

An independent study: “What are the most commonly used non-clinical MPA management interventions used in an education setting?”

Part One: Portfolio

Introduction

Music Performance Anxiety (MPA), a subtype of social anxiety disorder (Kenny, 2011; Clarke, Osborne and Baranoff, 2020) can be characterised by a set of somatic, psychological, physiological and emotional behaviours surrounding a music performance (Kenny, 2006). MPA onset manifestation is most common in adolescents and young adult music performers in a training environment (Alzugaray et al, 2018). For many young performers with MPA the stage can feel a hostile environment and can lead to avoidance, giving up the pursuit but also to form “maladaptive coping strategies” (e.g. substance abuse) all of which can have a grave impact on career and overall well being (Kenny, 2011; Braden et al., 2015).

MPA is not a homogeneously experienced phenomenon which makes it difficult to treat with a simple solution and it can be challenging to measure degrees of MPA, root causes and triggers. Although there has been a dearth of studies into MPA as a phenomenon many demographics are underrepresented in the research. Evidence suggests that there are strategies to help support young performers who experience MPA (Shaw et al, 2020) and this study aims to investigate the most suitable MPA management techniques that can be implemented by teachers and students. Research shows that specialist teachers may have a unique role to play in embedding MPA management into their practice as relationally the teacher-student dyad can be very similar to that of a therapist-client (Mahony et al, 2022). This study aims to investigate the current ways MPA is being managed by students and teachers and to research the literature to encompass other potential strategies that can be applied and used for singing and music students. Student singers, despite being underrepresented in the research, may be particularly vulnerable to MPA (Juncos, 2014). The respiratory nature of some of the physiological symptoms of MPA mean that this demographic may pose a particular challenge when treating and managing MPA (Juncos, 2018; Ryan and Andrews, 2009; Stothert, 2012).

I have ten years experience as a singing and music teaching specialist, but before that as a performer. My professional performing career was blighted by “stage fright” (Kenny, 2005) and ultimately distinguished in part due to my crippling MPA. I am passionate about helping others that

experience MPA and seek in my work to support young people in their experience before it impinges their chances in the performing arts. In my current practice, I regularly witness many young performers become overwhelmed and unable to participate due to MPA and I have dedicated my Masters research thus far to investigating how best to integrate MPA management strategies into my practice. As a singing teacher and whole class music teacher in both the primary and secondary school sectors, it is clear that performing is an key element of the national music curriculum from Key Stage 1 right up to Key Stage 3 (ages 5 - 14), (Department for Education, 2013). With this expectation for all children to engage in music performance MPA management should be a consideration even at this early age. Studies have shown that MPA tends to manifest in early adolescence and peaks when studying music at a higher level (Cornett, V, & Urhan, G, 2021) and strong evidence to suggest that preventative early interventions could be beneficial to anxious young performers (Spahn, 2005). There is currently no comprehensive strategy or evidenced protocol of research outlining the best practice for a teacher-led approach when tackling MPA; however, studies have outlined the potential for MPA interventions to be implemented in the classroom by teaching staff (Shaw et al, 2020). Gaps in my knowledge and an overarching lack of evidenced resources and understanding in the profession on how to deal with MPA in school aged children has led me to seek further support and deeper understanding in this area.

Upon previous research in this field there were a few studies that reviewed treatments for MPA but these tended to focus on older individuals and students in higher education. There are a handful of studies into MPA strategies for school aged children but they are relatively sparse and the outcomes were requiring further study for validity. The objective of this study will be to synergise the current literature, my previous study in this field and the valuable experience I have gained as a practitioner thus far to ascertain the best MPA management techniques that can be implemented within an education setting. MPA management, as an intervention implemented by teachers, is being taken more seriously in research and the need for specialist teachers with expertise in this area is required to support with this challenge. (Shaw et al, 2020)

I am uniquely placed to do this work as my personal performance experience and professional expertise have given me a good foundational understanding of the challenges and the importance of finding solutions to deal with MPA. I will be viewing the literature with a particular focus on singers but as I know the literature is sparse in this area I will be looking at the research for music students more broadly. The objective of this study is to investigate this subject in more depth with a wider aim to build an MPA curriculum for teachers to be able to apply in practice. My previous research in this area discovered that although MPA is a vast area of research, most outcome studies have been dedicated to treatments involving medical interventions only administered by

clinical professionals. This study will be focusing specifically on non-clinical modalities where there have been numerous studies that investigate MPA management strategies that do not involve clinical interventions. The studies are often smaller in scale, sample and lacking in methodological unpinning although revealing some interesting positive outcomes but also highlighting the need for further study (Burin, et al 2016).

What is MPA?

Dianne Kenny's definition of MPA still stands as the most robust and comprehensive and is often used as a benchmark for academics studying the field.

"(MPA is) the experience of marked and persistent anxious apprehension related to musical performance that has arisen through underlying biological and/or psychological vulnerabilities and/or specific anxiety-conditioning experiences." (Kenny, [2009b](#), p. 433)

Some definitions purport that MPA is predominantly an autonomic response triggered and perpetuated by the nervous system, (Cazden, 2017; Fitch, 2023). Other perspectives cite the more cognitive idea of MPA being a thought-based problem of 'threat perception' (Kirchner & Wilson, 2003). Individuals that suffer anxiety when performing can experience debilitating symptoms that can affect them physically (sweating, shaking, increased heart rate), emotionally (teariness, feeling overwhelmed) or cognitively (negative thoughts, fear of making mistakes (Mazzarolo et al, 2023). From the literature we can understand that although MPA experiencing is individualistic in nature and people have unique triggers and symptoms, there are some commonalities in the symptoms and experiencing. Although sweeping assumptions about this individual experience are unhelpful we can draw common themes together about how MPA affects performers. Despite having some understanding into why and how individuals are affected by MPA is important when trying to create a solution it is important to understand the limitations of the research. MPA research is vast in nature but in this particular area the literature is scant. We must address the parameters of the study which will be covered later in this portfolio.

Non clinical MPA interventions

Non-clinical interventions will be the focus of this study. This is likely to include acceptance and mindfulness based practices, breathwork and relaxation techniques. My previous research was

limited to breathwork interventions and I will be synergising both previous and current literature analysis. My previous research was also limited to the autonomic responses to MPA which led me further into breathwork research. My findings showed positive correlation between certain breathing techniques that stimulated the vagus nerve and a reduction of MPA (Fitch, 2023) and combined with the literature review conducted alongside the study, it found that teacher-led interventions can be effective in an education setting. By investigating current knowledge gaps and reviewing the literature on the best MPA management I can start to construct a picture of which interventions to use and how best teaching staff can deliver them.

A teacher's role in MPA management

The role of a singing teacher involves fusing practical experience, technical knowledge, an empathetic approach and commitment to self improvement (Williams, 2018). To bring about transformative change teacher's must be responsible for their own continuing professional development (Cornett and Urhan, 2021). By becoming aware of and researching the gaps in my practical knowledge of MPA and subsequent management strategies I am aligning with this concept. Teachers do not always feel they have the expertise to deliver MPA strategies and often students are ill advised by well-meaning teachers (Taborsky, C, 2007; Shaw et al, 2020). Research has found that students and teachers both believe it is their role to support with MPA management in the classroom (Cornett, V., & Urhan, G. (2021). There is little progress in this area of the research as MPA interventions are often left to experts, despite many interventions being easy to apply and accessible by teachers (Jimenez, F. M. (2016). Teachers reported that little to zero attention was given to MPA in their teacher training so it is not surprising staff may feel ill-equipped in delivering interventions to support (Rodriguez, C. L. 2023) and more focus should be placed on providing extra training for teachers to be able to feel confident when addressing MPA in their practice.

Music and singing performance in schools

My practice involves both individual singing lessons and whole class music teaching in both primary and secondary state-educated students. Singing has been recognised as an important part of childrens' wider music education from a young age (Lamont et al, 2012) and the UK Government's Music Manifesto (2006) elevated music as an integral part of the curriculum to promote enjoyment, the development of language, and the promotion of mental and physical health (Zeserson et al, 2014). All children are expected to present their work which involves some form of performance and for MPA sufferers this could pose significant stress. Although it is

believed that MPA affects young children less than adolescents and adults (Brugues, 2011) it is still one of the main reasons for non participation and avoidance in music performance (Taborsky, C. (2007) affecting the child's longer term musical engagement and development. Given the expectation that performing is a feature of music education and the prevalence of MPA in older children we must consider the role of the teacher in supporting with MPA in the classroom (Tardif et al, 2023). In a 2001 study 65% of staff members and 80% school students believed that MPA management strategies should be featured in music education and facilitated by music staff (Tamborrino, 2001). More recent studies support this idea that teachers may be best placed to support with MPA (MacAfee & Comeau, G, 2022; Mahony et al, 2022, Shaw et al, 2020).

This study seeks to consider how best to deliver MPA teacher-led interventions in terms of pedagogy and context. When it comes to pedagogical outcomes it is important to note the power of the person-centred learning model. Evidence suggests positive learner outcomes and experiences when a constructivist pedagogical framework is utilised (Shah, 2019). The constructivist perspective will frame how a teacher produces and conveys knowledge and equally seeks to provide agency, self awareness and critical thinking in the teaching-learning experience. This would need to be considered when considering the setting for MPA interventions and how the delivery may be impacted by this framework. This approach would impact which interventions were used and how, and illuminates the importance of an interactive, collaborative learning environment (Kilag and Ondog, 2023).

Vygotsky's research (1978; Wertsch, 1995) cited group learning as a means to "collective progress and collaborative peer learning" in that productivity can be obtained through peer interaction and the "interpersonal exchanges" (Vygotsky, 1978; Wertsch, 1995) that can be gained in the whole class learning context. Larger group learning can foster more active participation, engagement and motivation (Michaelson, Knight, & Fink, 2002). At primary school level the whole class teaching model tends to be the most common pedagogic practice to teach instrumental music (Alexander 2017, p21). However, the whole class teaching models cannot differentiate as easily or meet individual needs of the students and one-to-one (Slater and Chambers, 2022) with MPA management strategies as the material and approach can often become homogeneous (Parker and Hurry, 2007). When considering how best to deliver MPA treatments it is worth noting that it may not always be possible to choose the optimal setting to apply MPA strategies. Time, staff resource and financial constraints may mean that group sessions may be the only mode of delivery and, although this may not be possible to consider in this study application in setting will be something to investigate moving forward.

Individual singing lessons are non compulsory and are conducted typically on a one-to-one basis where each student works towards their intended musical goals with a peripatetic instrumental teacher. Many of these individual goals are focused towards performative assessment in the form of an exam or a solo performance. This type of vocal pedagogy is characterised by a strong student-teacher rapport, trust and a bespoke lesson highly tailored to the individual (Carey, G., & Grant, C., 2015). This provides a natural opportunity for a constructivist learning environment that promotes exploration, collaboration and self evaluation (Wilson, 1995). Research has found great value in the one-to-one teaching relationship with regards to student satisfaction and achievement (Gordon et al, 2003) and this type of learning relationship can prove most influential in terms of student achievement and well being (Gaunt, 2010). This study will consider both group and individual delivery in the investigated treatments and consider best practice for MPA interventions reflected in the literature. There are some challenges of working as a one-to-one teacher; it is an isolated role that is often not as closely connected to the wider school environment (Gaunt, 2010) which would make it hard to distribute information, collaborate with ease, and standardise practice amongst the wider teaching staff and community (Gaunt, 2010). A challenge to overcome when considering MPA interventions that can be shared departmentally and beyond.

This nature of the teacher-student relationship in one-to-one teaching allows for one-to-one attention, not dissimilar to the level of focus one would get in psychotherapy and if deemed a positive relationship can garner similar outcomes when managing MPA (Mahony et al, 2022). This style of teaching is considered the favoured way to teach instrumental music lessons, and its value as a practice still remains important due to the reported range of outcomes performative and in terms of well being (Carey et al, 2015). The unique relationship typified in the one-to-one teaching environment research shows these teachers have a deeper understanding of their student's needs which is crucial when tackling a sensitive issue like MPA (Kokotsaki and Davidson , 2003).

Existing research into MPA interventions

The research into MPA interventions is lacking in methodologically robust literature with definitive outcomes with most "best practice" MPA treatments currently being pharmaceutical or psychological (Clarke et al, 2020). There are notable contraindications in the literature to suggest medication (beta blockers) is not best suited to singers, certainly not an ideal intervention for young performers (Patston and Loughlan, 2014; Kenny, 2011). Psychological therapeutic interventions are considered a possible treatment offering positive outcomes without the physiological symptoms you might receive from a medical intervention (Clarke et al, 2020). However this type of intervention may not be attractive to younger people due to stigmas attached to receiving therapeutic treatment (Shaw et al, 2020). Cognitive Behavioural Therapy (CBT) has

been the “gold standard” intervention for MPA treatment (Kenny, 2005) with evidenced success in reducing MPA symptoms, however the ‘mastery and control’ framework (Mahony, 2020. p3) can often lead to a heightening of MPA symptoms whereby attempting to control thoughts and responses can compound anxiety (Eifert and Forsyth, 2005; Brooks, 2014).

Studies into the field of MPA have been developing over the past fifteen years and Dianna Kenny’s foundational research in this area (2005 - 2011) is always a good point of reference. The research has progressed over the years and has expanded into exploring MPA in an education setting and completed extensive treatment reviews which will be utilised in this study. MacAfee E. (2022), Stanson et al, (2022), Zhukov, K. (2019) and Mazzarolo et al (2022) have all provided recent comprehensive reviews. Acceptance and Commitment Training (ACT) is a methodology that has been an area of interest for researchers when investigating non-clinical MPA interventions. Key studies by Juncos and Mahony (2022) have paved the way with some more recent studies bolstering the evidence for this method of MPA management. ACT is a multi-faceted modality that promotes psychological flexibility to improve one’s experiencing of anxiety (Polk and Schoendorff, 2014) and has had some impressive results in anxiety management. Studies into ACT and Acceptance and Commitment Coaching (ACC - a form of ACT that can be carried out by non clinical professionals e.g. teachers or coaches) have suggested this may be a suitable classroom intervention notably by Shaw et al (2020) and Juncos and Mahony (2022).

Other non clinical strategies for MPA management include yoga, mindfulness, breathwork, bodywork and muscle relaxation exercises to regulate physiological symptoms or MPA arousal (Zaccaro et al, 2018; Fitch, 2023; Kenny, 2011) The benefits of these types of intervention are well documented even if the research into its benefits and application for school aged children is limited. (Gomez-Lopez, 2023). This study will be considering all of the mentioned inventions.

Overall aim of the study

- To research MPA interventions that could be led by a teaching professional in an education setting (to form the initial research that will help to create a future MPA management programme for music teachers to apply in their practice.)

(See Appendix 1 for Proposed GANNT chart timeline of the research project.)

Objectives

- To produce a literature review analysing the research into MPA management techniques that have been used in a teaching setting with a focus on school aged students.
- To create a critical reflective review of my current skills and expertise in this area.
- To consider application of techniques in both 1:1 and group teaching settings

Learning Outcomes

- To discover more about existing MPA management strategies and investigate their efficacy and ubiquity.
- To learn how best to apply these techniques in an education setting.
- To critically reflect on the process and make plans for future practice.

Literature Review

A literature review is a good way to consolidate and build on previous research, to summarise existing research and to identify future context for study (Hempel, 2020). Conducting a literature review can prove challenging as often there is access to vastness of information and sifting through this can be difficult without thoughtful process (Fink, 2019). I was interested in elements of the systematic and comparative model to help structure and focus this aspect of the process and I followed the following steps:

1. Defined my research question
2. Identified relevant search methods and resources
3. Defined exclusion and inclusion criteria
4. Categorised the literature
5. Analysed the sources drawing trends and comparing themes.

Searching the literature

I conducted a series of searches in academic databases such as Scholar, Frontiers, JStor, PubMed as well as the UWTSD Library database. I primarily used Boolean searches with

keywords and search terms AND and NOT to include and or omit searches results that are only relevant to my question. Boolean searches have the ability to recall specific results from large bodies of data. (Gusenbauer, 2020).

Initially the search terms were quite specific and broadened out the scope where necessary. As a pragmatist I understand the importance of ensuring the method works for the question. By applying Dewey's "what works" research approach to research (Morgan, D. L. (2014, p5) modifications could be made to the search criteria to gain more relevant results. Initially the plan was to narrow down the search criteria to non clinical MPA interventions used specifically for school-aged children but soon found the literature was not providing enough relevant results, therefore I had to broaden my search terms by adjusting age demographic and also by looking at non MPA specific studies to see what insights I could cross reference. I mainly used peer reviewed articles, PhD dissertations, books and websites, expanding into some secondary sources where necessary. By utilising advanced search criteria where possible to input date ranges to find the most recent articles but I often found the research to be too sparse in places to be so exclusionary.

Searches included:

"Non clinical MPA interventions AND students", "Non Clinical MPA interventions AND children", "Non Clinical MPA treatments AND school aged children"

"Mindfulness AND Acceptance based treatments for music performance anxiety"

"Music performance anxiety AND school", "music performance anxiety AND education",

Using meta analysis helped me to draw the research together and organise it into themes surrounding the interventions studied to be compared and written up (See appendix 2). This study did not test a hypothesis, rather explored a subject using a new question, therefore the analysis was inductive in order to explore what arose from the research and at the same time honouring my own experience and expertise as a practitioner (Glaser and Strauss, 1967). I was conscious that there may be some bias due to previous insider research in this field (Lincoln and Guba, 1985). However, viewing this as an insight, and completing a reflective journal throughout the 5 steps of the process following Borton's reflexive model of "What?", "So what?" and "Now what?" (1970) helped to mitigate against potential subjectivity (Finlay, 2002) and allow structure for reflexivity (Morse et al, 2002). Insider research often combines a wealth of existing expertise and a unique position with the practitioner being well-situated to carry out meaningful research (Winter, 2020).

Although bias can be a challenge in practitioner research bias especially as I was not coming to this field of research for the first time. It is good practice to build reflective processes into my research design to ensure my research isn't influenced by partiality (Finlay, 2002). I used a hermeneutic approach to jump between findings of the literature review and reflected on previous studies and experience in practice which provided symbiosis to enrich the analysis and ensure reflective process is adhered to throughout (Costley et al, 2010).

Exclusions and inclusions of study

In order for this assignment to be relevant to my practice some clear research boundaries must be asserted given the vastness of the field of MPA research. This study will investigate how MPA is currently being managed in an educational environment and will examine future considerations for teacher support in this area. Although my practice is predominantly with school aged children I will be looking at research that includes older students as to cross reference any research that may be relevant. The scope of this study does not extend to clinical or medical treatments of MPA nor will it be investigating clinical interventions carried out by medical professionals.

This study will omit any interventions that require previous clinical training to conduct as including these in a coaching context by an untrained professional would be crossing professional boundaries and promoting unethical practice (Mahony et al, 2022). Many studies have deduced that MPA management may fall within the music teacher's remit to support students in this area but most current clinical treatments would require significant training (Mazzrolo et al, 2023; Blair & van der Sluis, 2022). Teachers have a responsibility to invest in their well being and mental health of their students (Mahoney et al, 2022). This study will be focusing on the strategies that can be facilitated by music professionals and teachers who will not need to embark on any additional qualifications to do this work. I will be using mainly peer reviewed sources and will consider some secondary sources to provide context to the literature and to broaden my search should I not find enough initial material.

Critical reflection on learning experience

Self reflection promotes the enhancement of overall learning outcomes and targeted areas for development (Moon, 1999) and allows for deeper analysis of personal experience, a skill that can be transferred in various contexts and settings (Dewey, 1933). I am a strong believer in critical self

reflection as a tool to improve practice and a skill to promote in the learning environment especially when tackling a subject like MPA. Modelling good practice is foundational in acceptance and commitment-based interventions for MPA evidence in the literature.

Understanding the ontological and epistemological lens through which you view the research is crucial to meaningful reflection. A phenomenological perspective seeks to understand individual experience and interpretation of phenomena; MPA is experienced individually and is distinct to the person experiencing. Cornish & Jenkins (2012) assert that combining experiential knowledge through effective critical reflection can lead to the perfect blend of practice and theory.

As an educator I find critical reflection a natural part of what I do, however a systematic framework to regularly reflect on professional experience is necessary to embed structure into practice (Jenkins and Cornish (2012). Incorporating structure to my reflective practice is not something I find easy to apply in practice so considering a framework helped me to apply this. I found the structure easy to follow and helped me to stay on task.

I am uniquely placed in this field of research as an individual who has experienced high levels of MPA throughout my career, and as a practitioner who regularly observes students who experience MPA in my practice. This perspective has allowed me to connect to the subject matter ardently, however I was conscious of my bias when analysing the literature. The reflective journal did counter this somewhat but I was aware that at times I had to be careful not to over-identify with the research and allow my perspective to become too subjective.

Discovering new interventions and building on my previous research into MPA management was an enriching experience and has opened me up to new teacher-led interventions and ways of managing MPA that I intend to investigate further in terms of study and professional practice. I was able to reflect throughout the process and draw connections to my previous research and experience, especially in the areas of the mind-body practices and the literature served to support and deepen my existing knowledge. Using a hermeneutic approach enabled me to reflect on the literature and refer back to the question, previous work and experience to assess connections and relevance (Costley et al, 2010). This assignment has enhanced my previous understanding and reinforced my existing studies into breathwork which can be further incorporated into my practice. The Alexander Technique and ACT were modalities that I am new to and by discovering more about them and their impact on school aged music students has opened up potential new avenues of focus for me as a practitioner.

The initial searches did not glean the results I had hoped for, there was little in the research into school aged children and most of the studies focused on University aged students. Singers were underrepresented in the literature with most studies opting for a more generalistic music approach and many of the studies were over ten years old so finding up to date relevant literature proved challenging. I had to modify the search terms to obtain more relevant results in terms of date of the article and demographics used in the study. It was challenging to stay systematic as I had to demonstrate reflexivity to ensure I wasn't operating from a biased perspective when selecting the literature. Although the initial objective was to investigate literature available for non clinical MPA interventions for school aged music students (with a focus on singing), the minimal literature meant I had to widen my scope to incorporate a broader inclusion criteria that ultimately allowed for more reflection-in-action (Schon, 1983) as I had to critically engage and think more laterally about how the interventions may be applied in the context of my question despite the different contexts and age demographics used. Ultimately I believe my question was too broad and sought to cover too much ground in the study which resulted in my research losing focus. MPA research for school-aged children is still a relatively new field and the non MPA or child-focused studies into anxiety reduction in an education setting are too plentiful to cover in the scope of this study. Future studies would have to be much more selective in terms of narrowing my criteria to a particular intervention or a smaller age range.

The subject of MPA requires a high level of critical reflection by both teacher and student. Being able to recognise one's internal experience, to notice the physical and cognitive symptoms that arise in MPA experiencing is a fundamental element of the management. The literature provided evidence into the power a teacher has by demonstrating reflexivity and a flexible mindset in practice as a tool that can be modelled by the student. (Stefan and Cheie, 2022)

By using Borton's reflective framework (1970), (applied to the reflective journal and the overall critical reflection process of the study) I was able to create some action points for future study and practice:

- To enrol on both ACT and Alexander Technique courses to further my knowledge in these areas and be able to start applying these practices into my teaching.
- To further investigate how best to apply non clinical MPA interventions in a classroom setting as I feel this study only answered it in part.
- To create a resource for teachers to be able to confidently apply some appropriate MPA management strategies into their learning.

- To communicate my research and future aims in this field with school management to elevate this subject in the settings that I work in and to identify any opportunities to train music staff in MPA management.

Part Two - Written Assignment

This is a desktop study examining non-clinical approaches for MPA management that can be applied in a classroom setting for school aged children. The study's purpose was to expand on my previous studies in the field and to bridge gaps in my knowledge by investigating this area in further depth into school aged musicians and singers. The body of research on MPA is vast and there is a plethora of literature on treatments, however this study was focused on accessible and easily applicable strategies that teachers could incorporate in their teaching. Evidence has shown that by discounting the educators role by perceiving MPA as a problem to be dealt with solely by clinicians is short sighted and doesn't consider the bigger picture; the importance of the teacher and early intervention in MPA management (Mahony et al, 2022).

Numerous studies have reported that MPA is a significant problem for studying musicians affecting up to 70% of music students which can interfere with performance quality, engagement and well-being (Stanson et al, 2022). Treatments for MPA have mostly been limited to clinical interventions, however there is a growing body of research to evidence the important role non clinical treatments have in this field lead by non clinical professionals such as teachers. (Shaw et al, 2020) Adolescent onset has been reported by many studies (Britsch, 2005; Bruges, 2011) with many students affected avoiding performance and deciding on alternative careers to music due to their MPA.

Many recent studies assert the value of the teacher-led interventions for MPA which was previously an area that received little attention. This study has provided evidence that both students and teachers alike believe this could be an important way to tackle MPA at school aged level (Huang, 2019). Teachers have the access to students that clinicians may not have so readily and the potential to build a rapport that provides a unique relational space for students to feel safe to explore their MPA in. Teachers may also be in a unique position to be able to observe behaviours and know the student well enough to make adjustments and suggestions on potential

interventions (Shaw, et al, 2020). Not to mention that studies have shown students may feel more comfortable receiving intervention from their teacher rather than a clinician (Willamon and Thompson, 2006). That said, teaching staff do not often feel under qualified to offer such interventions in their practice and feel they would need considerable training (Macafee, 2022). However, this was challenged in some recent studies that provided evidence to suggest that non clinical interventions would need minimal training to be able to be delivered in this context (Shaw, et al, 2020) and some of the techniques studied proved very effective in this context.

This study has reviewed the most recent and relevant literature available to investigate an overview of the interventions that can be used in an education setting. There is a growing body of research that supports the role of the teacher in MPA interventions and the literature further supported that teacher-led strategies could be the key to supporting young people with their MPA (Daubney and Daubney, 2017). This study is following subsequent research into MPA including an introductory study into MPA more generally and then a follow up assignment into MPA and the function of the nervous system and breathwork and how this manifests physiologically. My participant-based study into Box Breathing (Fitch, 2023), cross-referenced the literature reviewed during the study, highlighted some interesting insights into how teachers can be uniquely placed to support with MPA management in young musicians. Upon researching this subject I discovered there were other non-clinical strategies that fell out of the scope of that specific study yet could also be utilised by teachers in this way. The literature review illuminated gaps in my knowledge and also areas of weakness in the research which prompted me to delve further into the subject. Kenny's (2005) review of MPA treatments listed the following non clinical modalities as alternatives to psychological and pharmaceutical interventions: yoga, meditation, the Alexander Technique, guided imagery and muscle relaxation. (Shaw, et al, 2020) It was concluded at the time of study there was no evidence to support these techniques were as effective as the clinical interventions (Juncos and de Paiva e Pona, 2018). By researching common MPA interventions that are currently being utilised by teachers and also treatments that could potentially be applied in this context we can consider best practice for this in terms of delivering to young musicians.

The literature revealed many studies on mindfulness (which incorporate muscle relaxation, breathing, visualisation techniques), similarly to interventions using the Alexander Technique. Yoga and meditation interventions which were well represented in the research, however Acceptance and Commitment Training as a methodology was by far the leading intervention in the most recent literature that supported the question about finding the most appropriate teacher-led interventions for MPA management in student musicians. This study aimed to look at interventions that would be appropriate for school-aged children, and although the literature is not plentiful for this

demographic, considerations have been made to see how evidenced techniques for older students could be applied for a younger clientele.

Following the key word search with the defined inclusions (and expanded secondary searches) detailed in the portfolio, 175 articles were produced. Filtering and sorting the articles by relevance I extracted 22 articles that fit the inclusion criteria to review (See Appendix 2b).

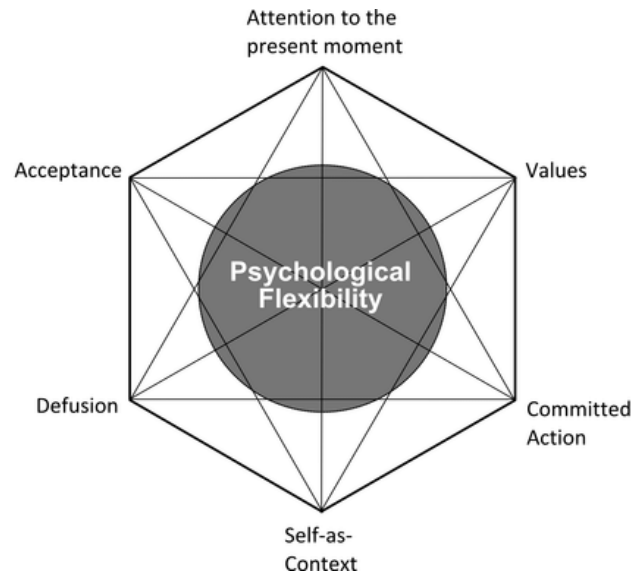
Acceptance and Commitment Training

Acceptance and Commitment Training (ACT) is a therapeutic, multi-process approach that combines modalities such as mindfulness, and behavioural techniques to make adjustments to one's psychological flexibility and relationship to stressful events (Hayes, 2005). Typically applied in a clinical setting many studies have shown its applicability to a variety of contexts.

The recent literature available suggests that ACT interventions may be the most effective, up to date MPA management method that has been applied at all age levels for MPA. The research also provided support for its efficacy when delivered by a teacher rather than a clinician. Psychotherapists David Juncos and Sarah Mahony have pioneered ACT based interventions for MPA with numerous group studies and single sample pilots all showing positive correlations between the ACT principals and a decrease in MPA symptoms.

ACT doesn't aim to reduce MPA symptoms as it's principal focus, but to improve psychological flexibility, to build emotional regulation and resilience. ACT principles do not delve into the content of individuals' worries like other cognitive behavioural treatments (Juncos, 2014; Harris, 2009). However, anxiety symptom reduction appears to be a byproduct of this process. The expansion of ACT principles to be used in a wider range of settings (and children) has leaned further towards the constructivist framework allowing for a more interactive and experiential learning environment (Shah, 2019) through the examples given below. ACT also aims to improve performance attainment through a six point ACT 'Hexaflex' process:

The ACT Hexaflex (Hayes et al, 2005.)



1. Acceptance:

The process and learned skill of being able to accept thoughts and sensations that may be uncomfortable without trying to eradicate or avoid them. Junocs (2014) talks about being able to create space for these experiences without struggling against them. Examples of this could be through meditative action to accept thoughts and feelings that arise MPA (Shaw et al, 2020). Acceptance can be gleaned through either one to one or group discussions that focus around the trying to control MPA feelings and the fruitlessness of this cognitive process (Mahony et al, 2022). These discussions may engage older students as they would be more able to reflect on the nuances between what is possible to control and what is not (Forsyth and Eifert, 2016) and the ultimate acceptance of all thought/feeling based responses that surround performing (Juncos and de Paiva e Pona, 2022). This reflective process may not be as easily accessible to younger students, (Black, 2022) a more experiential, interactive exercise would need to be used at this stage of the process to engage younger learners. Labelling thoughts and naming feelings (Hayes et al, 2005) may be a more accessible way for younger students to engage in acceptance and well as more hands- on activities to help younger students to visualise the metaphors (<https://www.merakilane.com/6-act-therapy-activities-for-kids/>). These activities can be delivered in a group and individual setting and easily workable into a music lesson rather than a standalone session.

2. Defusion (cognitive):

The idea of being able to relate to negative thoughts in a different way. Borrowed from CBT based therapies (Kenny, 2005), cognitive defusion helps to take the reactivity out of thoughts that come up that may be challenging to the individual. Shaw et al (2020) used a thought labelling exercise which was effective in providing clarity and helping the individual to separate themselves from their negative thoughts. Mahony et al (2022) described the defusion exercises carried out in Juncos and de Paiva e Pona's study (2015) were focused on trying to view your mind objectively, attempting to describe thoughts rather than attach too much meaning to them and being grateful for them. Hayes, et al (2011) describes the power of statements such as "I notice" rather than "I am" to try to make yourself distinct from your internal experience. This may be something students can engage in with the support and reminders from their teacher or coach.

3. Present Moment Awareness (Mindfulness):

This process is about being connected to the present moment and not allowing past or future worries in. This can be through grounding, visualisations and breathing exercises. This part of the process focuses on observing thoughts and feelings without judgment but objectively as they are without attaching other worries to it. Examples of these include body scans (Shaw et al, 2020), visualisations exercises, thought imaging and envisaging feelings (Mazzarolo, 2022; Juncos and de Paiva e Pona, 2022). Grounding exercises involving the five senses can be an accessible mindfulness exercises for any age and setting (Hayes, et al, 2011).

4. Self as context:

This step provides an individual with a broader sense of self rather than over-identifying with thoughts, feelings, responsibilities or roles with an aim to create a more flexible sense of self, more self compassion and less attachment to expectations. The Juncos and de Paiva e Pona study (2022) used discussion and videos and group exercises to separate the students' sense of self from their MPA and performance outcomes. Younger students may be able to access this part of the process by role play exercises and being able to view their experience as someone else through hot seat exercises (Hayes et al, 2011).

5. Values clarification:

An important part of the Hexaflex is encouraging the individual to focus on their individual values to

create meaning and purpose outside of the immediate experience. This can act as a guide for behaviours and actions. Mahony et al (2022) lists exercises surrounding writing a checklist or shopping list of values that students can identify with and further discussions to keep focused on values rather than controlling internal experience (Juncos de Paiva e Pona, 2022).

6.Committed Action:

This part requires aligned action with the value's identified previously despite the context. SMART targets can be a positive and simple way to establish this and could easily be applied in a music lesson (Hayes et al, 2011) Journaling to chart actions and keep focused on values is a way for students to engage in self reflection in this process when committing to values based action (Harris, 2005).

Acceptance and Commitment Coaching

Acceptance and Commitment Coaching (ACC) is a version of ACT that is specific to non clinical practitioners and provides special training for teachers and coaches (Shaw et al, 2020). In a 2011 study Studer et al discovered that 73% of students would like expert MPA support but over half stated they would like to receive this from their teachers. David Juncos (Juncos et al., 2014, 2017; Juncos and Markman, 2015) is a leading researcher in ACT interventions when dealing with MPA, alongside Clarke, Osborne and Baranoff (2020) who have also been instrumental in examining how ACT principles can be adapted for an education setting all studies correlated efficacy but there is a lack of robust methodology and generalisability which would require further study.

The review of the literature discovered that teachers do not feel confident when delivering MPA interventions (Juncos and Markman, 2015) despite the research showing the need and identification by students and teaching staff of the importance of application in this context (Huang and Yu, 2022). Shaw et al's study (2020) focused on training a singing teacher in the ACT principles but to be able to deliver them in a non clinical role which produced positive results in MPA reduction and mental flexibility.

Blonna (2010) discusses how ACT is a "perfect fit" for coaches promoting ACC as an intervention to reach a wider audience. However they also asserted the importance of recognising limitations and boundaries when conducting this type of work, which may be a concern that many teachers may have when wanting to integrate ACC principles into their practice.

ACT for younger students

As most of the studies reviewed involved adolescents it was important to expand my investigation to ACT interventions that included younger candidates. Russ Harris and Tamar D Black are leading the research on ACT interventions with children aged 5-12. Many therapists found the ACT Hexaflex difficult to translate for application with children. In its original form it proved too metaphorical, conceptual and discussion-based in its delivery for it to be appropriate to be used for younger clients. When considering this model for younger students the activities must be practical and experiential to ensure accessibility and engagement (Harris, 2023). Black's (2022) *ACT For Treating Children: An Essential Guide to Acceptance and Commitment Therapy for Kids* helps to bridge the gap between ACT's adult language and invites children to psychologically "be their own superhero" (Black, 2022. p19).

The Kidflex model, which is an adaptation of the original ACT Hexaflex, helped to counter this challenge by providing a plethora of workable exercises for younger people to engage with (Black,2022). This includes the following translations from the original: "*let it be*" (Acceptance), "*let it go*" (defusion), "*stay here and notice yourself*" (present moment awareness and self as context), "*choose what matters*" (identifying values), "*do what matters*" (committed action) and "*be kind and caring to yourself*" (self compassion), (Black, 2022 p2). Experiential learning is key to engagement and success of younger students' learning outcomes (Hamilton, 1980) which is a consideration when viewing any MPA intervention for younger musicians and singers.

ACT for children has been researched by Swain (2015) and Fang and Ding, (2020) who found this intervention to be effective in this context. Swain made particular reference to the challenges and lack of confidence therapists who are used to adult clients may feel when adapting their practice to working with children. The converse challenge may occur with teachers feeling ill-equipped to deliver ACT based interventions in their practice, which is why more studies are needed in this field of research (particularly into ACC interventions) to support this emergent evidence.

This application is not MPA specific and there are many other studies that have looked into the benefits of using ACT-based interventions to improve outcomes for children (especially neurodivergent children) but only mediated through their parents (Black, 2022). It would be advantageous to see more research into this area, specifically targeted at interventions that directly involve younger children. It is also important to consider the different applications more

generally as although age is an indicator of learning style, more practical and experiential exercises may have a more broader positive impact on delivery.

From the review of literature and looking into supported studies it is clear that ACT is a comprehensive approach that could be used in the management of MPA. ACT interventions boast impressive outcomes including reduction of avoidant behaviours (Mahoney et al, 2022), improved self compassion and less attachment to feelings of MPA related-shame (Shaw, et al, 2020) and overall reduction of MPA symptoms (Juncos, et al, 2015). What is also important to emphasise its potential to be utilised by teachers or coaches in an education setting demonstrated in the literature.

Yoga and meditation

Yoga, being the ancient mind-body practice that combines breathing exercises, relaxation through stretches and postures, was present in a lot of the studies and has well-researched positive outcomes for anxiety reduction (Diaz, F. M. 2018). Meditation is the practice of focusing thoughts in order to achieve inner stillness and calm often used in yogic practice and has emergent correlations in the research regarding efficacy with anxiety management (Fehm and Schmidt, 2019). Yoga and meditation are often used in conjunction in the literature for anxiety management, however I will attempt to separate the nuances between each method in the analysis. Yoga and meditation appear to be the most well-known MPA strategies in all the self-report studies into self focused management techniques in students (Burin and Orsorio, 2016; Fehm and Schmidt, 2019; Zhukov, 2019). 48% of students use meditation to self manage MPA (Diaz, F. M. (2018) and 35.7% of music teachers choose mediation specifically as their preferred way to manage MPA (Cornett, V., & Urhan, G. (2021). There is growing evidence to show students are seeking support from their teachers in helping deliver this into music curriculum to help with MPA (Fehm, L., & Schmidt, K. (2019). Lin et al (2008) found that MPA symptoms could be moderated by delivering an 8 week program of meditation to university aged students prior to a performance. Generally, studies into yoga and meditation as a treatment for MPA in adolescent students rendered mixed results in symptom reduction due to sample and methodological constraints, one area that was much improved was in rumination reduction (Burin and Orsorio, 2016) helping students to move away from a negative thought-based focus, reducing symptoms of anxiety Diaz (2018). As the voice is a biological instrument and body based anxiety management techniques will be particularly pertinent to reduce respiratory based physiological symptoms (Porges 2009; Cazden, 2017) although the literature was minimal when considering student vocalists. The studies focused mainly on group sessions to maximise resources and reach but both meditation and yoga exercises could be

carefully embedded into any individual music lesson as part of a warm up or an exercise in specifically reducing nerves where appropriate.

Although there is minimal literature on yoga and meditation for MPA reduction in younger students, the studies by Cornett and Urhan (2021) and Diaz (2018) gave some insights into applying mind-body practices in an education setting. In the former study both adolescent students and teachers alike used Yoga as a calming technique to help with MPA, which connects us to the idea of teachers modelling healthier coping strategies and embedding them into the curriculum as a way to address MPA. Yoga and meditation interventions were used in Diaz's study (2018) to assess MPA in university aged students where separate sessions were run in parallel to their usual music lessons, as an extracurricular activity. There was remarkable success in MPA reduction however the intensity of the intervention (3 x 45 minute sessions per week) may be a barrier to some education settings where time and resources are scarce.

Alexander Technique

The Alexander Technique (AT) is a method that involves movement, alignment and mind body awareness to improve performance outcomes and functionality. Used prolifically in tertiary music education (Davies, J. (2020), the literature shows that it is often used in music education as a way to manage MPA and improve performance standards. Similarly to the ACT principles in that MPA symptom reduction is not its primary aim, the AT seeks to align the body physically and bring awareness to bodily sensations, which has shown to help to reduce anxiety, and other notable positive outcomes for student singers including improved breath control, relaxation and vocal technique (McGrath, 2012). AT's success has been measured in a group or individual lesson context and these claims are backed up by many other studies that noted the perceived benefits of relaxation through AT methods and also point towards how many teachers are able to access this technique and feel comfortable teaching this to students in the context of MPA (Eğilmez et al, 2013; Burin and Osorio, 2016; Shaw et al, 2020; Zhukov, K, 2019). The reason for this is unclear but it could be to do with the historic use of AT in music education and its tried and tested results. Studies into AT as an MPA intervention for younger students were not evident so further study for this age group with a specific focus on MPA would be required to ascertain its efficacy in this context.

Mindfulness

Aspects of mindfulness have already been covered in the ACT model earlier but the literature showed there was some evidence that mindfulness was being used as a standalone practice in some music educational settings (Stanson et al, 2022). Mindfulness is the practice of being fully present in the moment and being open to thoughts and feelings without judgement and has some emerging evidence to support the use for MPA management (Clevenger, 2015; Stanson et al. (2022).

Diaz (2018) offered an interesting definition of mindfulness being both a trait and a state in that it can be achieved through breathing, meditation and grounding techniques and also a way of *being* in the context of MPA (Huffman, 2016). Huffman's study into university students and MPA found a 20 minute group mindfulness practice, embedded into the usual music curriculum, was an effective way to improve student well being and to reduce MPA. The students were expected to apply the techniques independently, therefore adjustments would need to be made to make this type of intervention accessible to younger learners (Huffman, 2016). Delivery of this practice in an education setting for maximum efficacy is unclear. Diaz's study (2018) purports that longer 45 minute sessions multiple times a week would be required to reduce stress states, yet (Goyal et al, 2014) suggested any form and measure of mindfulness intervention may be beneficial in reducing anxiety which needs further verification.

Breathing exercises

Breathwork is another area of research that has been linked with positive MPA reduction outcomes. From the studies explored, it is clear that breathing exercises are a popular way for students to either self manage their MPA symptoms and also for teachers to facilitate in their music lessons (Zhukov, 2019; Cornett et al, 2021) Up to 38% of students used breathing focused techniques to manage MPA and deep breathing exercises were the most popular amongst student self management and teacher led MPA interventions (Huang, 2019). There is an emphasis on diaphragmatic breathing (Lin et al, 2008, Zhukov, K, 2019), slow exhalations (Eğilmez et al, 2013) and yogic breathing techniques that focus on calming the nervous system response which can be a feature of MPA (Porges, 2009). In my participant study into Box Breathing for MPA management (Fitch, 2023) students reported that group sessions were advantageous to their engagement, but there was also evidence to suggest breathwork efficacy in a one to one setting. Singing requires breath control and some degree of nervous system regulation to ensure their physiological symptoms do not affect their performance negatively. This has been investigated by Joanna Cazden's (2017), and also in Stephen Porges (2009) research on the connection between the nervous system and the voice. The emergent studies prove positive in helping people manage

their physiological symptoms through breath but the research requires more studies to support the assertions especially for school-aged children where the research is scant.

Modelling behaviours and the teacher's temperament

The literature revealed an interesting theme that is pertinent to any teacher-led intervention and that is of the importance of the teacher's suitable temperament and disposition when considering MPA interventions. Most of the non clinical interventions associated with teacher-led anxiety reduction techniques stress the importance of a compassionate, empathetic approach but research suggests many practitioners must go further to model and embody behaviours they seek to foster in the students. Demonstrating vulnerability and openness to admission of errors helps to engender trust and rapport in students when delivering these types of interventions (Black, 2022). A teacher that demonstrates sensitivity and awareness of their students' needs are more likely to provide a safe and positive learning environment (Huang, 2019). This concept ties in with the constructivist pedagogical framework which aims to create a synergistic learning environment and emphasises the role of continuous professional development and self awareness of the educator (Kilag and Ondog, 2023). Self disclosure may be a way to help students open up and be more vulnerable if they feel they can relate to their teacher, opening the space up for more vulnerability and deeper self awareness (Marais and McBeath, 2021); a teacher giving an example of when they made a mistake and recovered may provide a relational tool to give permission to the students to be able to make mistakes.

MPA management requires a level of self awareness in both the student and the teacher. Treatments are more likely to be successful if an individual is aware of triggers, feelings and sensations that arise when performing, more so if a teacher or coach is there to help model and support with (MacAfee, E, 2021). If the teacher can model and provide opportunity there is great scope to create space for autonomy and reflection-in-action (Schon, 1983) in this type of learning environment which is crucial when dealing with MPA. This type of teacher-student relationship is also beneficial in terms of being able to observe the individual experience and to provide relevant and meaningful feedback which is a good context for being able to support with MPA management. (Gordon J, 2003).

Conclusion

This study sought to research the best MPA interventions and delivery methods for student musicians and singers. It achieved its aim in part in exploring the current trends in self management and teacher-led MPA management for students and the literature revealed some insights into best practice and delivery for these interventions. The study highlighted the most popular and most effective MPA interventions used in this context, although it is difficult to ascertain and evaluate each individual intervention as a standalone practice in terms of efficacy because they are often used in conjunction and combination with other techniques. Measure outcomes are also difficult to directly compare with the studies' varying methodologies and designs. And although MPA is a well established field of research there are still many areas that are neglected in the literature, student vocalists are particularly underrepresented in the research (Juncos, 2015). Most of the studies focus on adolescent or university aged students however it may be possible to adapt the techniques for younger students, with the example of ACT interventions adapted for children by Russ Harris and Tamar D. Black (2022). Further research into this would be needed to be able to conclusively design interventions for this demographic. ACT based interventions appear to have the most promising results in MPA reduction as it provides a clear protocol and a process that is easy to train coaches and teachers to follow. ACT also appears to be the most comprehensive and combines many of the non clinical techniques that would be accessible for teachers to apply in an education setting. This study also sought to investigate how best to apply interventions in various settings, which was ambitious considering the patchy literature and the problems in my methodology and methods surrounding searching and sampling the literature. That said many techniques such as AT, yoga and mindfulness could easily be included in a warm up routine or be incorporated in age appropriate exercises and games into a usual music lesson but further study and consideration would have to be done to ascertain best practice for this. The literature supports the need for teacher-led MPA interventions in the classroom yet the research is still very emergent. Despite the gaps in the literature the field of MPA research into school aged children is coming more into focus so it is possible to use these studies to work more generally with music students as the literature evolves.

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Appendices

Appendix 1 Proposed GANTT Chart timeline of project

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u> <u>(Draft submission)</u>	<u>December</u> <u>(Final submission)</u>
Agree project topic					
Create project aims					
Create project objectives					
Literature review					
Analysis of research					
Project write up					

Appendix 2 Table of articles studied

Intervention-based studies					
Title / Author	Year	Key themes / words	Sample size / age	Methodology	Results
Mahony, S. E., Juncos, D. G., & Winter, D. (2022). Acceptance and commitment coaching for music performance anxiety: Piloting a 6-week group course with undergraduate dance and musical theatre students. <i>Frontiers in psychology</i>, 13, 830230.	2022	Supports teacher-led interventions, group coaching, CPD for teachers, MPA reduction, university age student, self compassion	1 participant study / university age	ACT based sessions conducted by trained ACC singing teacher. Symptom based measures x 3 , self report based measures x 3 Small sample size, lacking interval validity,	Results supported teacher led ACT interventions Improved psychological flexibility, reduced shame, improved self compassion.
Huffman, J. M. (2016). Comparing Effects of Cognitive Behavioral and Mindfulness, Acceptance, and Commitment Interventions on Performance Anxiety in a Music Context.	2016	CBT and mindfulness, ACT	104 University students	Control group used	Both interventions demonstrated improvement in MPA experiencing

Shaw, T. A., Juncos, D. G., & Winter, D. (2020). Piloting a new model for treating music performance anxiety: training a singing teacher to use acceptance and commitment coaching with a student. <i>Frontiers in Psychology, 11</i> , 882. (Uni level, one student, no control)	2020	ACT based sessions Delivered by a singing teacher trained in ACC	1 university student	No control group used, small sample size,	More control over MPA related thoughts, improvement in overall psychological flexibility, importance on relationship between coach and student, less performance avoidance.
Fehm, L., & Schmidt, K. (2019). Music performance anxiety.	2019	Alexander technique, hypnosis, massages, yoga, positive self-instruction, relaxation techniques, and special practicing techniques.	74 pupils age 15-19 (gifted musicians programme)	Self report survey, no measure of efficacy of intervention	Students used relaxation techniques most, study indicated a need for teachers support in MPA management.
Cornett, V., & Urhan, G. (2021). Performance anxiety experiences and coping techniques of Turkish music students and their teachers. <i>International journal of music education, 39</i> (4), 504-519.	2021	Self report student survey into which MPA strategies they used	270 participants, both students and teacher participated	Self report survey	Greater psychological support needed in this area (33.8% students and 52.2% teachers) Working with an expert in the field Requested further resources to be implemented within the course on yoga, mindfulness MPA

					management etc. Highlighting the importance of the teacher relationship - fruitful only if it is good. Females suffered more.
Lin, P., Chang, J., Zemon, V., & Midlarsky, E. (2008). Silent illumination: a study on Chan (Zen) meditation, anxiety, and musical performance quality. <i>Psychology of Music</i> , 36(2), 139-155. https://doi.org/10.1177/0305735607080840	2008	Meditation, performance exposure	19 participants, school aged children(? Check this).	Control group used, intervention group performance quality and MPA experiencing improved	
Diaz, F. M. (2018). Relationships among meditation, perfectionism, mindfulness, and performance anxiety among collegiate music students. <i>Journal of Research in Music Education</i> , 66(2), 150-167.	2018	Meditation, yoga, mindfulness	255 college students (US study)	Self report questionnaire on which strategies are used	
Stanson, N., Comeau, G., Smith, A., & Swirp, M. (2022). The Effectiveness of Mindfulness Training on the Experience of Music Performance Anxiety in Young Adult Musicians. A Preliminary	2022	Mindfulness training for MPA in young adult performers, meditation, breath awareness, body scanning, mindful	26 postgraduate students 13 intervention group and 13 control group. 2 week intervention	STAI and KMPAI-R	results indicated that the training can significantly decrease self-reported mpa both before and after a performance. Larger sample would be needed to validate

Investigation. <i>Revue musicale OICRM</i> , 9(2), 102-115.		walking, qigong, and discussion groups.	before and after performance Self report measures		findings. 2 week period produced similar results to 8 week. 6 hour sessions over the two weeks offered.
Huang, W. L. (2019). <i>An investigation into Taiwanese music college students' self-management of musical performance anxiety</i> (Doctoral dissertation, Royal College of Music).	2019 PHD thesis	Links to sports science research which is more developed Acceptance based - accepting mistakes (more preparation was self strategy) Self talk and compassion - students that were more accepting had less MPA and felt better about their performances (Could link to ACT) psychological strategies Mental rehearsals MR - imaging (Roland, 1991) made matters worse / over practicing not	Numerous - self management reports		Future suggestions: Practice plans Smaller groups Teacher led support More support from institutions on MPA Resources from teachers

		switching off, increased anxiety Practice performances - went either way Breathing - too rudimentary and vague Physical exercise - to distract and focus away thoughts. Relaxes and focuses Muscle relaxation - Quigong Group discussion to share feelings - mixed results			
Jimenez, F. M. (2016). Music Performance Anxiety and Interventions in Conservatory and Liberal Arts Institution Music Students.	2016	PhD thesis Overview of treatments. Participants study, meditation and mindfulness exercises, journaling and biofeedback sessions	128 students - university level		

Rodriguez, C. L. (2023). Performance Anxiety in Young Musicians: A Case Study of Music Educators' Experiences.	2023	PhD thesis What MPA strategies are currently being used by teachers.	Music teachers Asked semi structured interviews 4 participants Teachers of school aged children		Preparation Accommodations and adjustments Breathing and relaxation tech Mindfulness Visualisations Exposure Creating a safe learning environment so students can share how they feel without it becoming overwhelming Openness about talking about mental health - not a weakness
Eğilmez, H. O., Aytekin, N. T., & Dirican, M. (2013). Coping with the performance anxiety among music education students: A method trial. <i>Asian journal of social sciences & humanities</i> , 2(1), 165-173.	2013	Breathing - slow exhalations to make part of students daily lives Muscle relaxation techniques - 2/3 times a week 30 min sessions Guided imagery	48 - undergraduate students		Breathing - slow exhalations to make part of students daily lives Muscle relaxation techniques - 2/3 times a week 30 min sessions Guided imagery
Stern, J. R. (2012). <i>Evaluation of a yoga intervention for music performance anxiety in conservatory students: A pilot study</i> . Boston University.	2012	9 week yoga practice (14 x 60 min yoga classes semi-weekly)	24 students - university age		Showed large decreases in anxiety

Khalsa SB, Butzer B, Shorter SM, Reinhardt KM, Cope S. Yoga reduces performance anxiety in adolescent musicians. <i>Altern Ther Health Med.</i> 2013 Mar-Apr;19(2):34-45. PMID: 23594451	2013	Yoga interventions	135 adolescent music students	Participants in the yoga intervention group were requested to attend three, 60-min, Kripalustyle yoga classes each wk for 6 wk.	Reduction of MPA symptoms
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Treatment reviews			
Title	Year	Scope of review	Comments / key relevant words and themes
Burin, A. B., & Osorio, F. D. L. (2016). Interventions for music performance anxiety: results from a systematic literature review. <i>Archives of Clinical Psychiatry (São Paulo)</i> , 43, 116-131.	2016	23 articles reviewed	Cognitive behavioural therapy (CBT), virtual reality exposure, biofeedback, yoga, meditation, music therapy and the Alexander technique.
MacAfee E., Comeau G. (2022). Teacher perspective on music	2022	Preparation, open communication, exposure to performance, deep breathing, realistic	Qualitative content analysis of scientific and non scientific literature. Interview transcripts from 5 piano teacher

performance anxiety: an exploration of coping strategies used by music teachers. <i>Br. J. Music Educ.</i> 40, 34–53. 10.1017/S0265051722 000146 -		expectations	participants. Teacher require formal MPA training opportunities to effectively manage students wit MPA.
Zhukov, K. (2019). Current approaches for management of music performance anxiety: An introductory overview. <i>Medical problems of performing artists</i> , 34(1), 53-60.	2019	Combining behavioural techniques with cognitive therapy strategies appears to be the most promising approach among interventions	Aimed at reducing MPA and improving the quality of music performance.
Kenny, D. T. (2006). Music performance anxiety: Origins, phenomenology, assessment and treatment. <i>Context: Journal of music research</i> , 31, 51-64.		CBT - most popular and well established Combined - relaxation and counselling - not enough research at this stage Alexander tech - well used in PA circles but only one study that provided mixed results Hypnotherapy Meditation neither had enough evidence Beta blockers	

Kenny, D. T. (2005). A systematic review of treatments for music performance anxiety. <i>Anxiety, stress, and coping</i> , 18(3), 183-208.	2005	Systematic desensitisation Mindfulness Beta blockers Exposure therapy Relaxation techniques Performance coaching	Combination of treatments may be best practice.
Mazzarolo et al (2023) Teachers' approaches to music performance anxiety management: a systematic review https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10426800/	2023		
Brugués AO. Music performance anxiety-part 2. a review of treatment options. <i>Med Probl Perform Art</i> . 2011 Sep;26(3):164-71. PMID: 21987072.	Not relevant as medical / pharmaceutical		
McGrath, C. E. (2012). <i>Music performance anxiety therapies: A review of the literature</i> .	PHD dissertation	Alexander Tech - HRV measure Visualisations / guided imagery	Systematic desensitisation , combined with other treatments most effective

University of Illinois at Urbana-Champaign.		Preparation and support with repertoire (Kenny and Ackermann, 2007)	
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