 solicited diary entries. The audio-recorded interviews were transcribed verbatim by me.

The data analysis of a qualitative study is usually both inductive and deductive and establishes patterns or themes (Creswell & Poth, 2016). An inductive research approach involves searching for patterns that emerge from the observations made in the data collection process and the development of theories for those patterns by making hypotheses (Bernard, 2011). Qualitative researchers organise common patterns or themes seen across all the data sources inductively into units of information that grow increasingly more abstract as the process of data analysis is undertaken. They work on different themes simultaneously until they establish a set of themes that are comprehensive enough for the topic. However,

qualitative researchers also use deductive thinking in that they constantly check their themes with the data they collected (Creswell & Poth, 2016). A deductive research approach involves developing hypotheses based on existing theories and then designing a research process to test or prove those hypotheses (Wilson, 2014).

The interview transcripts were analysed through the process of thematic content analysis (TCA). TCA is a systematic approach used to analyse qualitative data such as the answers to open-ended interview questions. It is the process of identifying "keys" or themes in the text that will help to interpret the raw data (Nieuwenhuis, 2007a). The focus during the data analysis process was on trying to understand the content and complexity of the meanings of the participants rather than measuring their frequency.

Researchers use a coding process during data analysis to mark segments of their data with descriptive words or symbols that enable them to quickly retrieve and collect together text that they have associated with some thematic idea (Nieuwenhuis, 2007a). The coding process for this study's data analysis included *a priori* coding. *A priori* coding is useful when the researcher seeks to test existing theories or expand on them (Nieuwenhuis, 2007a). *A priori* codes are codes that researchers develop before reading the interview transcriptions. These were codes that I have identified in the literature review and have based the interview questions on.

Each transcript of the interviews as well as the solicited diaries were read multiple times to become closely familiar with the account. The left-hand margins were used to make annotations about what is interesting or significant about what the participants said, to make summaries, interpretations, to paraphrase, or to comment on similarities or differences in what the participants said. Secondly, after all the re-reads of the transcripts, the right margins were used to document emerging theme titles. Thirdly, the themes that come up chronologically through the readings of the transcripts were ordered more analytically and

theoretically. I tried to find connections between the themes and some themes did cluster together while others originated as concepts of their own. Directories of the participants' phrases under each theme title were assembled with the cut and paste functions on a standard word-processing package to aid in the clustering of themes.

The write-up of the analysis focused on explaining and illustrating the themes identified through the participants' phrases. Relevant quotes are provided from each participant to support each subtheme. Special care was taken to clearly distinguish between what the participants said and my interpretation and account of it. Not all subthemes were discussed by every participant and therefore were not presented in the write-up of the analysis. Furthermore, some participants explored themes in greater depth than others and were prioritised in those instances.

3.9 Validity and reliability

In qualitative research, it is recognised that the researcher is a central figure who influences and actively constructs the selection and interpretation of the data, and that the research is co-constituted by the researcher and the participants, as meanings are given in a social context (Finlay, 2002). It was therefore evident that I needed to apply reflexivity in the data analysis procedure. The application of reflexivity by a researcher is a useful tool to more clearly understand the meanings of a phenomenon and the lens of personal philosophy through which the researcher views a phenomenon (Carolan, 2003). The process of reflexivity made me more aware of my own opinions/viewpoints during the data collection and analysis stages of the research, which prevented those opinions from unintentionally making their way into the analysis and discussion of the participants' meanings of the phenomenon.

The report of the study includes the perspectives and opinions of the participants, a reflection on the problem and findings by me, and a clear description and interpretation of the

problem. The one-on-one in-depth interviews also lead to in-depth and accurate information because these types of interviews involved repeated contacts between the participants and me, and it can therefore be assumed that the rapport were enhanced (Kumar, 2014). The final analysis of the data was also submitted to the participants in the study for them to verify whether the data collected, and the interpretations done by me, were correct. According to Nieuwenhuis (2007a), this further validates the reliability of a study.

3.10 Ethical considerations

There are several ethical matters that needed to be considered for the implementation of this study. Ethical clearance was first obtained from the University of Pretoria's Humanities Research Ethics committee before data collection commenced. Permission from the head of the School of The Arts had been granted to use university-level violin performance majors from the music division. The participants in the study were informed that their participation was completely voluntary, that they had the freedom to withdraw at any point, and that their identities would remain confidential (see Appendix A for the informed consent form). Informed consent was granted by each participant before data collection commenced. The participants in the study were also informed that they will have access to their data and the final research results, how the results will be disseminated, as well as how the data will be stored.

All the data collected for this study will remain the property of the University of Pretoria. The data will be stored in a secure password protected electronic format in the School of The Arts at the University of Pretoria for 15 years.

3.11 Delimitations of the study

This study did not evaluate all potential interventions for MPA, it only evaluated the effect of MMBSR on violin students and excludes students playing other instruments. This study also evaluated the experiences of only students and not professional musicians. Only

the phenomenological experiences of the participants were analysed, no empirical measurements were taken.

3.12 Summary

The study utilized a qualitative research approach and was designed as a multiple-instrumental case study, however, due to the intervention it also assumed elements of a quasi-experimental research design. The ontological position for this research was relativism and the epistemological position, subjectivism. These two positions led me to focus on acquiring subjective opinions, therefore it is fitting that the study drew on elements of ethnography and phenomenology.

The sample included three university-level violin performance majors. The sampling strategy was both purposive and convenient. It was required that the participants be students at the University of Pretoria, studying BMus with violin as a first instrument, or MMus (Performance) in violin. The participants should also have suffered from MPA at the time the research was conducted.

The MMBSR intervention was executed with guided meditation courses on the *Headspace* smartphone application. The participants were instructed to do five 10-minute sessions a week from the 'Basics' meditation course for the first two weeks, five 15-minute sessions from the 'Managing Anxiety' course in the third week, and then five 20-minute sessions per week from the 'Managing Anxiety' course for weeks four to nine of the intervention period.

The study was carried out in three phases and data collection consisted of two one-on-one semi-structured interviews with each participant, as well as solicited diary entries from the participants during the nine weeks in which the intervention took place. The data was analysed through the process of TCA. To ensure the validity and reliability of the study, I applied reflexivity in the data analysis procedure, and the final analysis of the data was also

submitted to the participants for them to verify whether the data collected, and the interpretations done by me, were correct. The study also complied with the ethical standards set out by the University of Pretoria.

Chapter 4: Findings

The findings from the inductive and deductive analysis of the data gathered from the six semi-structured interviews with the three participants and the 27 solicited diaries are presented in this chapter. The first interviews with the participants were conducted after, and on the same day as their First Performances. These interviews focused on acquiring information about the participants' previous experiences with MPA. The second round of interviews with the participants were conducted after, and on the same day as their Second Performances. These interviews focused on acquiring information about the participants' experiences and views on the MMBSR intervention. Throughout the interview process it was a priority to encourage the participants to reflect and explore experiences related to the questions asked. The interviews were transcribed and analysed through a TCA by means of qualitative coding, which included *a priori* coding. Through this process, four main themes and 14 subthemes were identified.

4.1 Main themes and subthemes

The data analysis procedure led to the emergence of many subthemes which were grouped into four main themes. Some of the main themes were identified through the inductive analysis of the data, some through the deductive analysis, and some through both. The themes and subthemes are presented in Table 4.1, illustrated with excerpts from the interviews.

Table 4.1

Main themes, subthemes, and interview data.

	Subtheme	Raw Data
First main theme: Intrinsic factors impacting music performance anxiety		
i.	The role of perfectionism	I would say that I have a high level of perfectionism, but it's not, like, a hundred percent. (Tiffany) …I'm less concerned with perfect as much as I am with just being authentic and doing it well. (Gretchen) …music is never gonna be perfect. So, it's kind of pointless to strive for perfection… (Catherine)
ii.	The role of motivation	I think motivation to perform well tends to make it worse… (Gretchen) …if my motivation is sometimes to just go on stage and just enjoy myself, then I basically have no anxiety, but the minute I think about the people that are in the audience and trying to impress them, it goes horribly wrong. (Catherine) …if I actually don't really care about the performance […] then the anxiety is less, actually. (Tiffany)
iii.	Trait anxiety and state anxiety	I'm a mess most of the time […] anything that involves other people is a problem… (Gretchen) I would describe myself as an anxious person. I get easily stressed about things… (Tiffany) After realising that I would have to perform soon, my anxiety spiked. (Catherine)
iv.	The role of preparation	My practice schedule was a lot better now, so I think that also helped […] I planned it out better and stuff. So, I think that helped [her MPA] a lot (Catherine) I knew, you know, if you're not well prepared then obviously you'll have performance anxiety. (Tiffany) Yeah…so it [not practicing well] does make it [MPA] worse, but usually I try not to do that, because I know it makes it worse. (Gretchen)
Second main theme: Symptoms of music performance anxiety		
i.	Physiological symptoms	…most of the time it's the tension, mostly in my shoulders […] I think my legs get tense and they lock straight [...] I don't shake usually, sometimes I do when it [MPA] gets really bad (Gretchen)

		…I start to, uhm…clench my teeth, like, really hard […] I have an increased heart rate, obviously […] I mean, all the blood goes to my fingers, so I would…yeah, it would start sweating and, uhm...there's actually not a lot of shaking, but there's some shaking. (Tiffany) Shaking would happen before I go on… (Catherine)
ii.	Psychological symptoms	…you don't pay attention, because you are too busy thinking about how worried you are… (Gretchen) …I would focus more on how I'm standing or what I'm doing, whereas I'm not nervous, then I might focus less on all those things because I'm just focusing on the music. (Catherine) …I kind of become uncertain about some things (Tiffany)
iii.	Behavioural symptoms	…my choice of tempo generally doesn't really get affected by it [MPA], but my intonation does… (Catherine) I would say intonation…that's quite a big thing…especially chords. When I'm not completely relaxed in my left hand, then I would place fingers slightly too high or slightly too low… (Tiffany) …I tried very hard to actually get the musicality very good on this performance…but the moment you start panicking you forget to do it. (Gretchen) I did experience some MPA, because I made some mistakes that I haven't made before… (Tiffany) I tend to tense more, and then make more mistakes. It's like an annoying cycle that happens usually… (Gretchen) So, normally when I make mistakes I just shut down, you know? (Catherine)

Third main theme: Extrinsic factors impacting music performance anxiety

	Subtheme	Raw Data
i.	Audience	If there's an audience, no matter if it's a hundred or five, I would still experience some anxiety… (Tiffany) …it [MPA] was worse because, like, my friends were there… (Catherine) If I know the people know that I'm making mistakes, so the people have musical experience, that scares me. (Gretchen)

ii.	Types of performances	…just solo, and mostly only when it's, like, uhm, classical repertoire, or something like that. (Catherine) I tend to only experience anxiety when I am performing…by myself… (Gretchen) When it's focused on me and I'm playing…a solo, or I just play with the piano for that matter, then I would experience some performance anxiety. (Tiffany)
iii.	Venue	The stage is lower than the Musaion, which is actually less nerve-wracking for me. (Gretchen) …I would definitely have been more nervous if we played in the Musaion. (Tiffany) …if I had to play in the Musaion I would have probably been more stressed out. (Catherine)

Fourth main theme: Experiences with the mindfulness meditation-based stress reduction intervention

	Subtheme	Raw Data
i.	Progress with meditation over the weeks	At first it [intervention sessions] was […] quite hard… (Catherine) Meditating in general gets easier as time goes on. (Gretchen) Later on it became more easier…easy, if I can put it like that, uhm, to focus on a specific thing… (Tiffany)
ii.	Observations during the intervention sessions	I feel like I could… arrange all of my thoughts… (Tiffany) It was actually so easy to calm myself down by simply categorising and identifying the main triggers. (Catherine) Mindfulness is a very useful skill to have… (Gretchen)
iii.	Intervention's effect on experience of mindfulness during the Second Performance	I could definitely concentrate my mind on a specific thing... (Tiffany) The whole mindfulness thing has helped because […] you're getting yourself into, like, a choreography of how it works, get your whole body into the performance and your whole mind. (Gretchen) …I was able to calm myself down in the performance… (Catherine)
iv.	Intervention's effect on MPA during the Second Performance	It definitely did help with my anxiety during the performance. (Catherine) …that [ability to control and organise thoughts] really, really helps to decrease the amount of anxiety that you have. (Tiffany) It probably decreased it [MPA]. It's difficult to tell, because I haven't performed in a while. (Gretchen)

4.1.1 First main theme: Intrinsic factors impacting music performance anxiety

The first main theme, intrinsic factors impacting MPA, focuses on certain underlying psychological impacts of each participant's personality on their MPA, as well as the impact of preparation for a performance on the participants' MPA. The theme is divided into four subthemes: role of perfectionism, role of motivation, trait anxiety and state anxiety, and role of preparation. Each subtheme will now be described individually along with reference to relevant interview data taken from both the first and second interviews and solicited diaries that illustrates and contextualizes the subtheme.

4.1.1.1 Subtheme (i): The role of perfectionism. This subtheme is concerned with how the participant's levels of general perfectionism (in their day-to-day lives), and how perfectionism in their music-making contributes to their MPA. For example, Catherine does not have a debilitating level of general perfectionism, describing it in her first interview as "Not insanely high, where I, like, beat myself up about things". However, Tiffany reported an extreme level of general perfectionism and a significant level of perfectionism about her music-making.

> …when it [the level of perfectionism] is about work, yes […] I try to work on every little aspect of my playing when I practice as well, because if I'm not happy with how I'm playing something, I really try and fix it before I go on […] I'm not super perfectionist. I would say that I have a high level of perfectionism, but it's not, like, a hundred percent. (Tiffany – first interview)

Meanwhile, Gretchen strives to execute everything at a high standard but not necessarily to perfection level. When it comes to music-making, Gretchen strives to play very well but does not strive for perfection, as she feels perfection can make her performance sound robotic. Catherine did not describe herself as a perfectionist in this regard either

because she believes that music performance can never achieve perfection, however, she feels that she should still give her best effort.

> …I'm less concerned with perfect as much as I am with just being authentic and doing it well […] it [a performance] doesn't have to be exactly perfect, but when there are so many mistakes that it completely takes away from the performance, then it bothers me […] and I try to do whatever I'm doing to a standard that…would almost surprise people because I don't want to settle for mediocrity, but I don't want to be the absolute because I've seen sometimes with perfection it starts sounding like a machine […] I don't try for perfect, but I try for very, very good. If that makes sense. (Gretchen – first interview)

> No, because music is never gonna be perfect. So, it's kind of pointless to strive for perfection, like, you can just do as much as you can do, and if you can do better the next time, do that. Just give your best. Yes, that's my philosophy on music. (Catherine – first interview)

4.1.1.2 Subtheme (ii): The role of motivation. This subtheme is concerned with the opinions of the participants about the role that motivation plays on their MPA.

Gretchen reported that the motivation to excel in a performance mostly increases her MPA because then she thinks a great deal about the performance; making the performance much more important to her than it should be. It is only occasionally that her motivation turns into determination, increasing her focus during the performance, which she believes in turn decreases her MPA.

> I think motivation to perform well tends to make it worse because you sit there overthinking it and you start overthinking it to the point where you…make it into this huge thing that's going to, like, destroy the world. Meanwhile, it's just one performance but your brain doesn't think about it that way […] It's quite situational. I've had it before where it actually helps, in the sense of I've been very, very motivated, like, I'm determined to get something right and then sometimes I just somehow focus better and get it right and I'm not anxious during it because

> I'm so determined. Other times, most of the time, like 95% of the time, it goes the opposite way where you want to get it right and then you end up anxious instead of determined. (Gretchen – first interview)

In preparation for her Second Performance, however, she was determined to improve both her MPA and her playing, although she was anxious about her Second Performance.

> I did want to play better and I wanted to practice performing better and all of these things. Improvement, yes! Determination! But at the same time, I was like, "I'm scared. I don't want to do it." I do, but I don't, if you get what I mean. I'm just…scared of it, that's all. But otherwise, I wanted to get better. I've been determined recently. (Gretchen - second interview)

For Catherine, it is all about where the motivation to perform well stems from. If her motivation is to just enjoy the performance, rather than to impress whoever she is playing for, she barely has any MPA. She was not focused on trying to impress the audience, consisting mostly of musicians, during her Second Performance. She was thrilled about being able to play and thought that the audience would not be bothered by the quality of her performance.

> …if I'm performing in front of a teacher or something, then my motivation is sometimes to impress them, and if that's the motivation behind what I'm doing then it doesn't always go well because you're just, like, focused on…playing perfectly and just impressing whoever you're playing for. But then, if my motivation is sometimes to just go on stage and just enjoy myself, then I basically have no anxiety, but the minute I think about the people that are in the audience and trying to impress them, it goes horribly wrong. (Catherine – first interview)

> So, I could have really freaked out today, but I was actually quite calm today because I was just excited that I got to play again. And I also realised that even though you are all musicians, you know, you don't really care about how well or how horribly I play, you just want me to play, you know? (Catherine – second interview)

When Tiffany is not motivated to perform well, she reports less MPA. Lower motivation is generally present when the performance is not particularly important to her. She regarded her Second Performance as preparation for her MMus recital only and believed that the performance was informal, which influenced her level of motivation.

> I would actually say, if I actually don't really care about the performance, or it's not really important or something, so I don't really motivate myself on it, then the anxiety is less, actually. (Tiffany – first interview)

> …my only motivation for this concert was the fact that it was preparation for my Master's recital, so I was determined to perform some of the pieces as a practice in front of people […] I knew it was a casual performance, so there were no other motivations other than preparation for my Master's recital. (Tiffany – second interview).

4.1.1.3 Subtheme (iii): Trait anxiety and state anxiety. This subtheme is concerned with how trait and/or state anxiety in each participant is related to their MPA.

All the participants were asked whether they would describe themselves as anxious people, and Gretchen's answer revealed that she experiences anxiety in any situation that involves people. Tiffany's answer revealed that she has a degree of trait anxiety, whereas Catherine only experiences anxiety when she "has to perform".

> Definitely. I'm a mess most of the time […] I am bad with performing things and doing speeches and playing solo, but otherwise […] actually, writing things and doing academics like that, I could do that no problem, but anything that involves other people is a problem… (Gretchen – first interview)

> Well, in real life I am actually an anxious person. When it comes to deadlines and…yeah, things like that, I get really anxious […] I would describe myself as an anxious person. I get easily stressed about things, yeah. (Tiffany – first interview)

All three participants said that they do usually worry about their imminent performances. Gretchen stated that her anxiety about a performance increased in proportion with how much time she spends thinking about the performance.

> Yeah, definitely. Yeah, I worry about it [an imminent performance] a lot, but I usually try to say, "Okay, calm down, we're not gonna think about this anymore until afterwards". The more I think about it then the worse it gets, so I just try and not think about it. (Gretchen – first interview)

Catherine and Gretchen worried about their Second Performances too. Catherine was concerned about missing entries in her music with her accompanist. She also made an entry in her week eight solicited diary reflecting that her anxiety had increased due to the imminent performance.

> …you know there is always that concern, like, you know, "What if I miss Antoinette [the accompanist]", or something like that. So yeah, there was that worry. (Catherine – second interview)

> After realising that I would have to perform soon, my anxiety spiked. (Catherine – week eight solicited diary entry)

Tiffany, however, was not worried about her Second Performance beforehand due to her believed familiarity with the music. But, along with Gretchen, usually she worries about parts in her pieces that she fears she will not play correctly during the performance.

> I didn't actually think a lot about it. I was just like, "Ahh, I'm just gonna play, it's fine." […] Well, too be honest, I was actually quite relaxed before the performance because I felt like I know this piece. (Tiffany – second interview)

> I would start to think about certain things that I could have worked on more. I always try and think about certain things that I can quickly look at and just make sure of just before the performance. (Tiffany – first interview)

Gretchen further explained that the more she thinks about a performance, the worse her MPA becomes. She gave her opinion on worrying about a performance in her first interview: "That's like the performance anxiety already coming in and then messing you up before you even start, which is annoying." It is also evident that she begins dreading an imminent performance the moment that she hears that she will have to perform, and she reported becoming more anxious as the time of her Second Performance approached.

> Like the week before the performance, you'll start getting worried because you're like, "This is still not fixed. This is still out of tune. Why is this out of tune? This was fine the first five times you did it, why is it wrong now?" (Gretchen – first interview)

> The moment they say I have to perform. "Oh, you have to do an exam in six months", it's like, "Ah, no." (Gretchen – first interview)

> I got more tense the closer it got to the time [of the Second Performance], so…I could feel myself building up for that. (Gretchen – second interview)

4.1.1.4 Subtheme (iv): The role of preparation. This subtheme is concerned with how the participants' preparation through practice and rehearsals may contribute to their MPA.

It became evident that Catherine and Gretchen both have a quality over quantity approach to their practice sessions in order to ensure that they can practice more productively rather than simply fulfil an arbitrary time requirement.

> …my practice habits used to be more time-focused than actually being productive in the amount of time, so I used to measure it according to time. But now [in preparation for her

> Second Performance] […] I did try and, like, actually plan it out properly, and, you know, focus on certain things in every practice session…(Catherine – first interview)

> I feel like it's not as much…the amount you practice, but how well you do. So, if you spend very specific attention on one section rather than just continuously playing the piece over and over again, it will do a lot better. Sometimes I do not have as much time to practice because I have so much to write and so much work to do, that I literally have to prioritize and do things like that. (Gretchen – first interview)

> I try to…not specifically increase the time as much as increase the quality. (Gretchen -second interview)

Catherine injured her wrist a month before her Second Performance, so she began to incorporate warm-up exercises in her newly established practice routine leading up to that performance. She also felt that her practice schedule improved from prior to her First Performance, which contributed to lessening her MPA and increase feelings of preparedness for the Second Performance.

> …I knew I was prepared; I mean, I did practice and stuff […] Last month I hurt my wrist while practicing and what not, so I couldn't play for, like, a solid couple of weeks […] I focused a lot on having, like, a proper routine while I practice, including, like, proper warm-ups for my body and stuff like that […] My practice schedule was a lot better now, so I think that also helped […] I planned it out better and stuff. So, I think that helped [her MPA] a lot. (Catherine – second interview)

Gretchen also felt that her practice habits leading up to the Second Performance were superior to her practice habits earlier. She incorporated different practice techniques and even some of the techniques she learnt during the MMBSR intervention.

> I tried quite a lot of the techniques [practice techniques and mindfulness techniques] and things to try, and specifically try and do better, so I think it helped. The practice, and the way I've been practicing, is better. (Gretchen – second interview)

Gretchen felt that she did have more time to practice because of the COVID-19 lockdown period. She also felt that her practicing was done more thoroughly. She also practiced performing the pieces she played in the Second Performance by playing them outside and for family members to see if and how she can cope with the pressures of performing in front of people. This helped her to feel more prepared for the Second Performance. She also felt that her improved practice strategies have enhanced her as a violinist.

> I practiced the same amount as usual - as much as I possibly could. I suppose I had more time actually, recently, because of lockdown. So, there's that […] a lot of the things [practice strategies] have been really helping me improve. So, I feel like I've gotten a lot better this year, so I'm glad about that […] I suppose for this one [Second Performance] it [practicing] was more intensive…more specific to specific areas, which is good […] I tried to practice performing these specific pieces. I'd play them outside, for example, which I often get tense about, or I try to play them for family members to see if I could work it out and stuff like that. So, that helped. (Gretchen -second interview)

Tiffany mentioned that she works on every aspect of her playing in her practice sessions, but her level of concentration during her practice sessions often depends on when her next performance is.

> I try to work on every little aspect of my playing when I practice […] If I don't have a performance that's, like, in the following weeks or in the following days, then, actually, I would get more easily distracted because I'm not really motivated to practice. And then, like,

> a few weeks or a few days before a performance I would really, like, you know, concentrate the whole time because I want to really play it the best I can. (Tiffany – first interview)

Both Gretchen and Tiffany are of the opinion that not practicing well enough for a performance increases their MPA.

> Yeah…so it [not practicing well] does make it [MPA] worse, but usually I try not to do that, because I know it makes it worse. (Gretchen – first interview)

> I mean, if you know you practiced a lot and you know a piece really well, then obviously performance anxiety would be less. (Tiffany – first interview)

Additionally, Gretchen also experiences more MPA during a performance in which it is the first time that she is performing the pieces in front of an audience. Two of the three pieces she played during the Second Performance had not been performed previously. However, she felt that she prepared them well, potentially lessening the degree of MPA she might have otherwise felt during the performance.

> …if I've played the piece before, that also helps. The fact that I did not play two of the pieces today before for anything - that was a little nerve wrecking. But otherwise it was okay. I felt well prepared with them…(Gretchen – second interview)

Tiffany attributed her MPA during the Second Performance to her lack of preparation for it. She was also expecting to experience MPA due to this.

> It [MPA] was actually caused by the fact that I was not well prepared for the performance and that's what initiated the anxiety […] I knew, you know, if you're not well prepared then obviously you'll have performance anxiety. (Tiffany – second interview)

She emphasised that she was feeling unprepared for this performance throughout her second interview. During the performance, she also regretted not preparing better.

> I was still…thinking…in the back of my mind, "Ugh, I should have prepared more for this", you know? (Tiffany – second interview)

Tiffany had been well prepared with her Second Performance piece in the past, but in the couple of weeks leading up to the performance, she was not able to make the effort to practice it enough to get it back up to her prior level of familiarity.

> I have practiced this piece a lot in the past, but the fact that I couldn't practice it as much the last week, or week and a half, or so… (Tiffany – second interview)

Tiffany also expressed in both her interviews that, when she has more self-confidence in a piece because she has practised it a great deal, her MPA is less. Subsequently, her self-confidence during the Second Performance was impacted because she could not practice much for that performance, increasing her MPA during that performance.

> …If I practiced a lot on a piece and I know I know it very well, then yes, it would be less, the MPA, because I have more self-confidence and I'm more sure about what I want to interpret in the piece and what I want to deliver… (Tiffany – first interview)

> Yeah, even though I know the piece, if you don't practice enough beforehand…then it kind of catches up with you during the performance. I mean, somehow it affects your…self-confidence and then immediately that causes anxiety […] The fact that I couldn't practice it as much the last week, or week and a half, or so…really affected my self-confidence with the piece; the fact that I'm sure I can play it, or so. It really affected that. (Tiffany – second interview)

Gretchen emphasized throughout her first interview that her MPA during a performance often eradicates the work that she did in her practice sessions. Catherine also experienced this in her Second Performance regarding her intonation.

> So, you work yourself into a panic and then […] your fingers don't move properly and everything that you so carefully practiced just doesn't work. It's so annoying […] This specific thing that I did just play…I spent so much time researching to understand how it works and I put time into that, and I tried very hard to actually get the musicality very good on this performance…but the moment you start panicking you forget to do it […] For the programme I did just recently…I was quite prepared for that. I spent a lot of time preparing, and I tried very, very hard […] The performance at the time was alright but it went better in rehearsal, which is frustrating, because why couldn't the rehearsal have been the actual performance? (Gretchen – first interview)

> …then intonation as well wasn't the way it normally is when I practiced. (Catherine – second interview)

4.1.2 Second main theme: Symptoms of music performance anxiety

The second main theme, symptoms of MPA, focuses on the subjective experiences of the symptoms reported by the participants. The theme is divided into three subthemes: physiological symptoms, psychological symptoms, and behavioural symptoms. Each subtheme will now be described individually along with reference to relevant interview data taken from both the first and second interviews that illustrates and contextualizes the subtheme.

4.1.2.1 Subtheme (i): Physiological symptoms. This subtheme addresses the findings on the physiological symptoms of MPA that the participants experienced prior to and during the study.

Catherine reportedly experiences shaking before a performance as well as occasionally after a performance. However, she claimed not to shake as much before her Second Performance as she usually would.

> Shaking would happen before I go on and maybe sometimes after, but mostly before. (Catherine – first interview)

> I still shook a little bit, but it wasn't as bad as normally, actually. (Catherine – second interview)

Gretchen claimed to experience muscle tension mostly in her shoulders and in her legs, and her left shoulder always pulls up while she is playing.

> …I literally have to sit there and try and move my shoulders down before I start playing because it always does this [pulls left shoulder up], which is annoying […] most of the time it's the tension, mostly in my shoulders […] I think my legs get tense and they lock straight… (Gretchen – first interview)

Gretchen's physiological symptoms were reported to depend on the degree of experienced MPA, for example, in the past she only noticed experiencing shaking and sweaty hands when her MPA was quite severe. During her second interview she said that she experienced almost the complete range of physiological MPA symptoms including shaking and sweaty hands, dry mouth, increased heart rate and muscle tension during her Second Performance.

> I don't shake usually. Sometimes I do when it gets really bad. I don't usually get the hand thing. All of those is when it gets really, really bad… (Gretchen – first interview)

> Basically, all of those [general MPA symptoms] beside shortness of breath. (Gretchen – second interview)

Apart from increased heart rate, sweaty and shaking hands, Tiffany also reported facial muscle tension such as jaw-clenching whilst usually performing. However, she only experienced tension in her left-hand fingers during her Second Performance due to anxiety

and the difficulty of the piece and felt this increased her MPA by creating a sense of loss of control. Tiffany claimed not to experience sweaty hands as much in her Second Performance than in her First Performance.

> I have an increased heart rate, obviously. When I experience anxiety my heart rate would go up […] definitely sweaty hands because, I mean, all the blood goes to my fingers, so I would…yeah, it would start sweating [...] there's actually not a lot of shaking, but there's some shaking […] I start to…clench my teeth, like, really hard. And then afterwards I can, like, feel my jaw is so sore… (Tiffany – first interview)

> …my hands were a little bit sweaty, but not as much as the previous time […] the jaw thing was actually not a problem today, for some reason. I felt quite relaxed actually, except for in my fingers. I could feel a lot of muscle tension in my fingers […] my fingers wouldn't work with me […] I didn't feel in control because of the anxiety, the muscle tension that it caused […] mostly my left hand is affected by it […] I think it has to do with the piece that I played as well because it has a lot of fast passages going up and down and things like that, and that just increased the muscle tension. (Tiffany – second interview)

4.1.2.2 Subtheme (ii): Psychological symptoms. This subtheme addresses the findings on the psychological symptoms of MPA that the participants experienced prior to and during the study. These symptoms included higher distractibility, self-doubt, and forgetfulness.

When the participants were asked whether they experience higher distractibility because of their MPA, both Gretchen and Catherine agreed that they do. Gretchen struggles with the ability to concentrate during the performance because her mind is occupied with worry about her performance. However, Gretchen did not experience higher distractibility during her Second Performance. Catherine is only distracted when she should focus on something else, like a class, before her performance.

> …and then you don't pay attention, because you are too busy thinking about how worried you are… (Gretchen – first interview)

> That [being distracted] would just happen if, for example, I have a class before, and then I can't focus on it because then I would just keep thinking about the music and the performance, and stuff. (Catherine – first interview)

Catherine described how MPA shifted her focus away from the music, directing it towards the way she is standing, or moving, while performing.

> …so, I would focus more on how I'm standing or what I'm doing, whereas I'm not nervous, then I might focus less on all those things because I'm just focusing on the music. (Catherine – first interview)

As Tiffany mentioned self-confidence and/or self-doubt several times during her first interview, it became evident that she experiences self-doubt as a symptom of her MPA. The first interview with Gretchen also revealed that she similarly experiences self-doubt due to her MPA.

> …I was shaking a little bit, and…when that happens I kind of become uncertain about some things, like, I would play and read the music and then suddenly think, "Oh shibbit, what fingering did I use here?", and then, you know, I would make a mistake or something. (Tiffany – first interview)

> …when you're anxious, then you sit there and you're like, "I don't know where this note is. Am I gonna get it, am I not?", then you usually miss it because of that. You doubt yourself, that's why… (Gretchen – first interview)

Gretchen, however, also reportedly experiences a form of forgetfulness during a performance due to her MPA. When she becomes panicked, this causes her to become less

aware of some of the aspects in her performance that she practiced, such as correct technique, musical expression or certain aspects of how she usually uses her instrument.

> I tried very hard to actually get the musicality very good on this performance…but the moment you start panicking, you forget to do it. It's like it gives you this weird memory lapse that you forget how your technical things work, you forget what the interpretation is supposed to be, all of it. You just panic. (Gretchen – first interview)

> …it [MPA] tends to make me forget things and then all the very specific choreographed movements don't work out the way you wanted it to. (Gretchen – first interview)

> …I tend to stand wrong, which is annoying, and I forget that I do it. (Gretchen – first interview)

> …leaving my mute off. That was the biggest one, oh my gosh. I planned everything. I had it on my violin and everything. (Gretchen – second performance)

4.1.2.3 Subtheme (iii): Behavioural symptoms. This subtheme addresses the findings on the behavioural symptoms of MPA that the participants experienced prior to and during the study. Behavioural symptoms of MPA are the unwelcome adjustments and other performance mistakes that occur as a result of MPA, and which negatively impact a performance (Kenny, 2006; 2011a; Kenny et al., 2014). During the interviews, a few behavioural symptoms of the participants' MPA were revealed. The participants reported having some musical aspects of their performances affected by their MPA in some way. These aspects include tempo, intonation, musicality or interpretation, and musical dynamics. This subtheme is also concerned with the bi-directional relationship between mistakes that the participants make during a performance and their MPA, and the role that self-doubt plays in making MPA-related mistakes.

When Gretchen experiences MPA her choice of tempo "wobbles a bit" and she "tend[s] to stumble". However, although Gretchen's choice of tempo during her Second Performance was in some instances slower than usual, she was doubtful as to whether that was caused by her MPA. Similarly, Tiffany reflected that generally her tempo occasionally increases when she is approaching a difficult part in her piece that she is uncomfortable with and feeling anxious about. However, she did not experience any MPA-related tempo increases during her Second Performance.

> I think I did lag at some places, so there was a few things here and there where I slightly deviated, but that can happen at any point […] I don't know if that's even due to that [MPA]. (Gretchen – second interview)

> ...the tempo would usually be a little bit faster because I'm not relaxed […] Depending on what difficulties there lie in the piece, I want to get it over with, and then it would become faster sometimes. (Tiffany – first interview)

On the other hand, Catherine believed that her choice of tempo was not affected by her MPA in either of her Performances.

> …my choice of tempo generally doesn't really get affected by it [MPA], but my intonation does… (Catherine – first interview)

All three participants agreed that their intonation during a performance is perceived to be affected by their MPA. Gretchen and Tiffany claimed that it happens mostly because of the physiological symptom of muscle tension they experience. Gretchen experiences this especially when she has a large shift between positions on the violin, or when she is playing double stops, while Tiffany experiences this specifically when she is playing chords.

> Yes, it [intonation] goes bad. It's out of tune, that's easiest to say. Things that demand specific intonation like double-stops are usually out when you do that [become tense]. The moment I get tense then it doesn't…the spacing changes […] and another thing, with big jumps…because it's kind of a choreographed movement you kind of learn where the note is, so you can jump to it, but the moment you tense up then you move differently to what you usually do and then you get the wrong note… (Gretchen – first interview)

> I would say intonation…that's quite a big thing…especially chords. When I'm not completely relaxed in my left hand, I would place fingers slightly too high or slightly too low. Then my intonation would not be that good as it would be if I'm completely relaxed at home or when I'm having my lesson. (Tiffany – first interview)

As previously mentioned, Tiffany experienced muscle tension in her left-hand fingers during her Second Performance which hindered her from playing in tune. Gretchen also said that she had trouble with her intonation during her Second Performance due to tension in her body, and Catherine believed her intonation was also not as secure as when she practiced her pieces at home.

> So, because of the anxiety, obviously, for me, it has a direct impact on how I play…Uhm, regards with, regards to intonation…it immediately affects my intonation, especially with the muscle tension I had. That made it difficult for me to play in tune (Tiffany – second interview)

> …the intonation, there was some issues and things like that just because I was tense…mostly. (Gretchen – second interview)

> And then intonation, as well, wasn't the way it normally is when I practiced. (Catherine – second interview)

For each participant, musicality and interpretation during performance is reportedly affected differently by their MPA. For example, Tiffany felt that her MPA enhances her

interpretation of the music, while Gretchen reflected that it often causes her to lose sight of the interpretation that she means to convey. Significantly, during her Second Performance Gretchen felt that her musicality was improved and more expressive than usual, signifying that her MPA might have been less than in previous performances.

> …musical interpretation would usually be better, actually […] I'm always trying to convey what I'm thinking in my head about the piece and what I want to say to the audience with the piece, then it would be…yeah, enhanced… (Tiffany – first interview)

> …I tried very hard to actually get the musicality very good on this performance…but the moment you start panicking you forget to do it. (Gretchen – first interview)

> The musicality was better, which is nice. I feel it was better than usual. I was less held back. It was nice. (Gretchen – second interview)

During Catherine's first interview, she said that her musical dynamics during a performance are not usually affected by her MPA, and that she is "not afraid" to play either loudly or softly. However, during her second interview she contradicted this by saying that her dynamics were in fact affected by her MPA in her Second Performance, and that she played most of her third piece loudly and realised that her dynamics were not as precisely executed as when she practiced them.

> So, I did realise throughout the performance that the dynamics wasn't, you know, really precise, and phrasing as well in the first piece…I played most of it just, especially the last piece, most of it was just, like, loud all the time. (Catherine – second interview)

She also reported that a knock-on effect of her intonation being affected by MPA is that her musical expression and interpretation are also affected, something which she practically experienced during her Second Performance.

> …I start to focus more on just playing the right notes instead of, like, phrasing properly or all of those things. So, then it becomes a very one-dimensional performance… (Catherine – first interview)

Gretchen usually has some trouble playing softly when she experiences MPA.

> I tend to mess up the piano passages. The forte ones are fine actually because those are more practised, I think, or more choreographed, because it's actually harder to play softer on your instrument than it is to play louder…for me, anyway. So, I either go too loud, or my bow slips if I don't put enough pressure on it, so then you try and play softly and you accidentally do the wrong thing, and it doesn't end up being soft, it becomes airy instead. (Gretchen – first interview)

Tiffany said that usually her dynamics "doesn't really get affected" by her MPA but reflected that her sound quality was often negatively impacted by MPA, something which she found to be true during her Second Performance due to MPA-related tension in her right hand.

> I was also not really happy with the sound, but that's also because the performance anxiety affected my right hand a little bit […] It's mostly the intonation and maybe the sound as well, that's usually affected by the performance anxiety. (Tiffany – second interview)

The participants also revealed some behavioural symptoms that are not related to the musical aspects of their performances. For example, Gretchen's reported muscle tension and movement problems negatively affected her stance. During her second performance her MPA-related muscle tension hindered her, making it difficult to perform actions with her left arm in the usual manner.

> I tend to stand wrong […] Then I wonder why I'm not moving properly […] leaning to one side sometimes, or just off balance. You're not grounded properly, which is a problem […]

> So, my technique kind of gets problematic because usually I tense up. Then it doesn't quite move the same way. (Gretchen – first interview)

> …because I was tense, […] I moved a little slower on the one part. I remember it moved slower and then I was out. (Gretchen – second interview)

Other behavioural symptoms of MPA that Gretchen reported included struggling to make eye contact with the audience and trouble bowing before and after her performance. She also stated that "fidgeting" additionally became a problem during her Second Performance.

> …I do have trouble bowing as well […] I try to not look at people. I try to avoid people's eyes all the time… (Gretchen – first interview)

Catherine was the only participant that claimed to experience sleep disturbance because of her MPA. She tends to wake up earlier on the day of a performance, something she also experienced on the day of her Second Performance.

> …so, I would generally wake up earlier, like, without any alarms or anything, if I'm really nervous about a performance that's happening on that day, like exams or whatever… (Catherine – first interview)

> I did wake up, like, an hour earlier than I normally was supposed to [on the day of the Second Performance]. (Catherine – second interview)

When Tiffany was asked whether she experienced any anxiety in her First Performance, her answer reflected that she feels that her mistakes during a performance are a direct result of MPA.

> I would say a little because I made like one or two mistakes that I wouldn't do if I was at home playing […] I would experience, like, a few times of uncertainty but only for, like, a

> second, and then I would maybe make a mistake or not, which I did now. (Tiffany – first interview)

> I did experience some MPA, because I made some mistakes that I haven't made before at all, so that was kind of surprising. (Tiffany – first interview)

The participants were asked how mistakes during a performance influences their MPA. Their answers reflected that mistakes sometimes increases their MPA.

> Sometimes it [MPA] does increase [after making a mistake] …a lot of the times it does… (Catherine – first interview)

Tiffany and Gretchen both made mention of self-doubt and how it can occur because of their MPA and cause them to sometimes make mistakes in their performances. For Tiffany, this self-doubt often occurs as a result of her shaking, and the operative factor is the degree of confidence she has in her familiarity with the music. Tiffany stated that her MPA and self-doubt during a performance becomes worse when she makes a significant mistake or when she makes multiple mistakes which, in turn, causes her to make even more mistakes. For example, during her Second Performance, she made many relatively small mistakes, especially with intonation, which decreased her sense of self-confidence during the performance and ostensibly increased her MPA.

> Well, it depends on what kind of mistake I'm making, that's the thing. If it's a really big mistake, then I would have more anxiety… (Tiffany – first interview)

> I think I made a lot of mistakes, not big mistakes, but the fact that it was a lot of small mistakes, ugh, really just bummed me out […] there were a lot of intonation mistakes […] when it [mistakes] became more than two, I was like, "Okayyy [suspiciously]", and that just decreased my self-confidence, immediately causing more and more mistakes to happen. (Tiffany – second interview)

Similarly, when Gretchen makes one mistake in a performance, she reportedly responds by tensing up – a physiological symptom of MPA – which also leads to her making more mistakes. However, during her Second Performance she felt that the mistakes did not worsen her MPA by much, and that she did not notice any tension-related symptoms.

> I tend to tense more, and then make more mistakes. It's like an annoying cycle that happens usually, yeah. It [mistakes] usually makes me play worse. (Gretchen – first interview)

> I'd say it didn't do the snowball thing like that as much [in the second performance], so that's interesting, actually […] They [mistakes] didn't help, but they didn't make it dramatically worse, I think, today. So, that's good. They didn't dramatically impact it, compared to what it usually was, so I'd say that's better. (Gretchen – second interview)

During Catherine's second interview she revealed that mistakes usually impact her to the extent that her concentration "shuts down." Then she is not able to put a mistake behind her and no longer focus on it, which she experienced in her First Performance.

> So, normally when I make mistakes I just shut down, you know? […] I remember in the last performance; I focused a lot on a mistake specifically instead of trying to just catch up with her [the accompanist] in the next bar. (Catherine – second interview)

Catherine elucidated that mistakes are part of the reason why she does not experience MPA in performances where she forms part of a group. She feels that her mistakes are not as exposed in a group performance as when she is playing a solo performance.

> …when you are playing with people it's easier to fix mistakes […] even when it's audible sometimes, it's not as bad as when you're playing by yourself. (Catherine – first interview)

4.1.3 Third main theme: Extrinsic factors impacting music performance anxiety

The third main theme, extrinsic factors impacting MPA, focuses on a few extrinsic factors that the participants have reported influencing their experiences of MPA. The theme is divided into three subthemes: audience, types of performances, and venue. Each subtheme will now be described individually along with reference to relevant interview data taken from both the first and second interviews that illustrates and contextualizes the subtheme.

4.1.3.1 Subtheme (i): Audience. This subtheme is concerned with how the presence of an audience in general, as well as the size of the audience and the specific audience members, influence the participants' MPA.

Tiffany and Gretchen reported that the slightest presence of an audience is a contributing factor to both participants' MPA and that this was not dependent on the size of the audience. It was interesting to find that Gretchen even experiences some MPA when she does not isolate herself while she is practicing because she becomes anxious even when someone is hearing her practice. She reported making senseless mistakes then due to her MPA, therefore any form of an "audience" triggers her MPA and it does not seem to be restricted to more formal performance contexts.

> If there's an audience, no matter if it's a hundred or five, I would still experience some anxiety […] so it's actually the audience that creates the anxiety for me. (Tiffany – first interview)

> …if I do practice at home…If my parents come past, I make mistakes. It's ridiculous. I am fine for like ten minutes, but then someone walks past me and I'm, like, "oh, someone's watching, no", and it's even people I trust. They're not going to judge me because I'm just practicing. It's not even a performance but I still jump. That happens all the time. So, I tend to kind of try and isolate myself when I practice because otherwise I do stupid things…the moment I know another human is in the room, yeah […] It's weird, I don't even think about it

> and I start making stupid mistakes. Yeah, so it's definitely the people being there. (Gretchen – first interview)

However, Tiffany did not attribute her MPA in her Second Performance to the presence of an audience, indicating a hierarchy among MPA triggers. As mentioned earlier in this chapter, she felt that her MPA was primarily triggered by not having prepared to a high enough standard for that performance.

> …surprisingly the MPA was not caused by the fact that I was supposed to play in front of people, actually… (Tiffany – second interview)

> So, the performance anxiety was not so much, like I said, because of me […] playing in front of people. (Tiffany – second interview)

Both Tiffany's and Gretchen's MPA stems from being worried about being critiqued by people in the audience that have had a musical education.

> When it's, like, fellow music students or professors that have a lot of knowledge concerning music, or even my teacher that knows a lot about violin playing and techniques and how certain things should be performed, then I would get nervous because I'm scared that I might be doing something wrong… (Tiffany – first interview)

> …you sort of get this feeling of worry that you are going to get judged by people because you know people are watching and they know what you…they might know what it's supposed to sound like, so if you mess up then it's…they'll know, which is a problem. (Gretchen – first interview)

Tiffany's MPA during her Second Performance was increased by the knowledge that most of the audience members were musicians. However, she said that it only increased it

marginally and not to the point that it distracted her from being mentally absorbed in the performance.

> …most of the people in the audience are musicians, so they know a quality performance […] Obviously, musicians can easily hear if you make some mistakes. So, just being aware of that definitely had an impact on my anxiety. It increased it somehow, but just slightly because I was still in the moment thinking about what I was actually playing […] So, yeah. It definitely did, but slightly. (Tiffany – second interview)

Catherine reported being more comfortable playing in front of strangers than playing in front of her friends but also that her MPA increased in inverse proportion with the degree of familiarity of the friend; that is, with closer friends being less likely to trigger MPA than less familiar ones.

> …it [MPA] was worse because, like, my friends were there… (Catherine – first interview)

> A little bit more, yes […] but it also depends on which friends […] like, Muti, for example, I'm very close with him, and him and I send each other recordings of us playing all the time. So, if it was him, then no, but if it was Alice, for example, then yes, I would be more nervous because I'm not used to playing in front of her and we're not that close. We just know each other, but we're not that close. (Catherine – second interview)

It was interesting to find that an audience consisting mostly of musicians, whom she was not used to playing for, did not increase Catherine's anxiety in her Second Performance but actually subdued her anxiety.

> I had more reason, actually, to freak out today because, you know, you, Lucy, Teresa, you were all here. So, I could have really freaked out today but I was actually quite calm today […] I think it [audience consisting mostly of musicians] actually made it [her MPA] better

> because I knew you guys are all musicians and you actually…you appreciate hearing music. (Catherine – second interview)

Gretchen brought a close friend to be in the audience of her Second Performance and found that having a friend in the audience dampened her feelings of MPA.

> I think I was a little bit less worried because, first of all, I know one of the audience members very well […] so at least that was sort of comforting. (Gretchen – second interview)

Gretchen was not aware that the other people in the audience were mostly musicians but stated that she would have experienced more MPA if she knew, ostensibly due to the fact that they would have been more aware of the mistakes she made than non-musicians. She mentioned that she did become tense as a result of the audience being there in her Second Performance but that it was less so than previous times. Gretchen also reported that when she sees people are not visibly reacting "badly" to her performance, her MPA decreases. In contrast to Gretchen, Catherine revealed that her MPA increases slightly when she knows or suspects one of her solo performances are being recorded, implying that the audience does not have to be visually present for Catherine to experience MPA.

> If, like, I know the people aren't particularly judgemental, then yes, it helps. If I know the people know that I'm making mistakes, so the people have musical experience, that scares me. The moment I know that they know that I did it wrong, then I get worried and I think, "Oh no, they know. It's not like I can get away with that one. They know. They're going to think about it. There's going to be a thing in their mind that they're going to be like, 'Oh she played that note out of tune', or 'that note sounded a little bit off.'" That sort of thing. People probably aren't that judgmental in reality, it's just what goes through my mind… (Gretchen – second interview).

> …then I realised, you know, you said it was a recording or something, and then I started freaking out a little bit. But then it was better again later on [when realising it wasn't a recording]. (Catherine – second interview)

Catherine noted that when she pays too much attention to trying to impress the audience, her performance often suffers due to MPA, but in her Second Performance she thought that the audience did not care about the quality of her performance and just wanted to hear her play, which contributed to lessening her MPA.

> …then it [a performance] doesn't always go well, because you're just, like, focused on…playing perfectly and just impressing whoever you're playing for […] the minute I think about the people that are in the audience and trying to impress them, it goes horribly wrong. (Catherine – first interview)

> And I also realised that even though you are all musicians, you know, you don't really care about how well or how horribly I play, you just want me to play, you know? (Catherine – second interview)

4.1.3.2 Subtheme (ii): Types of performances. This subtheme addresses in which types of performances the participants experience MPA. Additionally, it also explores which types of performances the participants partake in frequently.

It was found that all the participants reported only experiencing MPA in performances where they feature as the soloist, with or without accompaniment. Catherine made special mention that she only experiences MPA in classical solo performances. However, Tiffany explained that her MPA is dependent on how important she perceives the performance to be and whether it is informal or formal in nature.

> I tend to only experience anxiety when I am performing…by myself or with accompaniment. I still consider it as by myself because it is kind of a solo thing. (Gretchen – first interview)

> …just solo, and mostly only when it's, like, uhm, classical repertoire, or something like that. So, whenever I play elsewhere, maybe if it's like jazz or improv, then I'm not nervous at all. (Catherine – first interview)

> ...so just solo performances usually. When it's focused on me and I'm playing, like, a solo, or I just play with the piano for that matter, then I would experience some performance anxiety. Depending also on if it's an informal concert, or like a really…like an examination or a recital or something, then I would experience performance anxiety… (Tiffany – first interview)

All three participants claimed to generally not experience MPA when they are in contexts with other people, with variations in the type of performance context and the number of people involved. All three found their MPA to be absent when playing in an orchestra, which has the largest number of "others". Tiffany specified that her MPA is additionally absent in ensemble performances, while Catherine does not experience MPA in any performances where she is playing with other people.

> When I am in orchestra it's fine, I don't have a problem at all. So, it's interesting. I suppose strength in numbers… (Gretchen – first interview)

> …so in orchestra playing or ensemble, I would be very relaxed, there's no performance anxiety. (Tiffany – first interview)

> No, I love orchestra performances […] anything where I'm playing with people, then I'm perfectly fine. No nerves. (Catherine – first interview)

Catherine and Gretchen described feeling very self-exposed when performing solo as opposed to other type of performances because the audience can easily hear everything they play. Catherine feels that the audience can see all her musical shortcomings during solo recitals, increasing her MPA. Gretchen also said her feelings of exposure are due to the

knowledge that the audience members' gazes are focused entirely on her when performing alone as opposed to in a group, attributing her MPA in solo performances to this too.

> …you kind of see all of your weaknesses and if you're playing alone for an audience then they also get to see that. But when you are playing with people it's easier to fix mistakes…even when it's audible sometimes, it's not as bad as when you're playing by yourself [...] I guess it's just, like, you're just more vulnerable on your own. (Catherine – first interview)

> I feel like you're very exposed, it's very easy to hear if something goes wrong. If you're in an orchestra, often you can hide somehow […] If you are alone, they can hear everything […] they are only looking at you, so that's another thing. (Gretchen – first interview)

When the participants were asked whether they do solo performances frequently, all three participants admitted that they avoid doing them, with Catherine and Gretchen only performing solo for compulsory exams. Gretchen in particular admitted that she avoided solo performances due to her MPA, while Catherine suspected that her MPA in solo performances might be due to not doing enough solo performances, although the implication was that she also avoided performing solo as a result of MPA in the first place.

> …not very, no. Yeah, so, I try to avoid that [playing solo performances], for obvious reasons […] it's just generally feeling of dread. You don't want to do it for some reason. (Gretchen – first interview)

> I would say like once a year […] Yeah, I kind of try and make them the minimum, but, yeah, it's actually supposed to be more, but, yeah, it's like once a year…or twice. That's it. (Tiffany – first interview)

> …I don't know if it's [MPA] because I don't do it [solo performances] enough, or…I don't know […] No, no…solo performances…that I don't do […] I try not to do them. (Catherine – first interview)

It should also be noted that although these participants shy away from solo performances, they are regular group performers, with both Gretchen and Tiffany regularly performing in orchestral concerts, Tiffany additionally participating in many ensemble performances, and Catherine frequently playing at her church and for other 'gigs'.

> Last year I did a lot of ensemble performances, but at the moment it's just orchestral performances […] Like every week there would be a performance or a few performances. (Tiffany – first interview)

> Yeah, more frequently [performing] with orchestras and things like that, quite frequently yeah […] At least once a month. (Gretchen – first interview)

> …gigs or at church and all of that I play, like, quite frequently. (Catherine – first interview)

4.1.3.3 Subtheme (iii): Venue. This subtheme addresses the impact of different performance venues, specifically the two performance venues used in the study, on the participants' MPA.

Gretchen prefers the lighting conditions in the church hall. She felt that the lighting in the church hall was more natural in comparison to the Musaion, and she did not feel as self-exposed as under the lighting as in the Musaion.

> The lighting's different. Its less dark and light, and mostly just light. I suppose it was like daylight. More light here. There was less of those…the whole professional stage lights, like, a spotlight on the performer and everything else is dark - that scares me, oh my gosh. (Gretchen – second interview)

To Gretchen it felt that, acoustically, the Musaion creates an echo when she performs there, which one must become accustomed to. She and Catherine felt that the Musaion's acoustics are favourable, but very exposing. Gretchen's MPA is increased by such exposing acoustics.

> …your sound bounces of the wall and you're just like, "whoa". It feels as if there's two of you in the room. You have to get used to it, so it takes some getting used to, but after that you can hear how much it actually helps your sound […] you can also hear everything in the Musaion […] they [audience] can hear everything, so that doesn't help [her MPA] at all. You get worried. (Gretchen – first interview)

> It sounds nice but it's very scary because then it feels more exposed than, like, playing in a room… (Catherine – first interview)

Gretchen felt that the lower stage of the church hall in comparison with the Musaion's stage might have contributed to her lesser MPA because she was almost on the same level as the audience, which she claimed helped her feel less exposed than when performing on a higher stage. Also related to the architecture of the church hall, Catherine reported it being "less scary" for her to perform in the church hall due to its "smaller" size relative to the Musaion.

> The stage is lower than the Musaion, which is actually less nerve-wrecking for me. You're on a lower field, so people aren't looking up at you as a performer as much, kind of. A little bit less of that feeling, so maybe that helped. (Gretchen – second interview)

Tiffany reported that her anxiety in a hall is related to memories of previous experiences linked to that location, experiencing higher MPA in a performance venue with which she has associated unpleasant memories than an unfamiliar location. As she has unpleasant associations with the Musaion hall but not the church hall, she claimed that performing in the Musaion hall almost automatically increases her anxiety whereas she felt at ease playing in the church hall. Gretchen claimed that she finds performing in the Musaion "terrifying" due to the associated memories she has with that specific location.

> …when I perform on that stage [Musaion] there's a lot of memories that kind of come back on certain other performances that I did there and that would affect the atmosphere and the mood for me, definitely. (Tiffany – first interview)

> I would say it [church hall] differs [from the Musaion] because I don't have a lot of history in that hall. I mean, the Musaion just has a certain, I don't know…feel to it. I can't really explain it. It immediately creates some form of anxiety because there's a lot of musicians and performers that performed in that hall. I mean, there's a lot that happened on that stage…in the past, and immediately all those memories come rushing back. So, that affects how one feels in the Musaion […] there's not a lot of bad memories created in that hall [church hall]. So, the hall, I felt quite comfortable with. (Tiffany – second interview)

When Tiffany heard that the Second Performance would be done at the church, she did not really experience any reaction to the change in venue. Catherine, on the other hand, instantly felt calmer about the performance.

> Well, when you suggested that we go and play there...I really didn't feel anything. I was like, "Ah, okay. That's fine." I felt very neutral about it [...] It didn't really affect…it didn't really cause anxiety, or anything like that. (Tiffany – second interview)

> …even when you told me we would be doing it here instead of in the Musaion or wherever, I immediately calmed down a little bit because, you know, churches just have a better…feel to it. (Catherine – second interview)

Tiffany and Catherine felt that they were more comfortable playing in the church than in the Musaion. Their comfort at performing in the church seemed to be due to the fact that, unlike the Musaion, the church hall is not meant for examinations or concerts. Catherine also reported that she enjoys playing in churches, leading to decreased MPA in the church venue and increased feelings of being at ease.

> …the hall in which we played is […] actually a church. So, it kind of felt more comfortable…to perform in such a hall rather than one that's specifically for people to do exams and, you know, concerts and things like that. (Tiffany – second interview)

> …I like playing in churches, so it has a very comfortable home-y feel to it […] I think the venue made me…calm […] it's a lot warmer and it feels more performance-friendly…Whereas the Musaion feels very cold and…like it's a proper concert as opposed to just playing for people. (Catherine – second interview)

All three participants felt that they would have experienced more MPA during their Second Performances had they taken place in the Musaion hall.

> …I would definitely have been more nervous if we played in the Musaion. (Tiffany – second interview)

> …if I had to play in the Musaion I would have probably been more stressed out. (Catherine – second interview)

4.1.4 Fourth main theme: Experiences with the mindfulness meditation-based stress reduction intervention

The fourth main theme, experiences with the MMBSR intervention, focuses on the individual experiences of the participants with the intervention. The theme is divided into four subthemes: progress with meditation over the weeks, observations during the intervention sessions, intervention's effect on experience of mindfulness during the Second Performance, and the intervention's effect on MPA during the Second Performance. Each subtheme will now be described individually along with reference to relevant data taken from the second interviews and solicited diary entries that illustrates and contextualizes the subtheme.

4.1.4.1 Subtheme (i): Progress with meditation over the weeks. This subtheme addresses the findings on the participants' experiences as they progressed through the intervention sessions and learned how to meditate more effectively over time.

Catherine experienced the sessions early in the intervention period as tough, finding it difficult to only focus on one thing. She did not experience any results during the early days of the intervention.

> …meditating is always hard to begin with and, obviously, I didn't feel any difference at first… (Catherine – second interview)

> It's so hard to focus on only one thing at a time. (Catherine – week two solicited diary entry)

During the early weeks of the intervention period, Catherine became impatient during the sessions, but once she realised that she should approach mindfulness as a journey and not something that happens overnight, she began to enjoy the sessions.

> I started becoming impatient as well. (Catherine – second interview)

> I started to actually enjoy it [the intervention sessions] much more than feeling like, you know, I have to do this. (Catherine – second interview)

At the beginning of the intervention period, Tiffany found it very strange and unusual to sit down for a period and to try and clear her mind. She found it laborious because her mind is usually cluttered with thoughts, so she was easily distracted by them. She was also easily distracted by noises and found it difficult for her to relax at first.

> So, at first it [intervention sessions] was quite […] Weird […] I didn't know what was going to happen. It felt quite unfamiliar to sit for ten or twenty minutes, or whatever it was […] in the beginning it was quite weird for me to sit like that and, kind of…empty my mind…it was very difficult for me to focus my thoughts on […] what the person asked of me to think about

> in the moment and to just try and relax because I usually have a lot of thoughts running around in my head. I think about this, then that – I'm that kind of person. (Tiffany – second interview)

> I could get so easily distracted by thoughts or even noises. (Tiffany – week one solicited diary entry)

As Tiffany progressed through the weeks, it became easier for her to focus on one action or thought, to "organise her thoughts", accept it when her mind deviated, and concentrate for longer periods before her mind started to deviate.

> Later on it became more easy…to focus on a specific thing. (Tiffany – second interview)

> The longer I continue with these sessions, the easier it seems to organise my thoughts and stay calm if my mind decided to think of something else rather than what I am busy with. I also seem to be able to concentrate longer before my mind starts to wander. (Tiffany – week four solicited diary entry)

Towards the end of the intervention period Tiffany felt that she was able to ignore her worries during the sessions, even bigger ones, and could be "in the moment".

> …these, like, last few weeks, I could really be in the moment and put aside whatever it was to worry about, things that are still supposed to happen; big things, I mean, that you could easily worry about. (Tiffany – second interview)

In her solicited diary entry from week one, Gretchen claimed that the meditation overall became less laborious over time. In a later diary entry however, she reflected that longer sessions were more laborious, claiming that she found the ten-minute sessions during the beginning of the intervention period were more effective for her than the longer sessions later, during which she really struggled to maintain focus.

4.1.4.2 Subtheme (ii): Observations during the intervention sessions. This subtheme is concerned with the participants' subjective experiences of how the intervention affected their emotional and mental states as well as some more general thoughts on the practice of mindfulness.

When Tiffany was apprehensive before she began with a session, she found it hard to focus, although she found she was still able to relax. However, when she was feeling tranquil before a session, it was easy for her to focus on what the mindfulness instructor on the recording asked her to do. She felt that her emotional state beforehand also determined her concentration levels during the sessions. Tiffany learnt that setting aside some time before each intervention session to clear her mind and relax made the sessions more beneficial to her.

> …if I felt…a lot of anxiety or I was stressed or worried beforehand, it was very difficult for me to concentrate during the meditation but…even though I was worried beforehand, during the meditation sessions I would immediately start to relax. And if I was relaxed or just had peace of mind beforehand, then I could really easily concentrate and do exactly what I was supposed to do. (Tiffany – second interview)

> My mood prior to the sessions determined how focused I would be during the sessions. (Tiffany – week two solicited diary entry)

> The outcome of the sessions was quite dependent on the mood with which I entered the sessions. (Tiffany – week four solicited diary entry)

> My emotional state before each session had a direct effect on my concentration levels. If I was anxious or restless, I really struggled to concentrate, but if I was calm or not rushed, my concentration levels were so much better. (Tiffany – week six solicited diary entry)

> I need to take five minutes beforehand to clear my mind and try to relax so that I can concentrate at my best. (Tiffany – week six solicited diary entry)

Gretchen's experience was similar to Tiffany's in the sense that she was quickly distracted when feeling apprehensive but less so when she was calmer at the start of the sessions. However, Catherine's experience in this regard was contrary to those of Tiffany and Gretchen, finding it more difficult for her to keep her concentration when she was "in a good mood".

> I get distracted pretty easily when anxious. My success [with meditating] changes when I am reasonably calm to begin with. I have a very restless attention span when anxious. (Gretchen – week three solicited diary entry)

Tiffany also had difficulty concentrating when she was sleepy. For this reason, she suggested that one should rather do meditation sessions in the morning. In contrast to this, Catherine preferred to do the intervention sessions in the evening because she felt already composed in the morning but needed the extra help to stay calm in the evening.

> It helps to concentrate if your body is physically okay and well rested. (Tiffany – week three solicited diary entry)

> If you are physically tired you should rather try meditating or doing any other mentally draining activity when you are well rested, such as in the mornings. (Tiffany – week three solicited diary entry)

> Especially doing it, like, at night, as opposed to doing it in the morning. Cause it's easier to stay calm in the morning, for me […] So, doing it at night is quite helpful, for me. (Catherine – second interview)

During the fifth week of the intervention, Catherine had some difficulty with allowing thoughts to happen without resisting them, which seemed to frustrate her and hinder her from becoming relaxed during those sessions. Tiffany realised that she was exerting herself during the early weeks of the intervention. Her mind was crowded with thoughts and she found it tiresome to ignore them.

> It was quite difficult for me to not resist anything. This had a negative effect on me trying to calm down and relax. (Catherine – week five solicited diary entry)

> I easily got tired during the sessions because of the fact that I had so many thoughts running through my mind, and it was mentally exhausting to ignore them or push them aside. (Tiffany – week two solicited diary entry)

Gretchen discovered that it was unnecessary to exert herself during the sessions and that she made more progress and had better focus if she did not try so hard. Catherine seemed to have had the same revelation.

> The less effort you use in the exercises, the more you tend to progress and the more concentrated you are. (Gretchen – week two solicited diary entry)

> I need to let things happen. (Catherine – week five solicited diary entry)

Over the intervention period, Catherine seemed to have come to the realization that she should be more patient with herself and that she cannot, and should not, try to deal with her MPA “all at once”.

> …they spoke about, like, you know, having patience with yourself and, you know, thinking about this as a long journey and not just a quick fix. (Catherine – second interview)

> I need to be patient with myself and realise why I’m doing what I’m doing. (Catherine – week four solicited diary entry)

> I should be patient with my journey of anxiety. (Catherine – week eight solicited diary entry)

Even though the participants experienced trouble with concentration and found the sessions to be laborious at first, all three participants seemed to have experienced the intervention sessions as soothing. Tiffany said that she was feeling "relaxed" after "almost every" session.

> It's quite calming, actually. (Catherine – second interview)

> Whether you are calm to begin with or not, it tends to calm you to observe yourself without doing things to change it. (Gretchen – week one solicited diary entry).

> …it is as if I am soothing my emotional and mental state no matter what mood I am in. (Tiffany – week one solicited diary entry)

Tiffany observed that she felt more serene and in control because of the intervention sessions. During those sessions she could focus only on herself, be "in the moment", and limit any other thoughts for that period of time. She also discovered that she was able to manage her thoughts by shifting her focus to her breathing during the intervention sessions.

> I could control my thoughts better by focusing more on my breathing. (Tiffany – week one solicited diary entry)

> I definitely feel more at peace by taking a few minutes out of my day to focus on nothing but breathing and trying to limit the thoughts that pop into my mind. I feel more relaxed and in control if I take a few minutes for myself… (Tiffany – week one solicited diary entry)

It seemed that Tiffany learnt to be more observant of her thoughts, to categorise them and to control whether she will fixate on them. This ability helped her to focus during her sessions but also to relax and to be more positive in general. Categorising her thoughts helped her to feel more in control of them and to understand them and herself better. She also

realised that dealing with her anxiety is not as daunting as she previously thought it was because she can have control over her thoughts.

> I could easily refocus my attention on what I was doing if I remained calm and just observed and noted what distracted me. (Tiffany – week four solicited diary entry)

> I also became more aware of when I was thinking negative or positive thoughts and it gradually became easier to label the thoughts and move on. I can control my thoughts and decide whether I want to continue thinking about it or shift it aside. I find it very helpful to label the thoughts that come to mind because I realised that anxiety is actually not as bad as I thought […] I am more aware of the thoughts I am having and can easily tell myself to just shift it aside if it causes anxiety. (Tiffany – week five solicited diary entry)

> I felt more in control by labelling my thoughts under themes because it made me understand why I felt the way I felt during the week. By labelling my thoughts according to specific themes it created the opportunity for an overall perception of how I think and get to know myself in another way. I feel more relaxed and positive if my thoughts are accepted and placed under a specific theme because then I don't fixate as much on the specific thought and can move on more easily. (Tiffany – week eight solicited diary entry)

Catherine also found it useful to classify the triggering thoughts of anxiety she got during the sessions so as to calm herself down again.

> It was actually so easy to calm myself down by simply categorising and identifying the main triggers. (Catherine – week seven solicited diary entry)

During the second week of the intervention period, Catherine had a realization that she should be more attentive to her emotions and surroundings. She later made an entry which reflected that she had become more conscious of her mood.

> I need to be more aware of my emotions and surroundings. (Catherine – week two solicited diary entry)

> Days where I have lessons, my mood starts off a lot more rocky than other days. (Catherine – week four solicited diary entry)

Toward the end of the intervention period, Catherine claimed to have learnt that her awareness in life should be directed towards her health and happiness rather than her dilemmas. She also learnt that she should not be over-thinking.

> My awareness was directed at the wrong things. Being aware of my well-being is more important than being aware of my problems. (Catherine – week six solicited diary entry)

> I should not overthink things. (Catherine – week seven solicited diary entry)

Catherine felt like the intervention sessions impacted her to think more certainly in more areas of her life than just music. She also found that the intervention sessions were valuable in dealing with stress from her studies.

> I think it made me think about things more clearly, not just music-related and performance-related, but just in general…especially now when school starts to, like, get stressful, you know? It's helpful that I do the meditation sessions. And especially this past week or so, it was quite stressful, so that was quite helpful. (Catherine – second interview)

Tiffany observed that her day-to-day life was impacted by the outcome of the intervention sessions. She could go about her day with an unhindered mind and had more success with her tasks.

> My routine for the week, or tasks for the week, were affected by how well these sessions went. I could attempt the tasks with a clear mind and felt good about the outcome. (Tiffany – week seven solicited diary entry)

Gretchen expressed the view that mindfulness is an advantageous skill, but she realized that only completing the intervention sessions without applying mindfulness to her day-to-day life did not lessen her anxiety.

> Mindfulness is a very useful skill to have, but I find that observing as per the practice without actively helping yourself does not do a huge amount to decrease my anxiety. (Gretchen – week one solicited diary entry)

Gretchen had a hard time finding the motivation to do the sessions. She could see the potential benefits but rather wanted to spend her time otherwise when she felt uneasy.

> I can see the benefits, but in my restlessness, I struggle to get myself to set down time and do it even though I have the time. It's as if I feel I'll miss out on something while taking the time out. (Gretchen – week one solicited diary entry)

4.1.4.3 Subtheme (iii): Intervention's effect on experience of mindfulness during the Second Performance. This subtheme addresses the findings on the participants' thoughts about the intervention sessions' effect on their mindfulness during the Second Performance, specifically its role in helping them be focused and mentally involved throughout.

The participants were asked how they felt the intervention sessions impacted their Second Performance. Gretchen and Tiffany's answers revealed that they believed it influenced their ability to be focused and mentally absorbed in every moment. Tiffany also felt that this had an impact on her playing.

> I'd say the mindfulness and the…sort of focusing on one specific thing [helped]. (Gretchen – second interview)

> I could definitely concentrate my mind on a specific thing. I could tell myself easily to focus on a specific aspect that was important in the moment. (Tiffany – second interview)

> I would definitely do some meditations once a day to just focus my mind again and focus my thoughts to really think in the moment because it really affects how you perform in the moment […] I could really control what I was thinking about in the moment (Tiffany – second interview)

The intervention sessions led Gretchen to consider that it is beneficial to pay attention to immersing her body and mind into the performance instead of thinking of something that is not the performance, but she struggled to always remember to do this. She also attributed her better focus during the Second Performance to trying to be more mindful of the performance experience.

> The whole mindfulness thing has helped because […] you're getting yourself into, like, a choreography of how it works, get your whole body into the performance and your whole mind. Concentration - not thinking about other things. It's actually very helpful to try and pay attention to that when you remember to. So, I'd say it's very good. (Gretchen – second interview)

> I'd say it [focus] was a little bit better than usual, so that's good. I think it's because I tried to specifically focus on being mindful of the experience and things like that. (Gretchen – second interview)

Tiffany was not distracted by the presence of the audience or prematurely concerned about passages ahead in the music; a matter that usually increases her MPA. When she was worried during the Second Performance it was about what she was playing at that moment. She also said that even though the Second Performance's audience, mostly consisting of musicians, did increase her anxiety slightly, she was still able to be mentally absorbed in the performance.

> You know, to think only of this specific moment that I'm in, and not everything that is…everything else that is going on, you know, the people that are looking at me, or, you know, difficult passages that lie ahead, or something like that. (Tiffany – second interview)

> In the moment I didn't really worry about things that was still coming, you know, in the piece; certain passages…fast passages, or so on. I could really…focus in the moment what I was specifically busy with and if I worried, it was at the specific moment…with what I was playing in the moment. So, I didn't really think forward, if you know what I'm saying […] and usually I would worry about what's lying ahead […] usually my MPA increases a lot by things that I'm thinking of that still should happen, that I know that I'm stressed about and is difficult and, yeah, things like that. (Tiffany – second interview)

> …it [the presence of the audience] increased it [MPA] somehow, but just slightly actually because I was still in the moment thinking about what I was actually playing… (Tiffany – second interview)

Tiffany and Catherine both spoke about how they were able to quickly gather themselves again after they made a mistake in the Second Performance. Catherine mentioned that the intervention sessions assisted her in finding her place in the music again quickly when she became lost.

> …sometimes, like, when I made mistakes, or things like that, my focus sometimes went off, but only for, like, a millisecond, and then I would be in the thing again […] or even, like, a second, but it was, like, a small amount of time because I knew I need to focus now, and I just went on. (Tiffany – second interview)

> …it [mindfulness] helped me find myself quickly again. Because other times I would have…once I've lost it then I'm gone, you know, then I can't find my place anymore and just blank. But I did get lost for, like, a second or so, but then I was able to calm myself down in the performance… (Catherine – second interview)

Catherine reflected that she was able to ignore the mistakes in her Second Performance and to think ahead. Even when she fell out of sync with her accompanist after making a mistake, she was able to catch up with her again soon after. She did not feel like the mistakes were substantial enough to be detrimental enough to her performance to trigger MPA.

> I made a couple [mistakes] but not, like, mistakes that I couldn't recover from. Yeah, and…there were two times, I think, where I lost my place with Annalien but then I was able to catch up with her in the next bar. So, yeah, it's not, like, massive mistakes […] But this time it was just like, "Oh, okay. I need to catch up with her again." […] I kept telling myself, "Okay, I just need to keep going even though I made a mistake. I can't just focus on the mistake." (Catherine – second interview)

Gretchen claimed to have learnt to not obsess over a mistake that she has made, because she knows that it upsets her. This was put in practice during the Second Performance when she was also able to remove her attention from the mistakes in order to allow herself to focus on improving the rest of her performance.

> I just tried to carry on and say, "It's fine, it's fine. Forget it, it's gone. Carry on with the next thing." I try to ignore it mostly, and just carry on to try and make the rest better. Tried not to fixate on it because that always messes me up, so I've been trying not to do that. So…I did that a little bit better today, I think. (Gretchen – second interview)

As mentioned in the previous subtheme, it seemed that Tiffany learnt to be more observant of her thoughts, to categorise them and to control whether she will fixate on them. She also used the ability to categorise her thoughts in her Second Performance.

> I feel like I could…arrange all of my thoughts, if I can put it like that, with the meditation sessions and so on. (Tiffany – second interview)

> So…uhm, organising my thoughts – it [intervention sessions] definitely had an influence on that. (Tiffany – second interview)

4.1.4.4 Subtheme (iv): Intervention's effect on MPA during the Second Performance.

This subtheme is concerned with the participants' thoughts about the effect of the MMBSR intervention on their MPA during their Second Performances.

The participants were asked about the intervention sessions' impact on their MPA and the answers revealed that Catherine and Tiffany's MPA may have been decreased by the intervention sessions. Tiffany felt that this was because she could control and organise her thoughts – a skill that she learned during the intervention period. She suspected that her MPA improved from the First Performance to the Second Performance due to the intervention.

> It definitely did help with my anxiety during the performance. As I said, I didn't go on stage completely without nerves, but it definitely helped the nerves and helped my anxiety a lot… (Catherine – second interview)

> …I think it [MPA] was definitely better […] with the meditation sessions and so on. I think it really helped, actually […] that [ability to control and organise thoughts] really, really helps to decrease the amount of anxiety that you have. (Tiffany – second interview)

Although Catherine claimed that the intervention did improve her MPA, she said it did not remove it altogether. However, she felt more able to detect when her anxiety was becoming prominent in the performance and felt it was easier to decrease it then. She was also able to regain her composure in the Second Performance easily, which she has not been able to do in most previous performances.

> It [intervention sessions] did help me. Obviously, it didn't cancel out the anxiety completely […] I was able to calm myself down in the performance, which is something that I'm almost never able to do […] I was able to, you know, ease into the performance and catch myself in

> the places where I could feel that the anxiety was getting a hold of me, so it [intervention sessions] did make it [MPA] better. (Catherine – second interview)

Gretchen was unsure about whether the intervention impacted her MPA. She was not convinced that her MPA was lessened due to intervention because she could not sufficiently remember her experiences of previous performances as she had not, at the time, performed recently. She did, however, use a metaphor she learnt in the intervention sessions, which was beneficial for her to calm down. The metaphor explains that even though one's mind is troubled, it is possible to revert to a clear mind by shifting one's focus from that which troubles it.

> It probably decreased it [MPA]. It's difficult to tell because I haven't performed in a while. It's only this one, so. This one went better, so I'd say, probably, yes? (Gretchen – second interview)

> …they talked about, basically, that it's a sort of blue-sky sort of openness or a sort of…calmness that is there, and other things are on top of said calmness, you just have to, kind of, let it go and move away from your mind. And then the mind is still there, the sky is always the same colour, it's just clouds. That metaphor. I find it a useful metaphor to use, actually. So, I try to think about that and say to myself, "It's not that big a deal. Nothing's going to explode. Just calm down, have fun with the performance for once. It'll be okay." Try and talk myself down that way, and stuff like that, so that's been nice and helpful, I think. (Gretchen – second interview)

After their experiences with mindfulness through the intervention period, all three participants seemed positive about the potential for using MMBSR to combat their MPA. Tiffany stated that she will use it when she has a significant performance approaching. The intervention did not only benefit Catherine's MPA, but she finds it useful to become calmer

in her everyday life. Gretchen thought that she might use some of the techniques she learnt in the intervention to combat her MPA.

> If I know I have a very stressful, big performance that's coming, I would definitely do some meditations… (Tiffany – second interview)

> I would love to carry on with it. It's quite calming, actually. Yeah, it helps me a lot. As I said, it doesn't only help me with music related stuff. Just in general. (Catherine – second interview)

> I probably will use some of the things because I think it's useful. I think I would use it, yeah. (Gretchen - second interview)

4.2 Conclusion

The findings from the inductive and deductive analysis of the six interviews and 27 solicited diary entries revealed four main themes and 14 subthemes. The first main theme, intrinsic factors impacting MPA, focused on certain underlying psychological impacts of each participant's personality on their MPA, as well as the impact of preparation for a performance on their MPA. The second main theme, symptoms of MPA, focused on the subjective experiences of the symptoms of MPA reported by the participants. The third main theme, extrinsic factors impacting MPA, focused on a few extrinsic factors that the participants reported influencing their experiences of MPA. The fourth main theme, experiences with the MMBSR intervention, focused on the individual experiences of the participants with the intervention. The findings are discussed in relation to existing literature in Chapter 5.

Chapter 5: Discussion

In this chapter the findings presented in Chapter 4 are discussed in relation to the existing literature presented in Chapter 2. The literature review addressed the factors that impact performers' MPA, the most common symptoms of MPA experienced by performers, and discussed the researched treatment methods for MPA. The findings are discussed under the four main themes and 14 subthemes that were identified through the data analysis process (see Chapter 4).

The primary aim of the study was to explore an MMBSR intervention as treatment for MPA in three university-level violin students. The existing literature showed that there is a paucity of research regarding mindfulness and meditation as a treatment for MPA. Two of the three studies on this subject followed a quantitative research design (Chang et al., 2013; Lin et al., 2008), and one followed a mixed-methods research design (Czajkowski et al., 2020). Meditation is a novel treatment for MPA although there are few studies to support its efficacy. The current study's research design provides detailed description of participants' experiences with an MMBSR intervention. A secondary aim of the study was to investigate the self-reported experiences of MPA amongst university-level violinists.

5.1 First main theme: Intrinsic factors impacting music performance anxiety

The findings from the first main theme, intrinsic factors impacting MPA, are discussed under the four subthemes: the role of perfectionism, the role of motivation, trait and state anxiety, and the role of preparation.

5.1.1 The role of perfectionism

According to Papageorgi et al. (2007), perfectionism as a personality trait, defined by "striving for flawlessness and setting exceedingly high standards for performance, accompanied by tendencies for overly critical evaluations" (Stoeber, 2011, p. 128), may cause a higher probability of MPA. There are two standards of perfectionism that often apply

to musicians. Personal standards of perfection, for example musicians feeling that they must always work to their full potential, and social standards of perfection, where it is perceived by musicians that everyone around them expects them to succeed (Kenny, 2006). In considering the role of perfectionism in MPA experienced by the participants, Tiffany reported a high level of general perfectionism and a significant level of perfectionism about her music-making, indicating that perfectionism might be a source of her MPA. Gretchen stated that she always strives to play very well but claimed that she does not strive for perfection because such a preoccupation can make a performance sound robotic. However, generally Gretchen strives to execute everything to a standard "that would almost surprise people", suggesting that she has high social standards of perfection. Lehmann et al. (2007) and Mor et al. (2005) found that musicians with high social standards of perfection experienced more anxiety than those who did not have such high standards. Catherine reported a less debilitating level of personal perfectionism, and she particularly reported not being a perfectionist regarding her music-making. Therefore, it seems that Catherine's MPA does not stem from her perfectionism.

However, both Gretchen and Catherine reported being troubled with their mistakes during a performance even though they described themselves as not very perfectionistic in their music-making. Gretchen reported that she usually becomes flustered after making a mistake, indicating that an unwarranted concern about minor mistakes during a performance does not exclusively stem from perfectionism regarding music-making, but may also stem from general perfectionism in areas other than music-making. Catherine reported that she usually feels disappointed by the mistakes that she makes during a performance and that mistakes sometimes impact her to the extent that her concentration "shuts down". This is interesting because Lehmann et al. (2007) stated that musicians' perfectionism is often

manifested as unwarranted concern about minor mistakes during a performance and the tendency to fixate on what is wrong instead of what is right.

5.1.2 The role of motivation

Atkinson's (1964) achievement motivation theory, as cited in Papageorgi et al. (2007), proposes that everyone is motivated to succeed and has the tendency to want to avoid failure. MPA has also been linked to a fear of negative evaluation (Lehrer, 1987). In the framework of a musical performance, an individual's achievement motivation may be linked to their anxiety susceptibility, the aspirations they set, and the dedication they put into their practice (Papageorgi et al., 2007). Gretchen reported that the motivation to excel in a performance mostly increases her MPA because then she thinks a great deal about the performance, making the performance much more important to her than perhaps it should be. Further, Papageorgi et al. (2007) stated that a performer's motivation can be influenced by parents and teachers, but it is vital for the performer to also be intrinsically motivated to achieve success. It is unclear whether Gretchen's motivation is usually based on extrinsic factors like pleasing her parents, teacher, or the audience, or whether she is intrinsically motivated and just puts a great deal of pressure on herself. However, it can be concluded that Gretchen was intrinsically motivated to succeed while preparing for her Second Performance specifically because she reported being determined to improve her MPA. During her first interview she said that it is only occasionally that her motivation turns into determination, which she believes in turn decreases her MPA. Therefore, it can be concluded that intrinsic motivation contributed to decreasing her MPA in her Second Performance. During the time between her First Performance and her Second Performance she was also motivated to improve her playing and felt that she succeeded in this. This echoes the opinion of Papageorgi et al. (2007) that motivation influences a musician's task-efficacy. This could also have contributed

to decreasing her MPA in her Second Performance as poor task-efficacy is another source of MPA (Lehmann et al., 2007; Wilson & Roland, 2002).

For Catherine, it is all about where the motivation to perform well stems from. If her motivation is to just enjoy the performance, rather than to impress whoever she is playing for, she barely experiences any MPA. It can be concluded that her motivation for her Second Performance contributed to decreasing her MPA as she was not focused on trying to impress the audience but was just excited about being able to play and thought that the audience would not be bothered by the quality of her performance. This further supports Papageorgi et al.'s (2007) statement that it is vital for a performer to be intrinsically motivated to succeed because it was found that the fear of negative evaluation can trigger MPA (Lehmann et al., 2007).

When Tiffany is not motivated to perform well, she reports less MPA. Lower motivation is generally present when the performance is not particularly important to her. This was true for both her First and Second Performances. She regarded her Second Performance as preparation for her MMus recital only and believed that the performance was informal, which influenced her level of motivation and subsequently her MPA levels before the performance. This finding concurs with Lehmann et al.'s (2007) statement that a musicians' perception of the importance of the performance affects how they approach the performance, which in turn determines the level of MPA they experience.

5.1.3 Trait anxiety and state anxiety

Kenny (2006), Lehmann et al. (2007), and Papageorgi et al. (2007) found that performers with high trait anxiety perceive situations more threatening and will therefore experience higher levels of MPA (state anxiety). This occurs because a performer shifts into a self-evaluating mind-set once their MPA is triggered by an imminent performance, critically appraising their own abilities as inadequate (Kenny, 2006). While Tiffany reportedly believes

that she has a degree of trait anxiety, Catherine claimed to only experience anxiety when she "has to perform" (state anxiety), and her week eight solicited diary revealed that she became increasingly anxious before her Second Performance. Surprisingly, Catherine scored higher (137/240) on the K-MPAI than Tiffany (105/240), contradicting Lehmann et al., Papageorgi et al., and Kenny's above finding.

Performers who suffer from MPA tend to experience apprehension in other social contexts as well. For example, Gretchen revealed that she experiences anxiety in any situation that involves people, consistent with Cox and Kenardy's (1993) claim that MPA is often linked with social phobia. It is therefore possible that Gretchen has a degree of social phobia that could be the source of her MPA, or at least exacerbate it. Wilson (1999), as cited in Sinico et al. (2012), stated that musicians with a degree of social phobia experience more anxiety in a solo performance than non-socially phobic musicians. Gretchen corroborated this, scoring the highest in the K-MPAI of the three participants (146/240), reporting that she begins dreading an imminent performance the moment that she hears that she will have to perform, and that she became more anxious as the time of her Second Performance approached. Gretchen's inability to concentrate while she is performing due to worry about the performance also supported Lehmann et al.'s (2007) finding that highly anxious performers struggle with increased worry during a performance.

5.1.4 The role of preparation

Prior to their First Performances, Catherine and Gretchen already had a quality over quantity approach to their practice sessions in order to ensure that they can practice more productively rather than simply fulfil an arbitrary time requirement, which is already advantageous for performers with MPA seeing as 'inadequate preparation' is listed by Kenny et al. (2014) as one of the three main causes of MPA, and MPA is likely to be less if performers engage in task-efficacy (Lehmann et al., 2007; Wilson & Roland, 2002).

Further, both these participants felt that their practice strategies improved during the time between their First Performances and their Second Performances, and it can therefore be plausible that their improved preparation for their Second Performances could potentially have contributed to lessening Catherine's and Gretchen's MPA. Catherine felt that her practice schedule improved, which contributed to lessening her MPA and increasing feelings of preparedness for the Second Performance. Gretchen incorporated different practice techniques, and even some of the techniques that she learnt during the MMBSR intervention, into her practice habits. She also admitted that she had more time to practice for her Second Performance because of the COVID-19 lockdown period. Gretchen practiced more thoroughly for her Second Performance than for her First Performance and felt that her improved practice strategies have enhanced her as a violinist. These findings match the suggestions from multiple studies (Czajkowski & Greasley, 2015; Steinfeld & Brewer, 2015; De Felice, 2004; Hribar, 2012) that the increased bodily awareness, focus, and attention brought on by mindfulness can assist musicians in better instrumental practice.

Performers need to prepare for an imminent performance through physical practice but also psychologically (Papageorgi et al., 2007), which is what Gretchen did while preparing for her Second Performance. She practiced performing her pieces by playing them outside and for family members to see if and how she can cope with the pressures of performing in front of people. She also mentioned that she experiences more MPA during a performance in which it is the first time that she is performing the pieces in front of an audience. However, even though two of the three pieces she played during the Second Performance had not been performed previously she felt well prepared with them, potentially lessening the degree of MPA she might have otherwise felt during the performance. This is consistent with the view that the amount of work musicians can put in and their commitment to the process of

preparing for a performance influences task-efficacy and thereby MPA (Papageorgi et al., 2007).

Papageorgi et al. (2007) stated that individuals need to use practice time wisely to fine-tune their fingering, bowing, or breathing, depending on what they are more comfortable doing, to minimize any technical problems during performance and prevent increased nervousness. Gretchen and Tiffany echoed this statement by both being of the opinion that not practicing well enough for a performance increases their MPA.

Earlier in this chapter it was stated that Tiffany was not intrinsically motivated prior to her Second Performance because it was not important to her and, furthermore, that Lehmann et al. (2007) stated that a musicians' perception of the importance of the performance affects how they approach the performance, which in turn determines the level of MPA they experience. Tiffany had been well prepared with her Second Performance piece in the past, but in the couple of weeks leading up to the performance, she was not able make the effort to practice enough to reach her prior level of familiarity. She additionally expressed the view that when she has more self-confidence in a piece because she has practised it a great deal, her MPA is less. Therefore, Tiffany attributed her MPA during the Second Performance to her lack of preparation for it, agreeing with Kenny et al. (2014), who lists 'inadequate preparation' as one of the three main causes of MPA reported by musicians. Subsequently, her self-confidence during the Second Performance was impacted because she could not make the effort to practice much for that performance, increasing her MPA. The operative factor in her self-doubt and resulting MPA is seemingly the degree of confidence she has in her level of familiarity with the music.

No literature could be found on the impact MPA may have on the preparation that was done for a performance. However, Gretchen emphasized that her MPA during a performance often undermines the work that she has already done in her practice sessions. Catherine

claimed also to have experienced this in her Second Performance, specifically regarding her intonation and dynamics.

5.2 Second main theme: Symptoms of music performance anxiety

The findings from the second main theme, symptoms of MPA, are discussed under the three subthemes: physiological symptoms, psychological symptoms, and behavioural symptoms.

5.2.1 Physiological symptoms

The physiological symptoms that the participants reported usually experiencing during performances were muscle tension (Gretchen, Tiffany), increased heart rate (Catherine, Tiffany), shortness of breath (Gretchen), sweaty hands (Gretchen, Tiffany), shaking hands (Catherine, Gretchen, Tiffany), and dry mouth (Gretchen). These symptoms correspond to all the symptoms that have been previously reported in existing literature, apart from nausea, diarrhoea and feeling light-headed (Burin & Osorio, 2017; Kendrick et al., 1982; Kenny, 2005; Kenny, 2011a; Kivimäki, 1995; LeBlanc et al., 1997; Lehmann et al., 2007; Lehrer, 1987; Neftel et al., 1982; Spahn et al., 2016; Valentine, 2002; Wesner et al., 1990).

Gretchen reported that her physiological symptoms are dependent on the degree of MPA experienced and she specified only experiencing shaking and sweaty hands when her MPA was quite severe. She added that during her Second Performance she experienced almost the complete range of physiological MPA symptoms, including shaking and sweaty hands, which should indicate that she was experiencing a high level of MPA during her Second Performance.

There were also some differences reported in the participants' physiological symptoms during their Second Performances compared to their previous performance experiences, including their First Performances. Catherine claimed not to have shaken as much before her Second Performance as she usually would. Tiffany claimed not to have experienced sweaty

hands as much in her Second Performance as in her First Performance, but during her Second Performance she experienced tension in her left-hand fingers, which she does not usually experience. She felt this increased her MPA by creating a sense of loss of control.

5.2.2 Psychological symptoms

Psychologically, performers may be affected by their fear of a performance (Lehmann et al., 2007; Matei & Ginsborg, 2017) causing their working memory to be occupied by interfering worries which depletes attentional resources required to focus on the task at hand (Matei & Ginsborg, 2017). Additionally, poor concentration was one of the most commonly reported symptoms of MPA in the study by Wesner et al. (1990). Catherine described often being distracted by thoughts on how she is standing, or moving, while performing, shifting her focus away from the music. Gretchen stated that she struggles with the ability to concentrate while she is performing because her mind is occupied with worry about the performance. When in a panicked state, Gretchen reported her memory was also affected, losing consciousness of some of the practiced aspects of her performance such as correct technique, musical expression, and certain aspects of how she usually uses her instrument. All three participants reported worry about the performance as a psychological symptom of their MPA. For two of the participants, this symptom seemed to have been exacerbated by insufficient preparation. Tiffany reported that she usually worries about parts in her pieces that she will not play correctly, while Catherine was concerned about missing entrances during her Second Performance.

Tiffany and Gretchen also experience self-doubt as a psychological symptom of their MPA, corroborating Van Staden (2016), who also found self-doubt to be a psychological symptom of MPA in two of the participants in his study. For Tiffany, this self-doubt is sometimes triggered as a result of her shaking (physiological symptom), and the operative factor is the degree of confidence she has in her familiarity with the music. Similarly, Tiffany

mentioned that her lack of preparation for her Second Performance did affect her self-confidence during the performance.

5.2.3 Behavioural symptoms

Physiological symptoms of MPA may cause musicians to change their behaviour associated with performing, which is then referred to as behavioural symptoms of MPA (Lehmann et al., 2007). Behavioural symptoms of MPA are the unwelcome aberrations and other performance mistakes that occur as a result of MPA and which negatively impact a performance (Kenny, 2006; 2011a; Kenny et al., 2014).

The participants reported usually experiencing unwelcome adjustments in the following musical aspects of their performance: tempo (Gretchen, Tiffany), interpretation and musicality (Catherine, Gretchen, Tiffany), intonation (Catherine, Gretchen, Tiffany), dynamics (Catherine, Gretchen), sound quality (Tiffany), with the latter three all occurring as a result of muscle tension. Both Catherine and Gretchen reported having their interpretation and musicality negatively affected by MPA, but Tiffany felt that her MPA enhances her interpretation of the music. Hamann (1982) and Hamann and Sobaje (1983) found that for musicians with high task-efficacy, MPA can be a motivational factor that enhances their performance quality. This may indicate that Tiffany had achieved a high level of task-efficacy for those performances in which she experienced that her MPA enhanced her interpretation of the music. Catherine mentioned that her musical expression and interpretation is a knock-on effect of her intonation being affected; she is usually more concerned about playing the correct notes than phrasing beautifully. This is an unfortunate side-effect of Catherine's MPA because, ironically, minor performance mistakes do not ruin the experience of a performance for most audiences, but performers' preoccupation with these minor mistakes can prevent them from accomplishing an expressive performance, which is more important to the audience (Lehmann et al., 2007).

Inconsistencies were also present in the participants' self-reports of behavioural symptoms versus their actual experiences during the performances. It was interesting to find that some of the unwelcome aberrations that participants claim usually occur in their performances did not occur in their Second Performances. For example, even though Gretchen reported that her tempo is usually affected by MPA, she was doubtful as to whether her slower tempo choices in her Second Performance were due to her MPA. Similarly, Tiffany did not experience any MPA-related tempo increases during her Second Performance. Gretchen also reported that her musicality during her Second Performance improved and was more expressive than it usually was even though her repertoire in her Second Performance was generally of higher difficulty to her than that of her First Performance. Lehmann et al. (2007) and Wilson and Roland (2002) state that a musician's lack of task-efficacy can exacerbate their MPA, which may suggest that Gretchen had a higher level of task-efficacy for her Second Performance, which could have contributed to lowering her MPA in spite of the more "difficult" repertoire.

On the other hand, during Catherine's first interview, she said that her musical dynamics during a performance are not usually affected by her MPA and that she is "not afraid" to play either loudly or softly. However, during her second interview she contradicted this by saying that her dynamics were in fact affected by her MPA in her Second Performance.

Two of the participants also reported some behavioural symptoms that are not related to the musical aspects of their performance. For example, Gretchen's muscle tension and movement problems negatively affect her stance while playing. She also usually struggles to make eye-contact with the audience, which further supports the possibility that Gretchen suffers from a degree of social phobia; according to Schneier et al. (2011), self-reported fear and avoidance of eye contact are associated with social phobia. Additionally, Gretchen also

has trouble bowing before and after her performances and stated that fidgeting additionally became a problem during her Second Performance. According to Lehmann et al. (2007), highly anxious performers in particular can struggle with increased behavioural symptoms during a performance, which is demonstrated in this study as Gretchen experienced the most behavioural symptoms, reported trait anxiety, and scored the highest of the three participants on the K-MPAI (146/240). Furthermore, Catherine claimed to experience sleep disturbances because of her MPA, waking up earlier on the day of a performance, something she also experienced on the days of her First and Second Performances. No studies could be found in which sleep disturbances were reported by participants as being a behavioural symptom of their MPA.

The results showed a bi-directional relationship between Tiffany and Gretchen's MPA and the mistakes they make during a performance. Their MPA during a performance increases the number of mistakes they make and the mistakes that they make does, in turn, increase their levels of MPA. Interestingly, both participants also made mention of how their psychological symptom of self-doubt causes them to sometimes make mistakes in their performances. During Tiffany's Second Performance, she made many relatively small mistakes, indicating that her MPA may have been relatively high during that performance. Gretchen's also indicated that she made many intonation mistakes, however she experienced that her mistakes during her Second Performance did not impact her into making many more mistakes as she usually would.

5.3 Third main theme: Extrinsic factors impacting music performance anxiety

The findings from the third main theme, extrinsic factors impacting MPA, are discussed under the three subthemes: audience, types of performances, and venue.

5.3.1 Audience

Kenny (2011b) mentions that certain environmental stimuli can cause MPA. Factors related to the performance environment includes the presence of an audience (Papageorgi et al., 2007). Tiffany and Gretchen reported that the slightest presence of an audience is a contributing factor to their MPA. This finding concedes with LeBlanc et al. (1997) who studied 27 musicians with MPA and found that their self-reported anxiety was higher in the performances where an audience was present. Tiffany and Gretchen also reported that their MPA was not dependent on the size of the audience, contrasting LeBlanc et al.'s (2007) finding that performers' MPA increases with a larger audience size.

The degree to which a performer is visibly aware of the audience is related to this increase of anxiety (Lehmann et al., 2007), which coincides with Gretchen's statement that her MPA decreases when she does not see people visibly reacting negatively to her performance. Catherine, however, somewhat contradicted Lehmann et al. (2007) by reporting that her MPA increases slightly when she knows or suspects one of her solo performances are being recorded, implying that the audience does not have to be visually present for Catherine to experience MPA. Even the probability of her performance being listened to by another at a later stage invokes MPA in her.

Gretchen claimed to have experienced some MPA in the past when others could hear her practice. This is consistent with LeBlanc et al. (1997), who observed that some of their participants reported anxiety when playing alone in a glass-walled practice room with the researchers and several other participants close by, implying that some musicians' MPA is not dependant on the audience being in the same room.

Tiffany's MPA during her Second Performance was reportedly marginally increased by the knowledge that most of the audience members were musicians. Although Gretchen was not aware that the other people in the audience were mostly musicians, she stated that

she would have experienced more MPA had she known, in concordance with Tiffany, ostensibly due to an expert audience being more likely to be aware of the mistakes they make than non-musicians. Therefore, both Tiffany's and Gretchen's MPA likely stems from being especially worried about being critiqued by people in the audience who have had a musical education. This coincides with Lehmann et al.'s (2007) statement that the fear of negative evaluation can trigger MPA, and that certain people's judgments may carry more weight than others. However, it was interesting to note that an audience consisting mostly of musicians, whom Catherine was not used to playing for, did not increase her anxiety in her Second Performance but actually subdued her anxiety. This shows the extremely individual-specific nature of MPA triggers.

Lehmann et al. (2007) is also of the opinion that an audience consisting of anonymous faces in a full concert hall poses the same level of intimidation to the performer as a smaller audience consisting of the performer's loved ones, music experts, and adjudicators. Catherine's report of being more comfortable playing in front of strangers than playing in front of friends supports Lehmann et al.'s (2007) opinion. Catherine further reported that her MPA increased in inverse proportion with the degree of familiarity of the friend; that is, with closer friends being less likely to trigger MPA than less familiar ones. In accordance with Catherine, Gretchen reported that her MPA was dampened in her Second Performance because she had a close friend in the audience.

5.3.2 Types of performances

It was found that all the participants reported only experiencing MPA in performances where they feature as the soloist, with or without accompaniment. In accordance with Papageorgi et al. (2013), who found that western classical musicians were generally found to report higher levels of performance anxiety, Catherine made special mention that she only experiences MPA in classical solo performances. She reported experiencing no MPA in solo

jazz or improvisation performances. Tiffany concurred, explaining that her MPA is dependent on whether a performance is informal or formal in nature. Formality, in this case, could also be influenced by the type of venue (discussed more thoroughly in the next subtheme); concerts in the Western concert tradition are often carried out in more formal venues than, for example, jazz concerts (Kapersen & Götestam, 2002).

The number of co-performers on stage is also suggested to have an impact on the level of MPA experienced (Lehmann et al., 2007). All the participants reported only experiencing MPA in performances where they feature as the soloist, with or without accompaniment, concurring with Cox and Kenardy (1993), who found that musicians experience greater levels of MPA in solo performances than in group performances. All three participants found their MPA to be absent when playing in an orchestra, which has the largest number of co-performers (usually 15-90 musicians). Tiffany specified that her MPA is additionally absent in ensemble performances, which has a smaller number of co-performers (usually 3-15 musicians) than an orchestra, while Catherine does not experience MPA in any performances where she is playing with other people, regardless of the number. Papageorgi et al. (2007) also lists the performer's perception of their level of self-exposure, in the sense of feeling vulnerable during a performance (Wilson, 1997, as cited in Papageorgi et al., 2007), as a factor related to the performance situation impacting MPA. Ryan and Andrews (2009) stated that MPA may occur in both solo and group performances, but the former generates more anxiety as the musician is more exposed to the risk of their mistakes being perceived by the audience. It is not surprising then that Catherine and Gretchen described feeling very exposed when performing solo as opposed to other type of performances because the audience can then easily hear everything they play. Catherine reported that mistakes are part of the reason why she does not experience MPA in performances where she forms part of a group. She feels that her mistakes are not as exposed in a group performance as when she is playing a

solo performance and additionally feels that the audience can see all her musical shortcomings during solo recitals, which increases her MPA. Gretchen also said her feelings of self-exposure are due to the knowledge that the audience members' gazes are focused entirely on her when performing alone as opposed to in a group, attributing her MPA in solo performances to this too.

When the participants were asked whether they do solo performances frequently, all three participants admitted that they avoid doing them, with Catherine and Gretchen only performing solo for compulsory exams. According to Wilson (2002), experienced performers are more exposed to performance situations and consequently feel less threatened by their physiological arousal, indicating that it could be plausible to assume that if the participants participated in solo performances more regularly, their MPA and especially their physiological symptoms, might be less. In agreement, Kenny (2011b) also mentions that lack of previous performance experiences might underpin maladaptive MPA. This was also theorized by the participants; Catherine stated that she suspected that her MPA in solo performances might be due to not doing enough solo performances. It should be noted that even though these participants shy away from solo performances, they are highly experienced group performers, with both Gretchen and Tiffany regularly performing in orchestral concerts, Tiffany additionally participating in many ensemble performances, and Catherine frequently playing at her church and for miscellaneous 'gigs'. This indicates that the benefits of behavioural exposure may be highly context-dependent, and that performers should grasp that performing in a group is potentially not going to aid them in their pursuit of becoming a soloist if they have MPA.

Gretchen admitted that she avoided solo performances due to the MPA she experiences in those performances, and that she generally experiences a feeling of "dread" when she must do a solo performance. Catherine also implied she avoided performing solo

because of her MPA. This corresponds to Papageorgi et al. (2007), who lists negative previous performance experiences as an extrinsic factor that may influence a performer's susceptibility to MPA and further stated that negative previous performance experiences lead the performer to dread the next performance, further increasing the possibility for MPA.

5.3.3 Venue

Papagerogi et al. (2007) lists the performer's perception of self-exposure and unsatisfactory performance conditions as a factor related to the performance situation that impact MPA. In agreement with this statement, Gretchen did not feel as self-exposed under the lighting in the Church hall as in the Musaion, and therefore preferred the lighting in the church hall; Stage lights or spotlights seem to increase her MPA. Both Gretchen and Catherine also felt that the Musaion's acoustics are favourable but very exposing, and Gretchen's MPA is increased by such exposing acoustics. The findings also indicated that performers' MPA may be associated with the architecture of a venue. Catherine reported that it was less intimidating to perform in the church hall due to its smaller size in relation to the Musaion. Gretchen felt that the lower stage of the church hall in comparison with the Musaion's stage might also have contributed to lessening her MPA because she was almost on the same level as the audience. She claimed that this helped her to feel less self-exposed than when performing on a higher stage.

The findings of this study further corresponded to Papageorgi et al. (2007), who list negative or positive previous performance experiences as an extrinsic factor that may influence a performer's susceptibility to experience MPA. For example, Tiffany reported that her anxiety in a hall is usually related to memories of previous experiences linked to that hall and both Tiffany and Gretchen indicated that their MPA in the Musaion is related to the negative memories they have associated with that hall. Tiffany and Catherine also reported feeling comfortable playing in the church hall, seemingly because the church hall is not

meant for examinations or concerts. This may indicate that they have had negative experiences when playing examinations in the Musaion hall. On the other hand, Catherine also reportedly enjoys playing in churches specifically, which potentially decreased her MPA in the church hall. This concurs with Papageorgi et al. (2007), who states that a positive previous performance experience gives the performer extra confidence for the next performance.

All three participants felt that they would have experienced more MPA during their Second Performances if they had taken place in the Musaion hall, but it is safe to conclude that different venues likely impact performers' MPA in different ways.

5.4 Fourth main theme: Experiences with the mindfulness meditation-based stress reduction intervention

The findings from the fourth main theme, experiences with the MMBSR intervention, are discussed under the four subthemes: progress with meditation over the weeks, observations during the intervention sessions, intervention's effect on experience of mindfulness during the Second Performance, and intervention's effect on MPA during the Second Performance.

5.4.1 Progress with meditation over the weeks

The findings suggested that as the participants progressed through the intervention sessions they learnt to meditate more effectively over time. Some of their experiences changed from earlier in the intervention period to later in the intervention period. Catherine and Tiffany experienced the sessions early in the intervention period as tough and Catherine found it difficult to only focus on one thing and she became impatient. She did not experience any results during the early days of the intervention, which was to be expected as Headspace (n.d.-b) states that the benefits of meditation are felt gradually and over time. According to Headspace (n.d.-b), it is normal for first-time meditators to feel restless, dissatisfied, afraid, anxious, and burdened. Meditation is a life-long process and not a race to find immediate

improvement. It is an ability that requires dedication, patience, and regular practice for the benefits to be felt steadily over time. Once Catherine reportedly realised that she should approach mindfulness as a journey and not something that happens overnight, she began to enjoy the sessions. Tiffany found it laborious because her mind was usually cluttered with thoughts, so she was easily distracted by them as well as by any noise. Headspace (n.d.-b) also states that it is normal for the mind to be restless and easily distracted because the mind is used to being occupied and it will resist until it becomes more comfortable with the foreign idea of not being engaged. Tiffany found it difficult to relax at first and felt it very strange and unusual to sit down for a period to try and clear her mind. This seems to be a normal reaction, as Headspace (n.d.-b) states that many first-time meditators find it odd to sit quietly with their deepest thoughts and emotions and do nothing – the very thing people's minds tend to avoid. As a result, Headspace (n.d.-b) specifically states that first-time meditators should expect their minds to be occupied with thoughts, easily diverted, and impatient. Towards the end of the intervention period, Tiffany felt that she was able to ignore even bigger worries in her life during the sessions and could focus on being present "in the moment". This also correlates with Headspace's (n.d.-b) statement that meditation provides a space in which to experience peace from the turmoil surrounding one's life.

As Tiffany progressed through the weeks, it became more effortless for her to focus on one action or thought, to organise her thoughts, accept it when her mind deviated, and concentrate for longer periods before her mind started to wander. This concurs with Headspace (n.d.-b), who state that with dedication, the periods between awareness and distraction will become longer. Gretchen, on the other hand, reflected that the longer sessions in the later weeks of the intervention period were more laborious, claiming that she found the ten-minute sessions during the beginning of the intervention period more effective for her than the longer sessions, during which she really struggled to maintain focus. Acknowledging

that these concentration problems are common for many first-time meditators, Headspace (n.d.-a) recommends that users start with shorter sessions and then increase the amount of time until they find the optimal duration. They state that this optimal duration varies for everyone and that it is important to find the amount of time that is most effective for the individual. This amount of time should feel achievable which will help to keep the user motivated.

5.4.2 Observations during the intervention sessions

According to the findings, the meditation sessions affected the participants' emotional and mental states during the intervention period. They made observations of their experiences and shared some more general thoughts on the practice of mindfulness as well, which will now be discussed.

Tiffany and Gretchen both experienced that it was more difficult to concentrate when they were feeling apprehensive before they began with a session. However, Catherine found it more difficult for her to keep her concentration when she was in a pleasant mood to begin with. Tiffany felt that her emotional state beforehand also determined her concentration levels during the sessions and discovered that making time before each intervention session to clear her head and relax made the sessions more useful to her. Tiffany also had difficulty concentrating when she was sleepy and for first-time meditators feeling sleepy or falling asleep when meditating is normal. This happens because the mind confuses doing nothing with relaxation and will later, with more practice, learn the difference between relaxed focus and total relaxation (Headspace, n.d.-b). Headspace (n.d.-b) suggests doing the meditation sessions in the morning when the mind is refreshed and awake, which is exactly what Tiffany did. In contrast to this, Catherine preferred to do the intervention sessions in the evening because she felt already composed in the morning but needed the extra help to stay calm in the evening. Even though Headspace (n.d.-b) suggests doing meditation early in the day, they

also state that it is completely acceptable to choose a time that suits your schedule, be it morning, afternoon, or evening.

All three participants also seemed to have mentally exerted themselves during the earlier sessions of the intervention period by trying to ignore or control their thoughts. Gretchen and Catherine seemed to have comprehended that it was not necessary to try so hard and Gretchen discovered that she even made more progress and had better focus if she did not try so hard. McDonald (2005) stated that one's mind and body should be relaxed but alert during meditation. Mental relaxation is achieved by the decision to leave behind the worries and involvements around you and immerse yourself in your inner world. The goal is not to ignore or actively control any thoughts that may arise, but rather to observe the thoughts and feelings that may arise without becoming involved in them. Headspace (2017) explained that the object of meditation is not to restrict the mind forcefully but rather to bring it to a natural state of rest. Catherine had some difficulty with allowing thoughts to happen without resisting them, which seemed to frustrate her and hinder her from becoming relaxed during those sessions. Headspace (n.d.-b) states that this is a common problem for people learning to meditate and that frustration is one of the main reasons people quit meditating, becoming frustrated that their minds are not easily cleared and not accepting that the mind will always have thoughts because it is designed that way. Mindfulness' goal is not to stop thoughts, but rather to teach people to observe their thoughts without scrutiny or preconceptions.

Even though the participants experienced trouble with concentration and found the sessions to be laborious at first, all three participants seemed to have experienced the intervention sessions as soothing. Tiffany made special mention that she was feeling calmer even after the sessions where she had trouble with her concentration and observed that she felt more serene and in control because of the intervention sessions, during which she could

focus only on herself, be “in the moment”, and limit any other thoughts for that period of time. She also discovered that she was able to manage her thoughts by shifting her focus to her breathing during the intervention sessions, which is the object of meditating on the breath. Meditation on the breath involves keeping the mind from wandering by focusing primarily on the act of breathing (Headspace, n.d.-d).

It seemed that Tiffany and Catherine learnt to be more observant of their thoughts, to categorise them and to control whether they will fixate on them. This ability helped Tiffany to focus during her sessions, to relax, to be more positive in general, and to realize that dealing with her anxiety is not as daunting as she previously thought it was. She also used the ability to categorise her thoughts during her Second Performance. Catherine also found it useful to classify the triggering thoughts of anxiety she got during the sessions to calm herself down again.

During the second week of the intervention period, Catherine had a realization that she should be more attentive to her emotions and surroundings. She later made an entry which reflected that she had become more conscious of her mood. Consistent with this experience, Headspace (n.d.-b) states that an understanding of how your mind thinks and feels is one benefit of regular meditation practice. Tiffany also felt that she could understand herself and her thoughts better by the categorization of her thoughts during meditation. Headspace (n.d.-b) also claims that mindfulness allows people to better understand why they feel or think in a certain way, as Tiffany experienced, adding that this can result in a healthier perspective on life although this was not confirmed by any of the participants, except maybe by Catherine who claimed to have learnt that her awareness in life should be directed towards her health and happiness rather than her dilemmas, and that she should not be over-thinking.

Catherine felt that the intervention sessions encouraged her to think more certainly in areas of her life other than just music. She also found that the intervention sessions were

valuable in dealing with stress from her studies. Wylde et al. (2017) found that meditation sessions on Headspace can reduce work stress as seen in their sample of 95 novice paediatric nurses. In addition, Economides et al. (2018) found that only ten days of meditation on Headspace reduced stress by 14% in their sample of 69 psychologically healthy adults, and a study by Yang et al. (2018) showed that medical students who used Headspace for 10 days had a 12% decrease in stress.

Gretchen expressed the opinion that mindfulness seems like an advantageous skill, but she felt that only completing the intervention sessions without applying mindfulness to her day-to-day life did not lessen her anxiety. In agreement, Headspace (n.d.-b) states that the goal of the meditation sessions is to make a person generally more mindful and less distracted in their daily life, and that it is necessary to consider the nature of your mindset after the sessions and then to intentionally carry the state of awareness into the activities of the day. In contrast to Gretchen, Tiffany observed that her day-to-day life was impacted by the outcome of the intervention sessions. She could go about her day with an unhindered mind and had more success with her tasks. According to Headspace (n.d.-a), it was found that completing just one 15-minute meditation session on the app may result in a 22% drop in mind wandering (Kirk et al., 2019), and four weeks of consistent practice can culminate in a 14% rise in focus (Bennike et al., 2017).

Gretchen had a hard time finding the motivation to do the sessions. She could see the potential benefits, but rather wanted to spend her time otherwise when she felt uneasy. Gretchen found it burdensome to continuously do the meditation sessions in weeks five to nine. Headspace (n.d.-b) states that for beginner meditators it is helpful to define one's motivation for doing the sessions. If you only have a vague idea as to why you are meditating, then the chances of you quitting the practice are considerably higher.

5.4.3 Intervention's effect on experience of mindfulness during the Second Performance

The results indicated that at least one of the participants experienced the desired facilitation of mindfulness meditation – the sense of being present in every moment, free from distraction or judgment – after the intervention period. Tiffany revealed that she believed the intervention sessions influenced her ability to be focused and mentally absorbed in every moment of her Second Performance and to be able to categorise her thoughts during her performance. In addition, Tiffany also felt that this increased focus and mindfulness in every moment had an impact on her performance quality. For example, she was not prematurely concerned about troublesome passages ahead in the music, a matter that usually increases her MPA. Tiffany was also not distracted by the presence of the audience in her Second Performance and even though the audience did increase her MPA slightly, she was still able to be mentally absorbed in the performance, demonstrating the statement of Xu (2010) that by cultivating increased moment-to-moment awareness, musicians might also better deal with both the physical and mental distractions that occur onstage.

Gretchen attributed her better focus during the Second Performance to trying to be more mindful of the performance experience, although she did not always remember to be mindful. These findings correspond to Xu's (2010) claim that mindfulness can bring a clearer perspective to the art of performance, leading the performer to focus and be more confident with being the centre of attention. The intervention sessions led her to consider that it is beneficial to pay attention to immersing her body and mind into the performance instead of thinking of something other than the performance.

All three participants made mention of how they were able to better deal with the mistakes they made in their Second Performances. Catherine mentioned that she was more easily able to find her place in the music when she became lost. Tiffany felt that her focus was interrupted by a mistake for only a noticeably short amount of time before she regained

her focus. This may indicate that they both had increased levels of focus and mental alertness, possibly facilitated by the intervention sessions, as this is a reported benefit of frequent meditation practice (Headspace, n.d.-a). Lin et al. (2008) also states that the practice of meditation can allow a person to develop greater calmness and clarity to face life experiences and situations. Gretchen felt that her mistakes did not worsen her MPA by much and that she did not notice any increase in tension-related symptoms after the mistake. She also mentioned that a mistake did not necessarily lead to further mistakes, as would usually be the case. This could be due to her claiming to have learnt to not obsess over a mistake that she has made, as she was also able to remove her attention from the mistakes in order to allow herself to focus on improving the rest of her Second Performance.

5.4.4 Intervention's effect on music performance anxiety during the Second Performance

As mentioned in the literature review, there is a paucity of research on MMBSR as a treatment for MPA. However, Chang et al. (2003) concluded that meditation may be a useful tool for performers to combat their MPA. Lin et al. (2008) found that a decrease in MPA was associated with meditation. Studies by Czajkowski (2017), Diaz (2018), and Farnsworth-Grodd and Cameron (2013) showed that higher levels of mindfulness correlate with lower levels of MPA. The results of the current study show that two of the participants are of the opinion that their MPA may have been decreased by the intervention sessions, although it did not remove it altogether. One of these participants felt that the abilities she learnt in the intervention sessions (i.e., to control and organise her thoughts) were a major contributor to this. Another participant reported to have felt more able to detect when her anxiety was becoming prominent in the performance due to the mindfulness intervention and felt it was easier to decrease her anxiety as a result. She was also able to regain her composure in the Second Performance much more easily than usual, unlike most of her previous performances. Both these participants were positive about using MMBSR to combat their MPA in the

future. The third participant, however, was not convinced that her MPA was lessened due to the intervention because she claimed she could not sufficiently remember her experiences of previous performances due to infrequent performing in the past. However, she thought it possible that she might use some of the techniques she learnt in the intervention to combat her MPA in the future.

5.5 Summary

In this chapter the findings presented in Chapter 4 are discussed in relation to the existing literature presented in Chapter 2. A secondary aim of the study was to investigate the self-reported experiences of MPA amongst university-level violinists. The results and discussion revealed that the intrinsic and extrinsic factors impacting MPA reported by previous literature also impacted the MPA of the participants in the current study, however their experiences with these different factors were individualistic. The physiological symptoms reported by the participants in the current study corresponded to all the symptoms that have been previously reported in existing literature, apart from nausea, diarrhoea and feeling light-headed. Distractibility, poor concentration, self-doubt, and worry about performance have been reported as psychological symptoms of MPA in previous studies as well as in the current study, and additionally forgetfulness was reported by one of the participants in the current study. Behavioural symptoms of MPA are the unwelcome aberrations and other performance mistakes that occur as a result of MPA and which negatively impact a performance (Kenny, 2006; 2011a; Kenny et al., 2014). The participants reported usually experiencing unwelcome aberrations in the following musical aspects of their performance: tempo, interpretation and musicality, intonation, dynamics, and sound quality. These aberrations were also individualistic. Two of the participants also reported some behavioural symptoms that are not related to the musical aspects of their performance.

These included struggling to make eye-contact with the audience, trouble bowing, fidgeting, and sleep disturbances.

The primary aim of the study was to explore an MMBSR intervention as treatment for MPA in three university-level violin students. The existing literature showed that there is a paucity of research regarding mindfulness and meditation as a treatment for MPA. The findings suggested that as the participants progressed through the intervention sessions they learnt to meditate more effectively over time and the discussion showed that this progress was to be expected. First-time meditators often find themselves easily distracted and restless, but with dedication the periods between awareness and distraction will become longer (Headspace, n.d.-b). The results suggest that increasing mindfulness may have allowed the participants to become more observant of their thoughts, and the discussion showed that this was to be expected because an understanding of how your mind thinks and feels is a benefit of regular meditation practice (Headspace, n.d.-b). Some participants also seemed to have learnt to categorise their thoughts and to control whether they will fixate on them, as well as understand their thoughts and themselves better, which is supported up by Headspace (n.d.-b) claiming that mindfulness allows people to better understand why they feel or think in a certain way. It was also discussed that people may experience the benefits of mindfulness in areas of their daily lives including less work stress, a decrease/reduction in mind wandering, and an increase/improvement in focus. The discussion of the results showed that an MMBSR intervention may facilitate the sense of being present and focused in every moment, free from distraction or judgment, in a performance. In addition, an MMBSR intervention session may facilitate an increased level of focus and mental alertness in a performance, as experienced by Tiffany and Catherine. This is supported by Xu's (2010) statement that by cultivating increased moment-to-moment awareness, musicians might better deal with both the physical

and mental distractions that occur onstage. Tiffany and Catherine believed their MPA may have been decreased by the MMBSR intervention.

Chapter 6: Summary and conclusions

A summary and conclusion of the main findings are presented in this chapter by addressing the research sub-questions and main research question. The limitations of the study are also discussed and recommendations for future research are given.

6.1 Addressing the research sub-question: What are the participants' experiences of music performance anxiety?

The participants' experiences show that a high level of perfectionism was not a prerequisite to experiencing MPA in the sample, even though level of perfectionism is indicated by previous research as a predictor of MPA. However, it is evident that experiences of MPA were associated with the performance motivations of the participants. Factors tied to intrinsic motivation, for example being driven by the sheer enjoyment of performing and self-improvement, seemed tied to less MPA. However, factors tied to extrinsic motivation, such as being driven by a need to impress the audience, were associated with worse experiences of MPA. Additionally, the experienced level of MPA was also reported to be linked to the perceived importance of a performance, with seemingly important performances, like examinations, producing the highest levels of MPA. It is unclear whether trait anxiety is a major contributing factor to the MPA experienced by the participants, but one participant displayed signs of possibly suffering from social phobia/anxiety, which was perceived to be a significant predictor of MPA, and this participant also scored the highest on the K-MPAI and reported experiencing the most physiological and behavioural symptoms of MPA throughout the study.

The results suggest that preparation was a significant factor impacting MPA in the sample; a lack of preparation was linked with higher levels of experienced MPA in two out of three participants. One participant demonstrated that the perceived level of preparation and familiarity of the music influenced self-confidence during performance, a clear determinant of the level of MPA experienced. Further, preparing not only through practice but also

psychologically may further decrease MPA, as one participant found psychological preparation to be tied to the increased feelings of preparedness which are, in turn, related to lower MPA.

The findings indicate that all three participants experienced physiological, psychological, and behavioural symptoms of MPA. The physiological symptoms that the participants reported usually experiencing during performances were muscle tension, increased heart rate, shortness of breath, sweaty hands, shaking hands, and dry mouth. In addition, it was suggested by one of the participants that certain physiological symptoms, like shaking or sweaty hands, may be dependent on the degree of MPA experienced. The participants' psychological symptoms of MPA included distractibility, difficulty concentrating, forgetfulness, and worry about the performance. Additionally, two participants reported that self-doubt may also occur, and for one participant this was triggered by physiological symptoms such as shaking. Further, one participant suggested that the operative factor of this self-doubt may be the confidence engendered through increased familiarity with the music to be performed.

It is suggested that there exists a bi-directional relationship between the behavioural symptom of mistakes and MPA in the sample, with MPA increasing the number of mistakes made during a performance, and those mistakes, in turn, increasing the levels of MPA experienced. Unwelcome aberrations as a result of MPA may occur in the following musical aspects of a performance: tempo, interpretation and musicality, intonation, dynamics, and sound quality. The latter three were found to be associated with the physiological symptom of muscle tension. Other reported behavioural symptoms included struggling to make eye-contact, having trouble bowing, sleep disturbance, and fidgeting.

The results indicate that the presence of an audience, regardless of the size, was a contributing factor to two participants' level of MPA. However, these same two participants'

MPA reportedly increased when the audience consisted of people with a musical education, whereas the third participant's MPA was subdued by this type of audience. MPA also seemed to increase in inverse proportion to the degree of familiarity of friends in the audience; that is, with close friends being less likely to trigger MPA than less familiar ones.

In addition, one participant experienced that the degree to which the performer was visibly aware of the audience and could see that the audience members' reaction to the performance was not negative, was related to decreased MPA. On the other hand, the findings indicate that certain performers' MPA may be increased in performances without the audience being visually present, for example in recordings and even practice sessions in which performers know that they are being listened to.

The level of MPA experienced by the participants was also highly dependent on the performance context and the number of co-performers on stage. Western concert performances in which the performer is featured as a soloist, with or without accompaniment, were reported to induce the highest level of MPA, whereas MPA was found to be absent in orchestral and, as demonstrated by one participant, Jazz and improvisation performances. This may be due to the audience's gaze being focused on a soloist and being more aware of the mistakes a performer makes during a solo performance compared to group performances.

The findings suggest that MPA is also influenced by the venue of a performance. The lighting and acoustics of a venue may contribute to a performer's sense of self-exposure and thereby increase their MPA. In addition, there may be a correlation between a performer's previous experiences in a venue and their MPA. Negative experiences/associations with a hall are found to increase MPA, whereas positive experiences/associations seem to decrease MPA. The findings also indicate that the participants' experiences of MPA are impacted by the architecture of a venue. One participant reported that halls smaller in size are less

intimidating to perform in, and another participant said that a lower stage invoked less MPA during performance.

6.2 Addressing the research sub-question: How effective is a mindfulness meditation-based stress reduction intervention in combating music performance anxiety?

In attempting to explore how effective the MMBSR intervention was in combating MPA, I looked at how the symptoms of MPA in the participants may have been impacted by the intervention sessions, as the symptoms of MPA may be regarded a reflection of the participants' experienced MPA during their Second Performances. It seems that an MMBSR intervention may have assisted decreasing physiological, behavioural, and psychological symptoms of MPA in the participants, however, there were reported exceptions. All three participants reported at least one less physiological symptom experienced in their Second Performances. These symptoms included muscle tension, shaking, and sweaty hands. Some of the behavioural symptoms which participants claimed usually occur in their performances did not occur in their Second Performances, for example, one participant did not experience any MPA-related tempo increases during her Second Performance, and another participant reported that her musicality during her Second Performance improved and was more expressive than it usually is. However, another participant's dynamics were affected by her MPA in her Second Performance even though she claimed not usually experiencing this unwelcome aberration in her previous performances. All three participants still reported MPA-related mistakes in their Second Performances, but for one participant the mistakes did not increase her MPA as usual. This could be due to her claiming to have learnt to not obsess over a mistake that she has made, as she was also able to remove her attention from the mistakes in order to allow herself to focus on improving the rest of her Second Performance. All three participants reported increased focus during their Second Performances even though two participants experienced poor concentration as a psychological symptom of MPA in

previous performances. Additionally, one participant reported less distractibility during her Second Performance.

6.3 Addressing the main research question: What are violin students' experiences of a mindfulness meditation-based stress reduction intervention in combating music performance anxiety?

Participants reported that mental exertion, distractibility, and feelings of impatience were experienced in the early stages of starting an MMBSR intervention in attempting to clear the mind and control thoughts. However, one participant experienced making more progress and having better focus when she subdued the attempts to control her thoughts. The findings suggest that at least one participant learnt to meditate more effectively over time as she progressed through the intervention sessions, for example, it became more effortless for her to focus on one action or thought, to organise her thoughts, accept it when her mind deviated, and concentrate for longer periods before her mind started to wander. Towards the end of the intervention period, the same participant felt that she was able to control and ignore other thoughts, even bigger worries, during the sessions and could focus on being present "in the moment". The findings also suggest that the most enjoyable and effective amount of time to meditate, as well as time of day, differ from person to person.

The results indicate that the level of concentration experienced during the intervention sessions was related to the participants' moods prior to each session, however, these experiences differ in that two participants found it more difficult to concentrate when they were feeling apprehensive before they began with a session and another participant found it more difficult to keep her concentration when she was in a pleasant mood to begin with. Lower energy levels are also linked to lower concentration during the sessions, as experienced by one participant.

The results suggest that increasing mindfulness may have allowed the participants to become more observant of their thoughts, to categorise them, and to control whether they will

fixate on them, as well as understand their thoughts and themselves better. Performers may experience the benefits of mindfulness in areas of their daily lives other than dealing with MPA, such as in dealing with stress from studies, or improved instrumental practice strategies. It is also found that defining motivations for doing the sessions is of importance, otherwise completing the sessions may feel burdensome. In addition, the findings suggest that it is necessary to apply the skills learnt during the sessions into daily life to experience the full benefits of mindfulness in combating stress.

An MMBSR intervention may facilitate the sense of being present and focused in every moment, free from distraction or judgment, during a performance as experienced by at least one participant. In addition, an MMBSR intervention may facilitate an increased level of focus and mental alertness in a performance, which contributes to decreasing MPA levels during a performance. As two of the participants believed their MPA may have been decreased by the MMBSR intervention, it can be concluded that MMBSR might be an effective treatment for MPA, however, it is unlikely to remove MPA altogether as none of the participants experienced this more extreme response. However, two participants were positive about using MMBSR to combat their MPA in the future.

6.4 Limitations of the research

A considerable limitation in the study was the change of venue from the Musaion hall to the church hall due to COVID-19 restrictions. The participants' MPA would possibly have been increased in their Second Performances if those performances had taken place in the Musaion hall instead of the church hall, which they perceived to be a less threatening venue. In addition, the participants did not play repertoire of exactly the same difficulty in both their Performances, and therefore their repertoire might have influenced the comparative levels of MPA experienced in each performance. These two changes in circumstances could therefore have impacted the participants' ability to reflect as to whether the intervention sessions were

truly effective in reducing their MPA. Further, variability in the audience members' social relationships to the performers was present, blending strangers with familiar persons. Under ideal circumstances, this should have been held constant for all participants to minimize audience-related effects on MPA. Another limitation is the four-week break which Gretchen accidentally took during the intervention period, which might have impacted the effect of the intervention in her.

6.5 Recommendations for future research

Given the paucity of research on MMBSR as a treatment for MPA, the field continues to be a fruitful area for investigation. Specifically, the current study could be expanded by incorporating empirical measures to quantitatively determine the effect of MMBSR on participants' MPA by utilizing existing tests for MPA (e.g., Performance Anxiety Inventory (PAI) scale). The current research could also be replicated to focus on other instrumentalists, for example pianists, or professional musicians instead of students, to see if the causes and symptoms of MPA are universal to all types of musicians.

6.6 Conclusion

This research offers qualitative insights into the phenomenon of MPA and how it is affected by mindfulness and meditation. The main finding of this research suggests that MMBSR may be a promising treatment for MPA by facilitating increased levels of focus, mental alertness, and the sense of being present in every moment free from distraction or judgment, which may decrease student violinists' MPA during performance. This has provided a promising foundation on which to further study the investigation into the impact of mindfulness and meditation on MPA in musicians.

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Appendix A: Letter of informed consent

SCHOOL OF THE ARTS
UNIVERSITY OF PRETORIA
FACULTY OF HUMANITIES

September 2020

Dear Participant,

I, Elizabeth Schaap, am currently enrolled for my MMus (Performance) degree at the University of Pretoria for which I am conducting a research study. I would greatly appreciate your involvement which will assist me in obtaining a better understanding of the research topic.

Title of the study

Exploring violin students' experiences of a mindfulness meditation-based stress reduction intervention for combating music performance anxiety.

Aim of the study

This study aims to investigate the impact of Mindfulness Meditation-Based Stress Reduction (MMBSR) on Music Performance Anxiety (MPA) in university-level violin students by means of an intervention. In addition, the study also aims to investigate the self-reported experiences of MPA amongst these violin students. The overarching aim is to provide these violin students with a low-cost, effective solution for MPA.

Research procedures

If you are interested in this study, you will be asked to complete the Kenny Music Performance Anxiety Inventory (K-MPAI). You will then be selected for the study based on your anxiety score and whether you are between the ages of 19 and 25 and reside in Gauteng, South Africa.

If you are selected for the study, the research procedure consists of three phases. In Phase 1 you will be required to do a performance of approximately 15 minutes in front of a small audience. Following the performance, I will conduct a semi-structured interview with you about your experiences of MPA. In Phase 2, you will be required to do 45 guided MMBSR sessions in nine weeks (five per week), on the *Headspace* smart phone application. Your subscription to the application in those months will be paid for by the researcher. After every week of the intervention, you will also be required to do a short self-reflective diary entry. The format of the diary will be supplied to you. In Phase 3 of the study, you will be required to do another performance of approximately 15 minutes, where after I will conduct another

interview with you on your experiences with the guided MMBSR sessions and their possible impact on your MPA.

All the interviews will be audio-recorded. The first performance (in Phase 1) will take place in the Musaion hall at the University of Pretoria. The second performance (in Phase 3) will take place at NG Waterkloof church in Pretoria. These performances will be held at a time that is convenient for all the participants.

Confidentiality

The identities of all the participants will only be made known to the researcher and the supervisors. The research will be published with the use of pseudonyms to ensure the confidentiality and anonymity of all participants. All raw data will be stored in a secure password protected electronic format in the School of The Arts at the University of Pretoria for 15 years, in compliance with the ethical guidance of the university.

Potential benefits

This study can be beneficial to you because you will learn more about MPA and how you can possibly combat it.

Participants' rights

Your participation in this study will be completely voluntary and you are allowed to withdraw your participation at any time without having to explain why. There will be an information session where you can ask questions about the procedures and the study as a whole. You are allowed to have access to the data collected from you and also to the final research results. The final analysis of the data will be submitted to you to verify whether the researcher's interpretations of the data collected from you are correct.

Should you agree to take part in the study, please complete the informed consent form attached.

Contact details of researcher
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INFORMED CONSENT FORM

Faculty of Humanities
School of the Arts

I, _____ (name of participant) hereby agree to participate in the study by Elizabeth Schaap, titled *Exploring violin students' experiences of a mindfulness meditation-based stress reduction intervention for combating music performance anxiety*.

I understand the research procedures and that I may discontinue my participation in the study at any time without there being any negative consequences. I have also been informed that my anonymity will be ensured.

_____	_____	_____
Participant Name & Surname	Signature	Date
_____	_____	_____
Researcher Name & Surname	Signature	Date
_____	_____	_____
Supervisor Name & Surname	Signature	Date
_____	_____	_____
Co-Superv. Name & Surname	Signature	Date

Appendix B: Interview schedule

Phase 1 interview questions:

1. Please tell me about your most recent experience with MPA.
2. Do you experience MPA with all types of performances?
    a. With which type of performances do you not experience MPA?
    b. With which type of performances do you experience MPA?
3. Why do you think you are so anxious/nervous to do these types of performances?
4. Tell me how you respond when you make mistakes during a performance. Does it contribute to or increase your MPA? Please tell me more.
5. Tell me about how your MPA affects the musical aspects (e.g., intonation, choice of tempo, performance dynamic, or musical interpretation) of your performance?
6. Do you consider yourself to have high personal and social standards of perfection? Please elaborate.
7. Do you consider yourself to be a perfectionist when it comes to your music-making? Please elaborate.
8. Would you describe yourself as an anxious person? Please tell me more.
    a. How do you treat this anxiety?
9. Tell me about your practice sessions and whether you think there is correlation between MPA and your practice habits?
10. Do you believe that you can improve your playing with practise? Please elaborate.
11. Do you perform frequently?
    a. What types of performances do you do frequently?
12. How frequently do you do the types of performances that make you experience the most MPA?
13. Tell me about your experience of your most recent solo performance? Did you experience MPA?
14. In what way does your motivation to perform well influence your MPA?
15. How do you feel about performing in the Musaion hall?
    a. Are the performance conditions usually satisfactory? Please tell me more.
16. Do you think your MPA is influenced by specifically having the presence of an audience, or do you experience MPA by simply playing on a stage? Please tell me more.

17. Tell be about the physiological symptoms that you usually experience when you have MPA? Shaking or sweaty hands, dry mouth, increased heart rate, shortness of breath or muscle tension?
18. Do you have any psychological symptoms of MPA when you are experiencing MPA, such as worrying about your performance, sleep disturbance, or higher distractibility? Please elaborate on your symptoms.
19. In your opinion, how does MPA impact your performance behaviour and technique?
20. Do you have any experience with practising meditation? Please tell me more.
21. What, in your opinion, ruins a performance for the audience?
    a. Do you think minor mistakes have an impact on an audience?

Phase 3 interview questions:

1. Please tell me about you MPA during today's performance? Did you experience any MPA?
2. Did you experience any physiological, behavioural, or psychological symptoms of MPA during today's performance? Please elaborate.
3. Please tell me about your experience with the guided MMBSR intervention. Did it lessen, increase, or not influence your MPA? In what way? Please elaborate on your experience.
4. How would you describe your focus during today's performance?
5. How were the musical aspects of your performance (e.g., intonation, tempo, dynamics, phrasing) impacted by your MPA today?
6. Do you feel like you made many or big mistakes during today's performance?
    a. How did you feel about those mistakes and respond to them?
    b. How did the mistakes impact your MPA?
7. How do you feel about the piece/pieces you performed in the today's performance in terms of its/their difficulty for you?
    a. Were they more difficult or less difficult than the ones you played in your First Performance?
8. How did your preparation for today's performance impact your MPA? Please tell me about the amount of time you had to practice and about the productivity of your practice sessions.
9. Could you describe the motivation for today's performance? Did you have any?
    a. Where did your motivation come from?
10. How did you feel about performing in this hall when you arrived here today?

11. How did you experience the performance conditions (e.g., lighting, temperature) of the hall?
12. How did the audience impact your MPA today?
13. How do you feel about continuing to use MMBSR to potentially combat your MPA?

Appendix C: Solicited diaries

MMBSR Intervention Solicited Dairy:

Date:……

Week no:……

Diary Prompts:

Prior to this week's intervention sessions my mood/emotional state was…:

Session 1:……

Session 2:……

Session 3:……

Session 4:……

Session 5:……

During this week's intervention sessions my mood/emotional state was…:

Session 1:……

Session 2:……

Session 3:……

Session 4:……

Session 5:……

After this week's intervention sessions my mood/emotional state was...:

Session 1:……

Session 2:……

Session 3:……

Session 4:……

Session 5:……

I would describe my concentration/focus during this week's sessions as…:

Session 1:……

Session 2:……

Session 3:……

Session 4:……

Session 5:……

During this week's intervention sessions, I found interesting that…:

……
……
……
……

During this week's intervention sessions, I learned that …:

……
……
……
……

Other comments on my experience with this week's intervention session:

……
……
……
……
……
……
……
……

Appendix D: Kenny Music Performance Anxiety Inventory (K-MPAI)

Below are some statements about how you feel generally and how you feel **before or during a performance**. Please circle one number to indicate how much you agree or disagree with each statement.

		Strongly Disagree						Strongly Agree
K_1	I generally feel in control of my life	6	5	4	3	2	1	0
K_2	I find it easy to trust others	6	5	4	3	2	1	0
K_3	Sometimes I feel depressed without knowing why	0	1	2	3	4	5	6
K_4	I often find it difficult to work up the energy to do things	0	1	2	3	4	5	6
K_5	Excessive worrying is a characteristic of my family	0	1	2	3	4	5	6
K_6	I often feel that life has not much to offer me	0	1	2	3	4	5	6
K_7	Even if I work hard in preparation for a performance, I am likely to make mistakes	0	1	2	3	4	5	6
K_8	I find it difficult to depend on others	0	1	2	3	4	5	6
K_9	My parents were mostly responsive to my needs	6	5	4	3	2	1	0
K_10	Prior to, or during a performance, I get feelings akin to panic	0	1	2	3	4	5	6
K_11	I never know before a concert whether I will perform well	0	1	2	3	4	5	6
K_12	Prior to, or during a performance, I experience dry mouth	0	1	2	3	4	5	6
K_13	I often feel that I am not worth much as a person	0	1	2	3	4	5	6
K_14	During a performance I find myself thinking about whether I'll even get through it	0	1	2	3	4	5	6
K_15	Thinking about the evaluation I may get interferes with my performance	0	1	2	3	4	5	6
K_16	Prior to, or during a performance, I feel sick or faint or have a churning in my stomach	0	1	2	3	4	5	6
K_17	Even in the most stressful performance situations, I am confident that I will perform well	6	5	4	3	2	1	0
K_18	I am often concerned about a negative reaction from the audience	0	1	2	3	4	5	6
K_19	Sometimes I feel anxious for no particular reason	0	1	2	3	4	5	6
K_20	From early in my music studies, I remember being anxious about performing	0	1	2	3	4	5	6

		Strongly disagree						Strongly Agree
K_21	I worry that one bad performance may ruin my career	0	1	2	3	4	5	6
K_22	Prior to, or during a performance, I experience increased heart rate like pounding in my chest.....	0	1	2	3	4	5	6
K_23	My parents almost always listened to me	6	5	4	3	2	1	0
K_24	I give up worthwhile performance opportunities	0	1	2	3	4	5	6
K_25	After the performance, I worry about whether I played well enough.....	0	1	2	3	4	5	6
K_26	My worry and nervousness about my performance interferes with my focus and concentration.....	0	1	2	3	4	5	6
K_27	As a child, I often felt sad	0	1	2	3	4	5	6
K_28	I often prepare for a concert with a sense of dread and impending disaster.....	0	1	2	3	4	5	6
K_29	One or both of my parents were overly anxious.....	0	1	2	3	4	5	6
K_30	Prior to, or during a performance, I have increased muscle tension.....	0	1	2	3	4	5	6
K_31	I often feel that I have nothing to look forward to	0	1	2	3	4	5	6
K_32	After the performance, I replay it in my mind over and over...	0	1	2	3	4	5	6
K_33	My parents encouraged me to try new things	6	5	4	3	2	1	0
K_34	I worry so much before a performance, I cannot sleep.....	0	1	2	3	4	5	6
K_35	When performing without music, my memory is reliable.....	6	5	4	3	2	1	0
K_36	Prior to, or during a performance, I experience shaking or trembling or tremor.....	0	1	2	3	4	5	6
K_37	I am confident playing from memory.....	6	5	4	3	2	1	0
K_38	I am concerned about being scrutinized by others	0	1	2	3	4	5	6
K_39	I am concerned about my own judgement of how I will perform.....	0	1	2	3	4	5	6
K_40	I remain committed to performing even though it causes me great anxiety.....	0	1	2	3	4	5	6

K-MPAI© (Kenny, 2009, 2011) FACTORS	*SCORE*	*%*
1. ***Proximal somatic anxiety and worry about performance***		
K_10 Prior to, or during a performance, I get feelings akin to panic		
K_12 Prior to, or during a performance, I experience dry mouth		
K_14 During a performance I find myself thinking about whether I'll even get through it		
K_16 Prior to, or during a performance, I feel sick or faint or have a churning in my stomach		
K_22 Prior to, or during a performance, I experience increased heart rate like pounding in my chest		
K_26 My worry and nervousness about my performance interferes with my focus and concentration		
K_28 I often prepare for a concert with a sense of dread and impending disaster		
K_30 Prior to, or during a performance, I have increased muscle tension		
K_34 I worry so much before a performance, I cannot sleep		
K_36 Prior to, or during a performance, I experience shaking or trembling or tremor		
K_40 I remain committed to performing even though it causes me significant anxiety		
TOTAL/66		
2. Worry/dread (Negative cognitions) focused on self/other scrutiny		
K_7 Even if I work hard in preparation for a performance, I am likely to make mistakes		
K_15 Thinking about the evaluation I may get interferes with my performance		
K_18 I am often concerned about a negative reaction from the audience		
K_21 I worry that one bad performance may ruin my career		
K_25 After the performance, I worry about whether I played well enough		
K_32 After the performance, I replay it in my mind over and over		
K_38 I am concerned about being scrutinized by others		
K_39 I am concerned about my own judgment of how I performed		
TOTAL/48		
3. ***Depression/hopelessness (Psychological vulnerability)***		
K_1 I generally feel in control of my life (-)*		
K_2 I find it easy to trust others (-)*		
K_3 Sometimes I feel depressed without knowing why		
K_4 I often find it difficult to work up the energy to do things		
K_6 I often feel that life has not much to offer me		
K_8 I find it difficult to depend on others		
K_13 I often feel that I am not worth much as a person		
K_31 I often feel that I have nothing to look forward to		
TOTAL/48		
4. Parental empathy		
K_9 My parents were mostly responsive to my needs (-)*		
K_23 My parents always listened to me (-)*		
K_27 As a child, I often felt sad		
K_33 My parents encouraged me to try new things (-)*		
TOTAL/24		
5. Memory		
K_35 When performing without music, my memory is reliable (-)*		
K_37 I am confident playing from memory (-)*		
TOTAL/12		
6. Generational transmission of anxiety		
K_5 Excessive worrying is a characteristic of my family		
K_19 Sometimes I feel anxious for no particular reason		
K_29 One or both of my parents were overly anxious		
TOTAL/18		
7. Anxious apprehension		
K_11 I never know before a concert whether I will perform well		
K_17 Even in the most stressful performance situations, I am confident that I will perform well (-)*		
K_24 I give up worthwhile performance opportunities due to anxiety		
TOTAL/18		
8. Biological vulnerability		
K_20 From early in my music studies, I remember being anxious about performing **TOTAL/6**		
OVERALL TOTAL/240		