

Development and Evaluation of Two Brief, Group Treatments for Music Performance
Anxiety in Community Musicians: A Preliminary Study

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Certification

This is to certify that the research contained in the dissertation is my own original work and has not been submitted for any degree to any other university or higher institution.

Signed: _____ Date: _____

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Preface

This project came to fruition after many years working as a musician, music educator and examiner, and observing first-hand how debilitating the effect of music performance anxiety can be for a musician. It can affect both psyche of the musician and the quality of performance. Poignantly, the researcher recalls examining a mature-age candidate who reported a major breakdown in an early grade exam as a nine year old at Sydney Conservatorium. She described a terrifying experience of losing physiological control, shaking, sweating and trembling, as an ‘intimidating old man glared at her from behind a desk’. Forty years later, and following her nine-year-old son into the exam room, she reported she was back to ‘pass this time’.

After several attempts at her first scale, and in an attempt to equalise the power balance, the researcher/examiner asked her about her professional life. She reported that she headed a law firm in a major capital city. Further discussion ensued in which she reported being able to handle presenting as a barrister to a court of law calmly, and with no breakdown between ‘pre-frontal cortex and limbic brain’, yet she reported, as she held out her hands out in front of her, she was ‘shaking like a leaf’ at having to perform a G major scale.

Also anecdotally, as an examiner at grade and diploma level for the Australian Music Examinations Board, the author has frequently observed candidates scrutinising the examiner’s face as they perform, clearly searching for feedback about the performance. Candidates who display this behaviour tend to play with less artistic integrity than performers whose apparent focus is on aesthetic considerations.

In attempting to explicate the underlying components of music performance anxiety I hoped to provide the heterogeneous population of pre-professional, semi professional and amateur musician that I work with most frequently, some practical solutions that would allow them benefit more fully from the many joys that being part of a musical community can provide.

This journey has been a most rewarding way of combining my personal and professional interests with academic scholarship.

Abstract

The purpose of this study was to develop, administer and evaluate two brief group treatments for music performance anxiety aimed at reducing anxiety and improving performance quality. This study also investigated for differences in measurement outcomes between treatments. A cognitive behavioural therapy treatment was developed for the study from an existing empirically proven treatment, *Chilled* (Rapee et al., 2006), focusing on cognitive, physiological and behavioural symptoms. The second treatment, based on a protocol developed by Gardenswartz and Craske (2001), targeted physiological symptoms and delivered relaxation strategies. Treatments were administered in a workshop format over one day with four treatment sessions, preceded by a pedagogic practice skills session. The practice skills sessions functioned as a placebo treatment and included no active treatment component. A quasi-experimental group randomisation design compared the treatments in a heterogeneous sample of community musicians. Sixty-eight participants completed measures of trait anxiety, anxiety sensitivity, depression, and music performance anxiety. Participants also performed four times (pre- and post-placebo, post-treatment and follow-up) and were assessed for performance quality by an expert judge. The results suggest that both treatments offered significant gains for the musicians: anxiety was reduced and performance quality improved after treatment. Results of a feedback survey suggested that a majority of participants were satisfied with treatment workshops overall (98%), and reported that the treatment had given them strategies for managing anxiety and improving performance (99%). Despite an absence of statistically significant differences between treatments, treatment efficacy was demonstrated at different points, thus indicating the need for further explication.

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List of Abbreviations

AMEB	Australian Music Examination Board
ANOVA	Analysis of variance
ANZCA	Australia and New Zealand Cultural Association
AS	Anxiety sensitivity
ASI	Anxiety Sensitivity Index
CBD	Central Business District
CBT	Cognitive behavioural therapy
HREC	Human Research Ethics Committee
HSC	Higher School Certificate
ICC	Intraclass correlation coefficient
K-MPAI	Kenny Music Performance Anxiety Inventory
MPASS	Music Performance Anxiety Self-Statement Scale
NSW	New South Wales
PASS	Performance Anxiety Self-Statement Scale
PRIME-MD-PHQ	Primary Care Evaluation of Mental Disorders Patient Health Questionnaire
ROC	Receiver Operating Characteristic
SSRI	Selective serotonin reuptake inhibitor
STAI	State-Trait Anxiety Inventory
SUDS	Subjective units of distress
TCL	Trinity College London

Chapter 1: Anxiety Disorders and Music Performance

Anxiety

1.1 Anxiety Disorders

One in seven, or 14.4%, of the Australian population meet criteria for an anxiety disorder (Tiller, 2012). Social anxiety disorder is the second most commonly diagnosed anxiety disorder, affecting up to 4.7% of the population (Tiller, 2012). One third of these individuals will also experience co-morbid psychological conditions, including general anxiety disorder, social phobia and depression (Sanderson, Di Nardo, Rapee & Barlow, 1990).

The experience of social anxiety involves a marked and persisting fear of social situations. Symptoms can occur when exposed to or in anticipation of the feared situation, and frequently result in avoidant behaviour (American Psychiatric Association, 2013). For diagnosis, an individual must demonstrate symptoms that are disproportionate to what would be expected in the general population in duration and frequency. Impairment must last for six months or longer (American Psychiatric Association, 2013).

Heimberg, Hope, Dodge and Becker (1990) suggested that social anxiety presents across three subtypes; generalised, non-generalised and specific situational fear. Performance anxiety is defined in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013) as a fear of public speaking, academic performance, dance and acting. Severe performance anxiety affects around 2% of the United States population (Beatty, 1987; Elliot & McGregor, 1999; Kenny, 2005; Merritt & Davies, 2001; Powell, 2004). Kenny (2009) distinguished between social anxiety and the anxiety associated with achieving the synthesis of

cognitive, aesthetic and fine motor skills integral to a musical performance. Despite experiencing symptoms of music performance anxiety, many musicians continue to perform (Osborne, Kenny & Holsomback, 2005).

1.2 Definition of Music Performance Anxiety

The positive experiences of making music can be undermined by concern about a performer's own or others' evaluation of the performance. This can result in debilitating responses across a range of physiological, cognitive and behavioural domains. The quality of a performance may also be adversely affected (Brodsky, 1996; Cox & Kenardy, 1993; Kenny, 2011; Kubzansky & Stewart, 1999; Steptoe, 2001; Studer, Danuser, Hildebrandt, Arial & Gomez, 2011; Wesner, Noyes & Davis, 1990; Yoshie et al., 2009).

Music performance anxiety can be a state-anxious condition proximal to a performance, or can involve a gradual build-up of tension distal to the feared event. It occurs in solo, choral and ensemble situations (Kenny, Davis & Oates, 2004). However, it does not necessarily affect performance quality (Kenny, 2009).

In possibly the only definitive text to date in this area, Kenny (2011) proposed a new conceptualisation of music performance anxiety. She argued that earlier conceptualisations of music performance anxiety as a dimensional construct are not supported by the experimental and clinical literature, and proposed a new set of overlapping but distinct types of music performance anxiety. In this typology, music performance anxiety may be an occupational stress, or it may be co-morbid with social phobia, an underlying panic disorder or a disorder of the self, ultimately becoming an overriding state and conditioned response. Kenny also applied clinically based theories of anxiety formation to enhance our understanding of music performance anxiety.

The term ‘stage fright’ has been used to refer to the state of freezing immediately prior to or during a performance (Steptoe & Fidler, 1987), and is often used interchangeably with the term ‘music performance anxiety’ (Kenny, 2011; Studer, Danuser, Hildebrandt, Arial & Gomez, 2011). However, Kenny (2011) criticised the conflation of these two descriptors recommending that the term “stage fright” be limited only to performance catastrophes and not the more gradual build up of tension distal to performance (Kenny, 2011).

Kenny (2011) also criticised the oft-cited definition of music performance anxiety offered by Salmon (1990) as not consistent with research evidence:

The experience of persisting, distressful apprehension and/or actual impairment of performance skills in a public context, to a degree unwarranted given the individual’s musical aptitude, training and level of preparation. (p. 3)

Kenny (2009) offered an alternative definition, as follows:

Music performance anxiety 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. It may occur in a range of performance settings, but is usually more severe in settings involving high ego investment and evaluative threat. It may be focal (i.e. focused only on music performance), or occur co-morbidly with other anxiety disorders, in particular social phobia. It affects musicians across the lifespan and is at least partially independent of years of training, practice, and level of musical accomplishment. It may or may not impair the quality of the musical performance. (p. 433)

Salmon (1990) inferred that only those who possess executive levels of mastery, and have prepared adequately, experience music performance anxiety. On the contrary, Kenny (2009) noted that musicians of all skill levels experience music performance anxiety. However, Kenny (2009) concurred with Salmon's (1990) point that 'distressing apprehension' (p. 3) is the underlying component to music performance anxiety, irrespective of whether it attenuates performance quality.

1.3 Symptomology of Music Performance Anxiety

Anxiety symptoms, including those experienced with music performance anxiety, are experienced across physiological, cognitive, affective and behavioural domains (Barlow, 2002; Craske & Craig, 1984; Kenny, 2011; Kirchner, 2003; Salmon, 1990; Steptoe, 2001). Some musicians report autonomic activation without cognitive symptoms (Craske & Craig, 1984). Physiological symptoms can be akin to the experience of a panic attack. These include shaking, breathing restriction, sweating and vision disturbance; dizziness and digestive issues are also common (Kenny, 2011).

Cognitive symptoms can occur prior to a performance, in the form of catastrophising thoughts about the possibility of notational error, memory lapse or loss of technical control (Kenny, 2011). In a study of both professional and student musicians, Steptoe and Fidler (1987) found that elevated music performance anxiety was correlated with statements such as 'I am almost certain to make a dreadful mistake that will ruin everything'. Liston, Frost and Mohr (2003) posited that negative and catastrophic cognitions prior to performance predict that an individual will experience music performance anxiety. In contrast, a balanced expectation rationalising that a few mistakes are likely to happen and also happen to everyone is correlated with a more moderate experience of music performance anxiety (Steptoe & Fidler, 1987).

Unhelpful cognitions can also occur during the performance. An emphasis on the importance of the performance, such as an exam or audition, is associated with fear of negative evaluation (Lehrer, Goldman & Strommen, 1990; Liston, Frost & Mohr, 2003; Nagel, Himle & Papsdorf, 1989; Steptoe, 1989). A performer can also become fixated on assessing the audience response to their performance, redirecting attention away from the artistic focus (Liston, Frost & Mohr, 2003). Concerns about the visible manifestations of anxiety can also affect technique, leading to social phobic ruminations about how symptoms are being perceived by the audience (Liston, Frost & Mohr, 2003).

In contrast, other performers may report that the aesthetic qualities of their performance are deleteriously affected, despite an absence of physical symptoms. These performers report performing technical aspects robotically, while feeling frozen and unable to project the emotional content of their work (Kenny, 2011). Symptoms can also be experienced at different points proximal to the performance. Ryan (2004) found that pre-pubescent girls demonstrated elevated heart rate prior to performance; in contrast, boys in the study demonstrated greater elevation in heart rate during their performance.

Behavioural responses to the experience of music performance anxiety are broad, and include tension (evident both physiologically and cognitively), fight/flight/freeze responses, avoidance, performance breakdown, overlearning and preparation, and self-medication to manage the symptoms (Kenny, 2011; Salmon, 1990). Kenny (2011) also reported affective responses including anger, panic, embarrassment, shame and excitement. Thus, it is likely that any treatment aiming to

reduce music performance anxiety would require addressing the affective, cognitive, behavioural and physiological domains.

1.4 Aetiology of Music Performance Anxiety

Kenny (2011) posited that music performance anxiety may be a ‘multidetermined’ as opposed to a dimensional construct. Referencing Rachman and Hodgson’s (1974) theory that symptoms of fear occur in a desynchronous manner, Kenny (2011) observed that the symptoms of music performance anxiety do not occur in a uniform manner. Kenny (2011) suggested that desynchrony of symptoms occurs because the underlying precipitants of music performance anxiety are diverse, and can be both focal and distal to the manifestation of symptoms. An individual’s experience of music performance anxiety is the product of genetic, environmental, psychosocial and conditioned experiences. A complex and personal interplay of such elements as outlined below underlies the genesis of music performance anxiety (Kenny, 2011).

1.4.1 Trait anxiety

Elevated levels of state anxiety (proximal anxiety before a stressful event) and trait anxiety (enduring inclination towards anxiety) have been shown to correlate positively with higher levels of music performance anxiety. High trait anxiety, when associated with the stresses of being a musician, may sensitise some individuals to music performance anxiety (Salmon, 1990). Research by Craske and Craig (1984) demonstrated that performing before expert judges increased music performance anxiety in 40 piano students with high trait anxiety. This result is supported by self-report measures across tertiary students, teenage and professional musician populations (Kenny, Davis & Oates, 2004; Kokotsaki, Davidson & Coimbra, 2001; Liston, Frost & Mohr, 2003; Ryan, 1998). More recently, Thomas and Nettelbeck (2014) used a

hierarchical regression analysis while controlling for inter-correlations, and found that trait anxiety represented the most significant predictor for music performance anxiety in gifted teenagers.

1.4.2 Fear of negative evaluation

Individuals who report elevated fear of negative evaluation will avoid normative social interactions. Fear of negative evaluation is prevalent when the evaluators are expert judges, as in jury recitals, auditions or performance exams. In a study of tertiary flute students, Fortune (2007) found that participants who scored high on the fear of negative evaluation scale (Watson & Friend, 1968) received lower assessments of performance quality from expert judges. Individuals who experience music performance anxiety evaluate their performance with a high degree of criticism, yet those who score high on the fear of negative evaluation scale will also provide more realistic summations of their performance quality than those with lower scores on this scale (Kenny, Davis & Oates, 2004; Osborne, 2007).

1.4.3 Autonomic and/or cognitive?

There is debate as to the mechanisms of the initial activation of music performance anxiety. Zinn, McCain and Zinn (2000) suggested that autonomic system responses to one performance situation lead to the association of frightening physical arousal with other performance situations. Öhman and Mineka (2001) proposed that fear is activated by relevant stimuli that have an evolutionary basis; that it is automatic, with no regard for higher cognitive processes; and that it is 'encapsulated' within lower cortical functions and has specific neural circuitry. This is evidenced in back masking experiments, in which the subjects have no conscious awareness of being exposed to

angry faces, but nevertheless demonstrate an autonomic response to the exposure (Öhman & Soares, 1993).

In contrast to autonomic explanations, cognitive theories suggest that the processing of fear begins in the cortical regions of the brain, with conditioning leading to autonomic response (Lovibond, Siddle & Bond, 1993). Supporting this, Kirchner (2003) posited that the perception of threat activates music performance anxiety, and cognition precedes the autonomic response. Cognitive responses to the fear of evaluation may also provide a catastrophic framework in which trigger events create unconscious memory (Beck & Emery, 1985). Osborne and Kenny (2008) found a relationship between the memory of distressful performances and elevated self-reports of music performance anxiety in gifted teenagers.

1.4.4 Evolutionary

It may be that music performance anxiety is a response to evolutionary fear of evaluation. Kenny (2009) suggested that ‘biological predisposition’ (p. 430) provided survivor advantage for some species. For hunter-gatherer societies, separation from the group led to isolation and increased risk of attack from wild animals. The lone soloist, isolated from their audience, may experience this evolutionary fear and consequent autonomic fight-or-flight responses. Unfortunately, anxiety responses triggered by autonomic processes are not conducive to achieving excellence in the synthesis of complex skills required to achieve success in a music performance (Kenny, 2011).

1.4.5 Arousal and task complexity

Performers with superior technical skills perform better under increased levels of tension (Steptoe & Fidler, 1987). Technically skilled performers use arousal to facilitate performance, while less experienced performers may interpret arousal as

debilitative or threatening, thus activating an autonomic response with all its physiological manifestations. Fortune (2007) found that performers with high mastery, greater experience, and appropriate levels of practice performed better with some level of arousal. It may be that with greater technical skill and confidence, a performer will interpret arousal prior to a performance as excitement rather than anxiety. Salmon (1990) observed that, to perform at their optimum, individuals require a personal balance between arousal and task complexity. Likewise, Hanoch and Vitouch (2004) contended that optimum arousal strength is determined by the nature of the undertaking and the performance situation.

1.4.6 Neuropsychology

Eysenck (1960) conjectured that extroverts have lower levels of cerebral cortical arousal, and thus seek situations that promise elevated arousal, while introverts will be less able to use high arousal to achieve performance outcomes in similar situations. In support of this, neuropsychological research has found that while increased levels of glucocorticoid stress hormones decrease hippocampal and memory function, lower levels of circulating stress hormones can also result in decreased cognitive function (Lupien et al., 2004).

1.4.7 Anxiety sensitivity

Anxiety sensitivity is considered a personality variable that elevates the emotional consequences and intensity of the response to a particular experience. Consequently, an individual with anxiety sensitivity will misinterpret symptoms of anxiety as having catastrophic consequences. Reiss and McNally (1985) defined anxiety sensitivity as the fear of the sensations of anxiety due to the belief that such sensations are dangerous, physiologically, socially and/or psychologically. The situation in which

the symptoms are first experienced will become symbolic of the catastrophic sensations, and may then become a feared situation or activity.

Anxiety sensitivity manifests across three dimensions (Taylor, Jang, Stewart & Stein, 2008). First, there is the fear that certain physiological symptoms will be discernible to others: for example, the fear of sweating, shaking or going red in the face is amplified by imagining that these symptoms will be overt and easily observed. Second, there is fear that cognitive function will be affected and that such disturbances are indicative of insanity. Finally, an individual with elevated anxiety sensitivity may interpret physiological symptoms as representative of a physical health crisis. Thus, for example, rapid heartbeat, choking feeling and sweating are interpreted as possible heart failure and the consequent need for immediate medical attention (Reiss et al, 1986).

Recent attention has been given to anxiety sensitivity as a predictive factor of panic and other anxiety disorders. Research has also suggested that anxiety sensitivity may also contribute to substance abuse, depression and eating disorders (Taylor et al., 2008). Clinically, investigation of the role of anxiety sensitivity has focused on panic disorder; Reiss and McNally (1985) found recurrent themes of formative and conditioning experiences in early psychodynamic, cognitive and learning theoretical orientations. Thus anxiety sensitivity elevates the emotional consequences and intensity of response to a particular experience. Consequently an individual with anxiety sensitivity will misinterpret symptoms of anxiety as having catastrophic consequences. The situation in which the symptoms are first experienced will become symbolic of the catastrophic sensations and may then become a feared situation or activity.

1.5 Epidemiology of Music Performance Anxiety

Most musicians experience a level of music performance anxiety (Abel & Larkin, 1990; Kendrick et al., 1982). It has been shown to be problematic across age, genre, professional and student populations and across different performing contexts (Cox & Kenardy, 1993; Kenny, 2011; Ryan, 1998; van Kemenade, van Son & van Heesch, 1995).

1.5.1 Professional musicians

It has been argued that music performance anxiety is an occupational factor for professional musicians who ‘have to perform under conditions of high adrenalin flow, fatigue, social pressure and financial insecurity’ (Lehrer, Goldman & Strommen, 1990, p. 48). There have been extensive studies into the prevalence of music performance anxiety in the professional population (Kenny, 2009). The International Conference of Symphony and Opera Musicians’ national United States survey of 2,212 respondents found that 25% reported experiencing some form of music performance anxiety (Fishbein, Middlestadt, Ottati, Straus & Ellis, 1988). Similarly, 59% of professional musicians, in a Dutch study, reported experiencing music performance anxiety at a level significant enough to have an impact on both personal and professional life (van Kemenade, van Son & van Heesch, 1995). In addition, James (1998) found that 70% of those surveyed reported music performance anxiety, with 17% reporting a weekly occurrence. More recently, Kenny, Driscoll and Ackermann (2014) found that up to one third of professional Australian orchestral musicians reported significant levels of anxiety and co-morbid mood disorders, and many used beta-blockers to combat the physiological manifestations of music performance anxiety.

1.5.2 Tertiary students

Tertiary performance majors have reported music performance anxiety across a range of measurement domains (Cox & Kenardy, 1993; Gill, Murphy & Rickard, 2006; Liston et al., 2003; Miller & Chesky, 2004; Studer et al., 2011). Wesner (1990) found that high levels of distress were reported by 21% of 300 respondents when faced with a musical performance, while a further 40% also reported more moderate distress levels. Of those who reported any level of distress, 47% perceived that the quality of their performance was significantly or moderately impaired by music performance anxiety.

In a study of 126 Norwegian tertiary music students surveyed by Kaspersen and Gotestam (2002), 36.5% experienced music performance anxiety significant enough that they reported needing professional support. Another study found that 190 university music students perceived that music performance anxiety resulted in negative evaluative feedback about their performance (Studer et al., 2011). Even more recently, 96% of a sample of 60 final-semester tertiary music students reported experiencing music performance anxiety both before and during performance (Zakaria, Musib & Shariff, 2013). Moreover, 80% of this sample reported a perception that their performance was adversely affected by music performance anxiety (Zakaria, Musib & Shariff, 2013).

1.5.3 Children and adolescents

LeBlanc, Jin, Obert and Siivola (1997), Ryan (2004) and Boucher and Ryan (2011) found music performance anxiety evident in preschool, primary and high school populations across physiological and self-report measures. Preschool and primary school-age participants demonstrated physiological symptoms (elevated heart rate and salivary cortisol) between baseline and performance (Ryan, 1998, 2004, 2005). These participants also demonstrated negative associations between trait or state anxiety and

self-esteem. Further, children in these studies endorsed negative cognitions about making mistakes and concerns about audience evaluation of visible physiological symptoms (Ryan, 1998, 2004).

Adolescents have reported music performance anxiety in studies employing self-report, physiological, behavioural and, less commonly, performance quality measures (Fehm & Schmidt, 2006; Osborne & Kenny, 2005, 2008; Osborne et al., 2005). Britsch (2005) explored music performance anxiety across four youth orchestras. Of this sample, 75% reported experiencing some level of music performance anxiety.

In a study of 27 high school-age musicians, LeBlanc et al. (1997) used three performing conditions to investigate music performance anxiety. First, participants performed alone in a practice room; second, with one researcher in a practice room; and third, with an audience, expert judges, researchers and recording equipment in a recital hall. The final situation elicited elevated anxiety across self-report, behavioural and physiological domains. Maroon (2003) also explored the effect of audience type on adolescents, and found that more familiar and smaller audiences led to less anxiety as compared to performance before an adjudicator. Performance quality was also negatively associated with increased levels of state anxiety.

1.5.4 Gender

Anxiety disorders are more common in women than in men (American Psychiatric Association, 2013), and this trend is also evident in the music performance anxiety literature (Ginsberg, 2004; Osborne & Franklin, 2002). In their study of 377 professional Australian musicians, Kenny, Driscoll and Ackermann (2014) found that female musicians reported greater levels of music performance anxiety and other co-morbid psychopathology than males. In a study of teenagers presenting for performance

exams in Northern Ireland, girls self-reported higher levels of music performance anxiety than boys (Rae & McCambridge, 2004). Similarly, in a study of 90 high school-aged students enrolled in selective music programmes attending Adelaide metropolitan high schools, girls reported more escalated levels of music performance anxiety than boys (Thomas & Nettelbeck, 2014).

However, the situation may be more complex than the simple conclusion that females experience more music performance anxiety than males. Ryan (2004) found that, in the moments prior to performance, girls had more elevated heart rates than boys; however, the boys exhibited greater anxiety-related behaviours prior to performance. LeBlanc et al. (1997) found that the girls self-reported higher rates of anxiety than boys, yet gave higher quality performances.

It is possible that cultural expectations and demand characteristics underlie these results, with males feeling more pressure to appear and self-report that they are in control, while exhibiting equivalent or more severe somatic symptoms. Shedler, Mayman and Manis (1993) referred to this phenomenon as ‘illusionary mental health’ (p. 117). It may be that data gathered using self-report measures does not allow for a full profile of an individual’s psychological functioning for these reasons.

A recent study of 134 high school students studying at an arts college in Romania explored three factors in regard to music performance anxiety: somatic and cognitive features, performance context and performance evaluation. The authors found diverse predictive patterns for each factor. Rather than endorsing all three factors, females scored higher only on the somatic and cognitive factors (Sarbescu & Dorgo, 2014). The authors concluded that these results support Kenny’s (2011) suggestion that music performance anxiety is multidimensional in nature, and that further exploration of

gender and its effect on music performance anxiety would be most useful when considered in terms of multidimensional aspects.

In another Romanian study of 130 tertiary music students, females demonstrated elevated anxiety scores with an association between anxiety and level of musicianship in the case of vocal and string players (Iusca & Dafinoiu, 2012). This finding supports Kenny's (2011) contention that task mastery is a factor in music performance anxiety; however, this factor has been somewhat neglected in the literature.

1.5.5 Community musicians

To date only one empirical study has explored community musicians. This study assessed 191 adult community musicians and vocalists and found that all participants reported elevated levels of anxiety and apprehension prior to a performance (Wolfe, 1989). Recently, Barbar, Crippa and Osório (2014) used a sample of both professional and amateur musicians to explore the discriminant validity of a Brazilian translation of the Kenny Music Performance Anxiety Inventory (K-MPAI; Kenny, 2004, 2009). However, despite amateur musicians constituting 61% of the sample, the study did not present its results in a way that differentiated between the two populations.

1.5.6 Exam candidature

Candidates for performance exams represent a heterogeneous population, ranging from young beginners to adult amateurs and emerging professionals, thus encompassing a wide range of aspirations and musical ability. Examining boards such as the Australian Music Examination Board (AMEB), Trinity College London (TCL) and the Australia and New Zealand Cultural Association (ANZCA) provide performance exam assessment. Given the overlap between performance exam

candidature and the community musician population, it is likely that comparisons may be drawn between these two groups.

Three empirical studies focused specifically on candidature for performance examinations have been published, using either self-report measures (Rae & McCambridge, 2004) or self-report and performance quality as evaluated by one examiner (McCormick & McPherson, 2003; McPherson & McCormick, 2006). McPherson and McCormick (2006) studied 446 musicians presenting for AMEB exams, and also conducted a study of 332 TCL candidates (McCormick & McPherson, 2003). Both studies concluded that self-efficacy was the best indicator for examination success. Music performance anxiety was not the focus of these studies.

Using self-report measures of state or trait anxiety and music performance anxiety, Rae and McCambridge (2004) investigated performance anxiety in 120 teenage musicians presenting for Associated Board of the Royal Schools of Music performance examinations in Northern Ireland. In this study, females demonstrated higher levels of self-reported music performance anxiety, while a relationship between neuroticism and music performance anxiety was also demonstrated. In an unpublished Honours project, Halls (2011) found that a sample of 25 performance exam candidates, ranging in age from 12 to 48, exhibited significant correlations among self-report anxiety measures. Prior to performing before a panel of seven expert judges, this sample also demonstrated non-significant elevation of salivary cortisol between baseline and pre-performance.

1.6 Performance Context

As discussed previously, music performance anxiety is experienced at different levels of intensity according to the situation in which a performance occurs.

Researchers have concurred that performance context may be a contributory factor to the experience of music performance anxiety (Osborne & Kenny, 2005; Sarbescu & Dorgo, 2014). The relative size of an audience, the perceived expertise of the audience and the intent of a performance can result in contrasting levels of music performance anxiety in the same individual. Solo performances also result in greater arousal than ensemble situations: soloists often report greater music performance anxiety than ensemble or choral musicians (Kenny et al., 2004). Concordances across several studies have shown that the experience of music performance anxiety decreases as the performance context moves from solo to small ensembles, to orchestral and finally to teaching situations (Cox & Kenardy, 1993; Jackson & Latane, 1981; Kenny, Davis & Oates 2004).

A prestige audience with superior knowledge or expertise in the field will elicit heightened anxiety compared to a less expert audience. Thus, evaluative situations including performance exams, competitions, jury recitals and auditions are frequently cited as the situations most likely to elicit music performance anxiety (Kenny, 2011). Craske and Craig (1984) assessed 40 pianists and their responses on a range of self-report, behavioural and physiological measures as they performed alone (un-stressful condition) and before an audience (stressful condition). The most anxious group demonstrated heightened levels of anxiety across measures as the performance situation intensified, while the less anxious group were desynchronised in responses.

In LeBlanc et al.'s (1997) study (discussed previously in section 1.5.3), 27 high school students were evaluated on self-report, performance quality and physiological measures (heart rate) across an increasingly confronting series of performance conditions (LeBlanc et al., 1997). The final, most stressful performance condition

(audience, expert judges, researchers and recording equipment in a recital hall) elicited more elevated expressions of anxiety across self-report and heart rate measures, with females demonstrating particularly marked elevation compared to males.

Kenny (2011) suggested that performance breakdown is rare in the professional and tertiary student populations. Anecdotally, however, it is highly prevalent in performance exams. It is common for candidates to cry during exams, and examiners come equipped for a day's work with tissues (AMEB examiner, personal communication, 14 May 2014). It is not unusual for candidates to have to leave the exam room to compose themselves, or to abandon a section of the exam until they feel recovered enough to resume. This is most prevalent in the early grades, and such experiences may be conditioning moments for the later development of music performance anxiety (Kenny, 2009).

Chapter 2: Theoretical Explanations for Anxiety

Explanatory models of the underlying aetiology of anxiety have been developed under various theoretical disciplines. Most relevant to this treatment study are psychoanalytic and psychodynamic theories, attachment theory, behaviour and learning theories, cognitive and emotion-based theories.

2.1 Psychoanalytic and Psychodynamic Theories

Psychodynamic theory suggests that much of mental life occurs in the unconscious, and behaviour is therefore influenced by unconscious needs, urges and wishes. Freud conceptualised personality as a tripartite structure (Freud, 1927): the *id* represents an impulse drive focused on achieving immediate gratification; the *superego* serves as brake to the *id*, internalising messages from parental or authority figures and societal expectation; and the *ego* mediates between the opposing drives of the *id* need for instant gratification and the constraints of the *superego*.

Three types of anxiety become encapsulated within the *ego*: realistic anxiety, moral anxiety and neurotic anxiety. Freud theorised that neurotic anxiety represents the internal battle with *id* impulses. When the *ego* becomes overexcited as a result of a response to a traumatic moment (traumatic anxiety), or the possibility of a repeat of the trauma (signal anxiety), there are resulting experiences of helplessness or feelings of being overwhelmed and annihilated. This results in anxiety conditions characterised by phobias, generalised anxiety or panic attacks. The *ego* then develops a series of defence mechanisms to minimise further psychic pain (Freud, 1927). These defence mechanisms may manifest in symptoms such as avoidance, denial or reaction formation (Freud, 1927).

Object relations theory posits that early experiences become the basis for the quality of internalised psychological structures and interpersonal interactions throughout life (Westen, 1998). Horney (1937) suggested that a child is unable to express feelings of hostility and anger towards parental figures, as the child recognises that the caregiver is needed to provide comfort and protection. The consequent feelings of being powerless, helpless and dependent underlie the resultant anxiety and the defence systems developed to repress unconscious angry impulses (Kenny, 2014).

Psychodynamic theorists explain anxiety and other psychopathologies as symptoms of structures held in the unconscious mind (Kernberg, 1970). This approach can be contrasted with the current practice presented in the *DSM-5* (American Psychiatric Association, 2013), which takes a symptom-focused rather than a dynamic process approach to describing psychopathology. Under this rubric, various psychopathologies are presented as clusters of symptoms that are discrete and observable.

Treatment for anxiety within the psychoanalytic paradigm is focused on rebuilding structural elements of the personality so that an individual can both self-soothe and establish a sense of overall wellbeing (Lerner, 2002). Psychoanalytic treatment has been shown to be more effective than placebo, but is time-consuming and thus costly. Further, current methods of psychoanalytic assessment have not been psychometrically validated (Antony, Orsillo & Roemer, 2001). However, recent developments in neuro-scientific research methods have supported many of the tenets of early psychodynamic theory (Bargh & Morsella, 2009).

2.2 Attachment Theory

Emanating from the psychodynamic tradition, attachment theory explores how early life relationships, most particularly between child and primary caregiver, create a template for the quality of subsequent relationships, and how less-than-adequate early attachment can result in the development of psychopathology. Bowlby (1980; 1988) defined attachment as the connections that underpin human relationships, and perceived it as an innate evolutionary drive rather than a learnt behaviour.

Behaviourist models ascribe attachment behaviour in infants to a conditioned response, primarily to serve the need for physical nourishment (feeding). However, in their work with rhesus monkeys, Harlow and Zimmermann (1959) demonstrated that infant primates gravitated to a cloth mother (an inanimate wire contraption covered with soft cloth) for comfort, despite receiving feeding from a wire mother (a similar contraption without the comforting cloth cover).

Attachment theory posits that attachment keeps a child close to their primary caregiver and thus safe and secure. If the caregiver is available and dependable, the young human is able to develop internal maps that represent life as a generally secure enterprise. This facilitates developmentally appropriate steps towards the ultimate goal of separation when maturity is reached.

Baumrind (1971) defined three types of parenting approaches: *authoritarian* parenting, a cold approach with clearly mandated rules and limited flexibility; *authoritative* parenting, which provides flexible boundaries and structures and warm and emotionally available caregiving; and *permissive* parenting, characterised by emotional disconnectedness and few limits or rules. Authoritative parenting has been shown to result in the best outcomes for children (Steinberg, Darling & Fletcher, 1995).

In the ‘strange situation’ research paradigm, Ainsworth and Bell (1970) demonstrated that secure and insecure attachments are a reflection of the primary caregiver’s responsiveness to the infant’s needs. Early attachment styles and parenting styles become enduring patterns of relationship quality throughout life, and underlie subsequent development across many domains. Thus later peer or romantic attachments, temperamental development and psychiatric diagnoses (particularly anxiety and depression) are all affected by the quality of early relational interactions (Ainsworth & Bell, 1970). Likewise, secure attachment predicts that an individual will have enhanced self-esteem and greater self-reliance in later life.

Kenny (2011) suggested that highly elevated symptoms of music performance anxiety may represent ‘a disorder of the self’ (p. 260) perhaps as a consequence of not experiencing unconditional acceptance of caregivers as a young child. Attachment-focused treatment for music performance anxiety explores links between attachment ruptures and performance evaluation. A treatment approach that allows re-experience and processing of unconscious emotions would help to alleviate the triggering of symptoms in performance.

2.3 Behavioural and Learning Theories

2.3.1 Classical conditioning

In classical conditioning a stimulus elicits a response. Pavlov observed that the salivary reflex is activated in dogs when they are given food (Schwartz & Lacey, 1982). He also noticed that his dogs began to salivate prior to the presentation of the food. If food arrived after a tone was sounded, and if this sequence was repeated consistently several times, the dogs began to associate the tone with food and would reliably salivate at the ringing of the tone (Schwartz & Lacey, 1982). Thus a temporal association

between a neutral stimulus (tone) and an unconditioned stimulus (food) resulted in the transfer of an unconditioned response (salivation) to the neutral stimulus (tone). After this conditioning, the unconditioned stimulus (food) no longer needed to be present for a response (salivation) to the neutral stimulus (tone) (Beecroft, 1966). In this manner, internalised physiological sensations can also become conditioned stimuli (Gosch, Flannery-Schroeder, Mauro & Compton, 2006).

The association of additional neutral stimuli with conditioned stimuli results in further conditioning (Schwartz & Lacey, 1982). Watson and Rayner (1920) demonstrated this when they were able to condition ‘little Albert’, a young baby, to fear all furry objects. A loud noise and appearance of a rat were temporally linked. Prior to the loud noise, Albert displayed no fear of the rat; after pairing the loud noise with the rat, the fear generalised to all furry objects. Thus, behavioural theory suggests that temporal associations between unrelated stimuli could result in the conditioning of irrational fears and phobias (Mischel, 1993).

Rescorla and Solomon (1967) suggested that the presence of specific information in the unconditioned stimulus is necessary for conditioning to occur. Further, a temporal or contiguous relationship needs to be present between the stimuli for classical conditioning to occur. Rats who are exposed to a tone followed by a shock will be conditioned to perceive the tone as an adverse event (Kamin, 1969). Thus, a musician who experiences panic symptoms contiguous to a musical performance may associate future performance with the reoccurrence of symptoms.

2.3.2 Operant conditioning

Thorndike’s law of effect posits that when behaviour elicits a desired response, it is more likely to be repeated (Thorndike, 1932). Consequently, Thorndike

demonstrated that a cat in a cage, attracted by a piece of salmon on the outside of the cage, will learn to unlatch a door and retrieve the salmon through a process of trial and error, first experimenting by reaching through the cage and scratching the bars. After the desired outcome had been elicited (salmon), the cat repeats the behaviour (opening latch) to achieve the desired outcome (more salmon), and then extinguishes the non-productive behaviour (scratching and reaching). Thus, according to Thorndike, an organism acts in a particular way to achieve expected outcomes. This stands in contrast to classical conditioning theory, which suggests that an environmental stimulus elicits the conditioned response (Thorndike, 1932).

The law of effect laid the groundwork for Skinner's theory of operant conditioning. Skinner suggested that an organism's behaviour operates on or is influenced by its environment. A response is followed by a consequence; if a response is positively reinforced by the consequence, the behaviour is likely to be repeated (Mischel, 1993). Thus, a rat will press a lever if food is the consequence; however, a lever press followed by an electric shock results in the lever-pressing behaviour being extinguished. If a lever press results in no food, the behaviour will eventually extinguish also (Schwartz & Lacey, 1982).

In classical conditioning, the stimulus elicits the response. In contrast, in operant conditioning, the stimulus directs the response towards positive or negative consequences. Thus operant responses are discriminative and allow the organism to differentiate between good and bad consequences. This results in actions that lead to the most efficacious response (Schwartz & Lacey, 1982).

Avoidance-escape theory explains how the absence of action can be associated with a negative consequence (Rescorla & Solomon, 1967). For example, an animal

conditioned to jump over a partition in a box to avoid shock will continue to jump over the partition even in the absence of shock. The animal has learnt to associate the behaviour (jumping) with avoiding shock (negative consequence), while no response (no jumping) has become associated with shock. Thus the jumping response has been conditioned to keep the negative consequence (shock) from occurring.

Intermittent schedules of reinforcement maintain behaviours and keep extinction from occurring. A fixed ratio schedule will reinforce behaviour after a fixed number of responses have been elicited. In contrast, when reinforcement occurs after an alternating number of responses, a varied ratio schedule is established. Intermittent schedules are more effective than continuously reinforced schedules, as recognition is delayed. Consequently, the element of uncertainty will result in reinforcing the behaviour despite the absence of any actual reinforcement (Schwartz & Lacey, 1982).

Behavioural theory posits that anxiety is an internalised state in which an individual learns through both classical and operant conditioning. In operant conditioning, behaviours will be elicited when they have been rewarded. Likewise, behaviours, situations or places that have elicited adverse consequences will result in avoidance.

Musicians may be helped to replace conditioned fears of performance with more adaptive responses using systematic desensitisation, either through imaginal exposure (imagining the performance situation while implementing relaxation techniques) or in vivo (the actual conditioning environment). Interoceptive exposure, such as hyperventilation or increasing heart rate through physical activity, can induce the physiological sensations of music performance anxiety in a controlled manner. This normalises the symptoms and demonstrates that an element of control over these

sensations may be developed. More recently, distributed simulation training has been developed to give musicians repeated exposure to realistic performance situations (Williamon, Aufegger & Eiholzer, 2014).

2.4 Cognitive Behavioural Theories

Cognitive theories propose that the underlying mechanism for the development of anxiety lies in dysfunctional cognitions. Lang (1971) suggested that anxiety results from the interaction of three domains: cognitive, behavioural and psychological. Lang posited that these systems function both independently and, at times, together.

Rachman and Hodgson (1974) theorised that it is this independence between systems that results in the often desynchronous nature of symptoms. Thus the range of symptomology experienced in anxiety can be explained by activation of and, at times, interaction between the three systems. This model provided an explanation for varying levels of treatment efficacy, as different treatments target different sets of symptoms (Hawton, Salkovskis, Kirk & Clark, 1989).

Beck and Clark (1986) suggested that anxiety is the uncomfortable result of the evocation of fear. In its most useful form, it represents a primitive survival strategy. The unpleasant emotional state of anxiety results in appraisal and scanning for danger; thus the fight/flight/freeze response was an effective safety mechanism for early humans.

Early in life, an individual develops cognitive constructs or schemas that represent composites of experience and knowledge. These schemas become enduring representations of each person's world. Maladaptive schemas develop as a result of early life experiences and consequent reinforcement. Once established, these cognitions focus attention on the perceived threat or danger. This serves to maintain the dysfunctional cognition (Beck & Clark, 1986).

Beck and Clark (1986) posited that individuals scan for threat or danger, drawing on established cognitive constructs. Once an anxiety response is evoked, cognitive, behavioural, physiological and affective responses may be activated according to appraisal of the danger. The cognitive system takes a central role to co-ordinate a response by formulating a plan and activating the other systems (Lazarus, 1991). An affective response, when activated, focuses the individual on the perceived threat through subjective sensations of panic, pain or anxiety (Sweet et al., 1987). Autonomic activity will result in the activation (sympathetic) or inhibition (parasympathetic) of motor responses (Beck & Clark, 1986). The cognitive model conceptualised by Beck and Clark (1986) then comprises two mechanisms that activate simultaneously: first, an autonomic primitive response (fight/flight/freeze), and second, a slower response in which cognitive systems evaluate both the danger and the appropriate response system.

Overall, the cognitive models suggest that anxiety disorders emanate from a mechanism that allowed early humans to scan and appraise for danger in the environment. However, some individuals develop maladaptive constructs that interpret particular non-dangerous situations as threatening (Clark & Beck, 1988). Such cognitive errors may include interpreting future events as threatening, and underestimating both individual coping mechanisms and the possibility of support from others (Clark & Beck, 1988).

A cycle may ensue whereby a response to a perceived threat results in problematic symptoms, which then provide confirmation as to the veracity of the threat, funnelling increased fear and further intensifying of the symptoms. Beck and Emery (1985) described symptoms as occurring across cognitive (sensory perceptual, thinking,

concentration, conceptual), affective (fear, jitters, nervousness), behavioural (hyperventilation, restlessness, impaired co-ordination, immobility, flight) and physiological (cardiovascular, respiratory, neuromuscular, gastro intestinal, urinary tract, skin).

Barnard and Teasdale (1991) suggested that cognitive and emotional responses are distributed between processing systems. Consequently, an emotional state is a result of the collective experience of the various response systems. Thus an affective response to anxiety is a composite of the responses of the cognitive, behavioural and physiological systems. Similarly, Lang (1985) described the affective system as the cumulative end product of verbalisation, fearful behaviour and somatic systems.

Beck and Clark (1986) theorised that, when faced with evaluation, an individual may respond with 'evaluation anxiety'. Once activated, evaluation anxiety is characterised as resulting in dysfunctional cognitions such as selective abstraction, minimisation, hyper-vigilance, magnification and catastrophic thoughts (Beck & Clark, 1986). When in this state, an individual will reactivate negative experiences of a similar nature and inadequate performances from the past. Beck and Clark (1986) postulated that evaluation anxiety is most prevalent when the status of the evaluator is perceived as more powerful, there is decreased confidence in ability, there are doubts about the attainability of the outcome, and the fight/flight/freeze mechanism is activated. Thus cognitive treatments for music performance anxiety need to replace associations of performance with negative outcomes with associations of success in performance, or with more realistic cognitions around performance.

Critics of behaviourism have suggested that the development of language resulted in differences between human and animal behaviour (Lowe, 1979). Thus

human responses to stimuli are not merely the product of contiguity, but also of the meaning attributed to the pairing of stimulus and response (Rescorla & Solomon, 1967). Beck and Clark (1986) pointed out that humans are social animals, and that cognition incorporates and is developed by socialisation processes.

Cognitive behavioural therapy (CBT) addresses behavioural and emotional responses to underlying maladaptive cognitions. These can be restructured by identification, examination and exposure in order to ultimately change the cognitions that supported the maladaptive distortions. These are then replaced with realistic and more effective problem solving. Functional analysis breaks down anxiety into component parts: behavioural, cognitive and physiological (Craske, Barlow & O’Leary, 1992). The interaction between each of these components contributes to the development of the disorder.

Rapee (1997) suggested that vicarious conditioning may be acquired through conditioned and/or cognitive means, and thus a model that accounts for alternative paths of acquisition should direct treatment approaches. Fundamental to panic disorder is the manner in which somatic responses are processed cognitively. Rapee (1997) also suggested that, as somatic symptoms of panic are processed cognitively, exposure treatment requires both cognitive and emotional processing (see also Reiss & McNally, 1985).

Thus, a cognitive behavioural model of treatment for music performance anxiety will need to include exposure to the feared performance context, thoughts and symptoms; incorporation of distress tolerance techniques; and cognitive techniques to identify and restructure contributing cognitions. It may also be necessary to address the

specific technical, musical or conceptual skills that underlie the experience of symptoms.

2.5 Emotion-based Models of Anxiety

Critiques of cognitive explanations for anxiety argue that emotion and consciousness have not been afforded due regard. Barlow (2002) proposed a three-factor emotional model of anxiety. The first factor is generalised inherited anxiety, or biological vulnerability. Second, psychological vulnerability may be the result of high parental expectations and limited guidance in how to achieve excellence. Finally Barlow (2002) suggested that phobias may be the result of debilitating specific psychological experiences either conditioned or learnt vicariously. These factors may increase an individual's risk for developing a generalised anxiety disorder.

Osborne and Kenny (2008) found that negative memories of a performance, reinforced by negative cognitions, resulted in self-reports of elevated music performance anxiety. Barlow (2002) linked anxiety to emotional responses and uncontrollability, and suggested that emotional memory can lead to anticipatory anxiety for future events.

Barlow (2002) described the physiological responses of anxiety as akin to the fight/flight/freeze defensive responses defined by Cannon (1929). Porges' (2001) polyvagal theory suggests that the autonomic system operates as a series of opposing functions responding to varying situations. These neural circuits are ordered by their evolutionary development (Porges, 2001), while intensity of threat determines which network will be activated (Kenny, 2011). One such system deals with social interaction, and is linked to the hypothalamic-pituitary-adrenal axis, which controls the release of stress hormones (Kenny, 2011).

In response to a stressor, the body releases the neuro-transmitter, corticotropin, which stimulates production of adrenocorticotropin in the pituitary gland. The adrenal glands then send a cascade of cortisol throughout the body to prepare for the anticipated threat (Lupien et al., 2004). Cortisol elevation results in emotional and cognitive reaction, and affects learning and memory (Lupien, Maheu, Fiocco & Schramek, 2007). This is an adaptive reaction, and evaluative situations can activate this physiological response.

2.6 Kenny's (2009) Emotion-based Theoretical Model of Music

Performance Anxiety

To date, Kenny's (2009) theoretical model of music performance anxiety is perhaps the most comprehensive explanation for music performance anxiety; it encapsulates important aspects of all the major theoretical explanations for anxiety. Kenny's (2009) model uses Barlow's (2002) model as a conceptual framework for explaining music performance anxiety. It also suggests alternative pathways through which an individual can develop the condition, and provides a theoretical framework from which existing treatment protocols can be adapted to address the symptoms.

In this model, 'true alarms' are autonomic responses preparing an individual for fight, flight or freeze in life-threatening situations (Cannon, 1929). 'False alarms' evoke the same type of panic reaction, but are responses to non-life-threatening triggers. 'False alarms' may be the result of conditioning episodes (classical, operant or vicarious) in individuals who, as Barlow (2000) suggested, have high trait anxiety and underlying psychological vulnerability.

A music performance triggering an extreme emotional reaction has the potential to become a conditioned stimulus. When an alarm is triggered contiguously with a

performance, or a performance is perceived as unsuccessful, negative conditioning to the performing experience may ensue. Anxious apprehension about future performances, and resulting anticipation of somatic, cognitive and behavioural symptoms, can result in a cyclic repetition of debilitating alarm prior to a performance. A physiological response to stress may occur in a situation that is unpredictable and in which an individual feels they lack control (Kenny, 2009).

By these means, a compromised performance may become a focus of anticipatory dread for subsequent performances, resulting in successively impaired performances, and the development of more severe forms of music performance anxiety. The release of circulating stress hormones enhances coding for strong emotional memory by interacting with neurotransmitters in the amygdala and hippocampus (Lupien et al., 2007). This neuro-physiological process intensifies ‘flashbulb’ memories of emotive situations, and may explain the ease with which focal music performance anxiety can develop (Lupien et al., 2007).

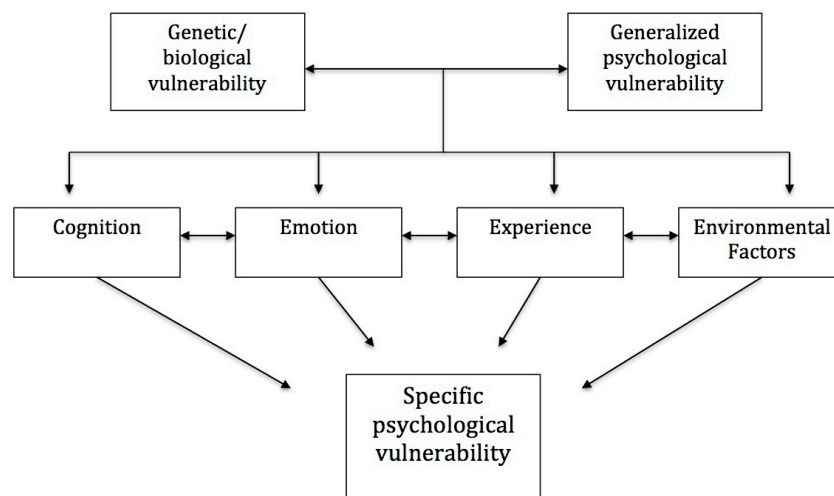
Alternatively, ‘false alarms’ may occur in individuals who have an existing vulnerability, including co-morbid anxiety conditions. Even when the performance is unimpaired, these individuals will experience symptoms of music performance anxiety as a result of their underlying condition. In contrast, a successful performance that is accompanied by an attenuation of symptoms may diminish the potency of the conditioned stimulus over time, if performances continue to be positive experiences.

Evidence has been presented for conditioning as a causal factor in both performance anxiety and social anxiety disorder (Hackmann, Clark & McManus, 2000; Stemberger, Turner, Beidel & Calhoun, 1995). Individuals who report music performance anxiety also report underlying negative cognitions. For example, both Ellis

(1962) and Tobacyk and Downs (1986) found that questionnaire scores on elevated threat and irrational beliefs were predictive of higher state anxiety scores prior to performance. Likewise, participants who endorsed the likelihood and consequences of negative evaluation had more elevated scores of music performance anxiety than those low in music performance anxiety (Osborne & Franklin, 2002). Liston et al. (2003) also found that catastrophic cognitions were predictive of music performance anxiety. Baker (2005) found that cognitions more aptly predicted high and low music performance anxiety than did physiological measures (cortisol elevation). Osborne and Kenny (2008) also found that negative memories of a performance, reinforced by negative cognitions, resulted in self-reports of elevated music performance anxiety.

2.7 Summary of Theoretical Models

In evaluating the aetiology of music performance anxiety and relevant theoretical models of anxiety, a unity of theme emerges in that underlying causation appears to be the result of a complex interplay and reciprocity between factors (Kenny, 2011). Thus an individual's genetic or biological make-up interacts with intra-personal factors, such as cognition and emotion; likewise, experiences, environmental factors and respondent behaviours contribute to the development and maintenance of anxious appraisal. Each factor is cumulative to the eventual development of an anxiety disorder (Bandura, 1991).



Adapted from Kenny, 2011

Figure 1. Theoretical model of music performance anxiety.

2.8 Anxiety Treatments

Meta-analytical research has shown that CBT is currently best practice for the treatment of unipolar depression, generalised anxiety disorder, panic disorder with or without agoraphobia, social phobia and post-traumatic stress disorder (Borkovec & Ruscio, 2001; Butler et al., 2006; Covin, Ouimet, Seeds & Dozois, 2008; Gould et al., 1997; Norton & Price, 2007). This treatment modality delivers psycho-education for anxiety aetiology, while relaxation exercises, including breathing and progressive muscle relaxation, target the somatic symptoms. Cognitive restructuring is used to explore and challenge the thought patterns that contribute to the condition. Exposure techniques are also implemented according to the anxiety condition. Graded exposure, using imaginal, in vivo and interoceptive techniques, is utilised to habituate an individual to the feared situation, object or stimulus.

CBT encourages teamwork between clinician and client, and provides established, goal-oriented, sequential intervention (Hofmann & Asmundson, 2008).

Manual-based treatments have been empirically tested across a large participant base, and support clinicians and clients with worksheets, homework and follow-up activities (Hofmann & Asmundson, 2008). Use of a manual also supports a consistent treatment approach across time and client populations.

2.8.1 Anxiety sensitivity

Anxiety sensitivity, or fear of the symptoms of anxiety, appears to be a significant risk factor for the development of anxiety-related disorders (Watt & Stewart, 2008). Individuals who experience elevated anxiety sensitivity will seek to avoid or remove themselves from situations or activities that increase arousal (Sabourin et al., 2011). Anxiety sensitivity treatment specifically targets physiological symptoms and provides relaxation techniques.

Maltby (2001) randomly assigned 75 participants demonstrating elevated anxiety sensitivity to a single-session treatment protocol. Participants were assigned either to a control, an education-only condition, or the treatment condition. While both education and treatment groups demonstrated reduced anxiety sensitivity, only 10% of the treatment group had developed panic disorder compared to 23% of the control group at 12-month follow-up.

Using a five-hour workshop format presenting psycho-education, interoceptive exposure and relaxation techniques, Gardenswartz and Craske (2001) demonstrated that participants were less likely than controls to develop panic disorder over the following six months. Schmidt et al. (2006) trialled a brief 40-minute audio-visual computer presentation intervention designed to decrease anxiety sensitivity. Results indicated that the treatment group displayed fewer psychiatric diagnoses in the follow-up period.

Watt and Stewart (2008) included physical activities such as running on the spot (to elevate heart rate and thus duplicate a symptom of panic) in a three-day intervention for clinically elevated levels of anxiety sensitivity. Participation in the programme resulted in overall decreases in anxiety and particularly anxiety sensitivity.

2.9 From Research to Community Settings

Issues requiring consideration in anxiety treatment studies generally relate to differences between the efficacy of a treatment in a controlled research environment and its efficacy when applied to the much less homogenous community setting. In general, many efficacy studies have demonstrated significant treatment effects when interventions are administered to research participants who have been screened for co-morbidity and other confounding variables such as personality disorders (Kenny, 2011). In these studies, internal validity has been achieved by applying exclusion criteria that do not reflect the more heterogeneous nature of a community population (Borkovec & Castonguay, 1998).

Consequently, evaluations of treatment efficacy operate on the ‘pure’ manifestation of the disorder being considered. However, co-morbidities have been shown to be prevalent in anxiety disorders. The presence of co-morbidities results in lessened treatment effect (van Balkom et al., 2008).

2.10 Treatment for Music Performance Anxiety

The overall treatment literature for music performance anxiety is limited, piecemeal and inconsistent across assessments (Brugués, 2011). There is still a need for a synthesis in definition and choice of outcome measures (Kenny, 2011). Kenny (2005, 2011) noted that larger sample sizes and a wider range of tools across cognitive, behavioural and physiological measures are necessary. Many studies also lack empirical

rigour, and sample sizes are small and homogeneous (Brugués, 2011). Treatment studies in music performance anxiety also must conform to the conventions of evidence-based practice (2007; Brugués, 2011; Kenny, 2011). A brief overview of treatment studies to date follows.

2.10.1 Psychoanalytic approaches

Nagel (2004) and Kenny (2011) concurred that music performance anxiety is in part a symptomatic reflection of the degree of adversity in a musician's life history, particularly attachment ruptures in early childhood. Treatment in this modality assists the musician to explore relevant family-of-origin issues that have resulted in the development of unconscious defences that protect the individual against re-experiencing the pain of the original attachment ruptures. While there is currently no empirical evidence to attest to the effectiveness of psychoanalysis for music performance anxiety, Kenny (2011) suggested that attachment theory may be a useful means of explaining severe music performance anxiety. Early relational experiences, and most particularly the quality of attachment experiences, may be the defining point for all subsequent behaviours, beliefs, emotions and relationships (Kenny, 2011).

For those musicians who present with severe symptomology, Kenny (2011) posited that attachment-informed psychodynamic psychotherapies may offer the most efficacious treatment. A recent paper provided a case study example of the successful implementation of Intensive Short-Term Dynamic Psychotherapy for a professional musician with severe music performance anxiety (Kenny, Arthey & Abbass, 2014). The authors suggested that further research may be required to replicate the promising outcome of this single case.

2.10.2 Behavioural treatments

Behavioural treatment approaches focus on changing dysfunctional behaviours resulting from anxiety (Kenny, 2004). The performance situation is imagined in steps or as a fear hierarchy while relaxation is implemented, often focusing on relaxing muscle tension. After imaginal desensitisation, in vivo or situational application is implemented.

To date, techniques such as systematic desensitisation, progressive muscle relaxation, self-instruction, attention-focusing, breathing relaxation and improvisation, guided imagery and differential relaxation using biofeedback have demonstrated success in reducing cognitive and physiological symptoms, allowing some improvements in performance quality (Appel, 1976; Esplen & Hadnett, 1999; Kim, 2005; Grishman, 1989; Irvine & LeVine, 1981; LeVine & Irvine, 1984; Norton, MacLean & Wachna, 1978; Wardle, 1975). Salmon (1990) reflected that modality-specific behavioural treatments reflect support for Lang's (1985) three-system model. In existing studies on these treatments, sample sizes have been small (6 to 41) and either extremely homogeneous or diverse, with alternating session lengths and different measurement scales. Kenny (2005) concluded that more research with greater statistical power is necessary to reach definitive conclusions as to the effectiveness of behavioural treatments.

2.10.3 Cognitive treatments

Underlying maladaptive behaviours are based on problematic thinking patterns (Kenny, 2004). Cognitive therapy seeks to replace negative or catastrophic thinking with more rational perceptions. Patston (1996) compared cognitive treatments (positive self-talk strategies) with a control treatment using physiological strategies (walking) in

sample of 17 opera singers. No significant differences were found between groups in this small and homogeneous sample. However, Kenny (2005) commented that the study lacked statistical power and had poor intervention integrity.

2.10.3.1 *Cognitive behavioural therapy (CBT)*

Treatment seeks to integrate cognitive and behavioural interventions to identify, examine and replace maladaptive thoughts and behaviours. In a sample of 49 piano students, Sweeney and Horan (1982) delivered a cue-controlled relaxation treatment, a cognitive restructuring treatment, a combination treatment of controlled relaxation and cognitive restructuring, and a control score analysis treatment across four groups. Results showed decreased anxiety and increased performance quality across treatment groups. The cue-controlled relaxation group and combination groups were equally effective, and slightly more so than the cognitive restructuring group, with no significant increase in efficacy for the combined treatment group.

Kendrick et al. (1982) administered two treatments allocated randomly across a group of 53 piano students identifying with music performance anxiety. The CBT treatment included self-instruction, attention and focusing components, and was compared to a behavioural rehearsal intervention. Behavioural rehearsal resulted in greater improvement on the Performance Anxiety Self-Statement Scale (PASS) and also improvement in performance quality and visual signs of performance anxiety. However, participants who received the CBT intervention demonstrated elevated scores on the Expectations of Personal Efficacy scale.

In a randomised study of 17 students, Harris (1987) implemented six-weekly two-hour treatment sessions using relaxation training, imagery, behavioural rehearsal

and self-instruction. Treatment resulted in decreased levels of performance anxiety post treatment and at follow-up, and state anxiety at post-treatment (Harris, 1987).

Roland (1993) conducted two studies using CBT treatments. Twenty-five music students received either self-instruction, progressive muscle relaxation or a combination of both treatments. The combination group demonstrated improvements on the Music Performance Anxiety Self-Statement Scale (MPASS; Roland, 1993) post-treatment and at follow-up. The self-instruction group demonstrated pre- and post-test improvement, while the muscle relaxation group showed pre- and post-test and follow-up improvement on the performance quality measure.

In a second study, Roland (1993) compared a standard CBT treatment with a modified treatment that included pre-performance routines and visual rehearsal. There was no difference between treatment groups; however, when results of the intervention groups were compared with controls, there were decreases in state anxiety, scores on the MPASS and self-efficacy. There was no correlating increase in performance quality, although unexpectedly, the control group exhibited decreased anticipatory heart rate prior to performance.

Other studies delivering CBT treatments to adult musicians have shown success in reducing levels of music performance anxiety (Buswell, 2006; Connolly & Williamon, 2004). These treatments have included exploring self-defeating self-talk and replacing it with more positive and adaptive suggestions. A pilot study delivering CBT treatment to a sample of gifted secondary students found that all participants reported reduced music performance anxiety; significant decreases were reported when programme adherence was greater (Osborne et al., 2007). Most recently, Braden, Osborne and Wilson (2015) demonstrated significant decreases in self-reported anxiety

in a sample of 62 adolescent musicians after CBT treatment. This treatment, delivered via group format, included psycho-education, cognitive restructuring and relaxation techniques. Additional components of this treatment included identification of strengths, imagery, goal setting and visualisation.

2.10.3.2 *Anxiety sensitivity*

To date, only one empirical study has explored associations between anxiety sensitivity and music performance anxiety, and there have been no treatment studies. However, Stephenson and Quarrier (2005) found that elevated anxiety sensitivity was a greater risk factor for performance anxiety than trait anxiety. They also found that concerns around cognition ('I am losing control/going mad') more accurately predicted music performance anxiety than physiological sensitivity, and that men feared losing cognitive control, while women associated physical symptoms (e.g., respiratory and cardiovascular) with performance anxiety. Likewise, anxiety sensitivity was more predictive of performance anxiety in females than in males. These findings suggest that anxiety sensitivity treatment may be an appropriate treatment modality for musicians.

2.10.3.3 *Brief group treatments for music performance anxiety*

Control trials for group-based treatment interventions for anxiety disorders have been conducted in research settings (Braga, Cordioli, Niederauer & Manfro, 2005, Erickson, Janeck & Tallman, 2007). Group interventions limit costs and thus are potentially able to provide treatment to a wider demographic (Tucker & Oei, 2007; Oei & Dingle, 2008). McEvoy and Nathan (2007) conducted a group CBT programme for social anxiety disorder in a community setting with 153 participants. The study explored the generalisability of the treatment from research to community setting. One third of participants reported symptom change that was clinically significant, while one

half demonstrated some level of symptom improvement. Following group treatment for social phobia in the community setting, Gaston, Abbott, Rapee, and Neary (2006) were able to demonstrate symptomatic relief for participants reporting panic disorder.

The symptoms of music performance anxiety are experienced in the presence of others (e.g., audience, evaluators), thus treatments that utilise group members as audiences make intuitive sense. Sharing experiences and gaining participant support may be integral to normalising symptoms. Likewise, treatments that incorporate techniques of exposure allow group members to operate both as participant and as practice audience.

Crome and Baillie (2014) suggested that performance anxiety is commonly experienced by non-pathological populations, and should not attract a social anxiety disorder diagnosis. A brief, targeted exposure treatment is a recommended treatment protocol (Crome & Baillie, 2014). Kenny (2011) proposed that music performance anxiety may be a multidimensional condition with diverse underlying causes; others have posited that music performance anxiety presents across a continuum of mild to severe symptoms. Some individuals may require a one-on-one approach to treatment (Kenny, Arthey & Abbass, 2014). However, for others, a group treatment workshop may offer an introduction to treatment, or an effective treatment in itself.

Chapter 3: Measuring Music Performance Anxiety

There are discrepancies in the literature in views as to how best to measure music performance anxiety (Kenny, 2011). Results from behavioural observations, performance quality, physiological data and self-report measures are often divergent (Lang, Cuthbert & Bradley, 1989). This reflects the complex nature of measuring an artistic endeavour that requires aesthetic, intellectual, physical and muscular skills to interact and co-ordinate simultaneously to create aesthetic appeal. An individual experiencing music performance anxiety may report symptoms across any one or all of these domains. Thus Kenny (2011) recommended that data be collected across a range of different measures to produce the most effective characterisation of music performance anxiety. Co-morbidity with other psychological disorders is also of interest.

3.1 Self-Report Assessment

Self-report tools are cost-effective, provide effective methods of measuring symptom severity, and can differentiate between clinical and non-clinical levels while discriminating between disorders (Schniering et al., 2000). Self-report measures also provide additional and/or convergent information when evaluated alongside other data sources. When repeated at intervals throughout a study, self-report tools provide a measure of both treatment gains and symptom changes during treatment and at follow-up assessment (Barlow, 2002).

The K-MPAI provides a comprehensive self-report tool that assesses anxiety, tension, memory and cognitions with specific reference to an individual's personal experience (Barbar, Crippa & Osório, 2014). In an assessment study of this tool with a sample of 230 adult musicians, it was found to have discriminative validity. It

demonstrates the ability to screen for elevated levels of music performance anxiety and can be used in association with other validated measures of anxiety and depression. Thus it is able to provide valuable information as to the severity of symptoms and the manner in which they manifest in performance (Barbar, Crippa & Osório, 2014).

3.2 Performance Quality

To assess performance quality, it is necessary to operationalise assessment validity and reliability. Quantifying a subjective response to artistic expression presents challenges. Traditional arguments against such quantification have posited that objectivity is not possible when evaluating a work of art, and that subjectivity and intuition are necessary parts of the evaluative process (Kokotsaki, Davidson & Coimbra, 2001; Stanley, Brooker & Gilbert, 2002). However, as accountability for educational outcomes has dominated teaching and learning, there has been increased focus on establishing an empirical methodology for ensuring consistent marking, both across performances and between expert judges (McPherson & Thompson, 1998; Thompson & Williamon, 2003). Historically, performance quality has been assessed by a mixture of established practice and the innate responses of evaluators (Davidson & Coimbra, 2001).

In a review of the literature, McPherson and Thompson (1998) concluded that there was a need for clarification of quality measurement tools in musical contexts, while cultural biases also merited investigation. Subsequently, Thompson and Williamon (2003) recommended that psychological studies employing existing educational scales apply greater rigour in empirical testing.

Conservatorium practice has traditionally relied on the expert opinions of examiners using a personal and often undefined set of expectations to arrive at a

‘global’ subjective response to a performance (Stanley, Brooker & Gilbert, 2002).

Advocates of this holistic approach suggest that segmenting artistic endeavour into a series of smaller technical constructs does not allow for recognition of the artistic effect of a performance. Thus, a performance lacking technical perfection but expressing intrinsic artistic quality could be given lower ranking in comparison to a more pedestrian but technically accurate performance (Stanley et al., 2002).

Fiske (1977) and Mills (1991), for example, advocated for such a holistic approach. Conversely, Saunders (1993) suggested that ‘criteria-specific’ rating scales achieve greater reliability than global scales. Thompson and Williamon (2003) achieved inter-rater reliability by implementing limited subscales and a global measure.

Examination boards use rigorous criteria to select qualified examiners and provide ongoing training for examiners (McCormick & McPherson, 2003).

Comparisons of examiners’ marking are employed to maintain consistent results across different syllabi (McCormick & McPherson, 2003; Thompson & Williamon, 2003).

Wapnick et al. (1993) assessed expert judges’ marking for reliability. They reported that reliability was not significantly related to whether the examiner played the instrument being assessed, the performance skill of the assessor, whether the performance was live or recorded, or whether judges were following the musical score. Winter (1993) found of a sample of qualified musicians and educators that the most consistent evaluators were those who had training in assessment. Thus, expert judges who had attended training courses and were experienced in assessment demonstrated greater understanding of the criteria and were more confident in their assessments (Winter, 1993).

Some studies have assessed performance quality by utilising grades awarded in performance examinations (Kokotsaki & Davidson, 2003; McCormick & McPherson, 2003). In this method, the assessment of performance quality is provided by one examiner. However, Shedler et al. (1993) recommended that confidence in grading be achieved by having an additional expert judge co-rate a proportion of performances.

Another approach, used by Miller and Chesky (2003), involves multiple modalities, whereby students, teachers and jury assessments of performance quality are compared to self-report measures of music performance anxiety. In Miller and Chesky's (2003) study, students tended to rate their performance quality at a lower level than did their teachers, yet teachers underestimated their students' levels of anxiety. Similarly, Bergee (2007) found that self-evaluations, peer evaluations and faculty evaluations were not concordant. Thus self-evaluations may not reliably describe the quality of a performance. Braden, Osborne and Wilson (2015) found that, despite reporting decreased music performance anxiety, a sample of adolescent musicians did not demonstrate increased performance quality when assessed by two expert judges across three performance situations (baseline, post-treatment and at two-month follow-up).

As the community musician population overlaps with that of performance exam candidates, criteria commonly applied by examining bodies would appear to be appropriate assessment criteria for this population. Despite limited current literature on performance evaluation and a lack of psychometrically proven instruments, there is concordance that musicians and educators trained in assessment provide the most reliable assessment of performance quality. Thus it is suggested that by using experienced expert judges, testing for inter-rater reliability, and applying criteria-based

assessment for performance quality, confidence in study transparency can be established.

3.3 Summary of Measurement Tools for Music Performance Anxiety

Measurement tools and treatment protocols for music performance anxiety have been either generic or idiosyncratic to specific instrumental categories or samples (Brugués, 2013; Kenny, 2011). The development of the K-MPAI provided a welcome contribution to the assessment of music performance anxiety and investigations of its underlying aetiology. Data collection across a range of self-report measures and objective measures of performance quality will provide comprehensive baseline profiles, associations between co-morbidities and measurement of intervention outcomes to complement the K-MPAI.

3.4 Research Aims and Study Hypothesis

In a review of the epidemiology of music performance anxiety, Brugués (2011) found that current literature had limited sample sizes and concentrated on homogenous populations and specific age groups. Brugués (2011) also reflected that many studies focused only on professional and advanced undergraduate and postgraduate level musicians. To date, little research has been devoted to the hundreds of thousands of musicians who participate in music making at a community or amateur level (McCormick & McPherson, 2003).

For the purposes of this research a community musician may be defined as a volunteer, amateur or semi-professional musician whose music making is not for profit. This is a broader definition than that used by music therapy profession, which more narrowly defines community musicians as professionals who apply their skills to promote healing, health and wellbeing and often work with a clinical population.

Community music making builds identity, enriches social and emotional bonds and enhances quality of life and psychological health (Hallum, 2010; Langston & Barrett, 2008; Olseng, 1990). Community music making is characterised by accessibility, equal opportunity, and active participation in the process of making music (Olseng, 1990).

Up to 20% of the Australian school-age population and 15% of adults play a musical instrument (ABS, 2010, p.1). Of these musicians, 90% participate in music making activities as a hobby and engage in personal practice, rehearsals, group music making, and performance activities four to five times per week (ABS, 2010).

Community musicians participate in orchestras, brass and military bands, choirs, church groups and garage bands. They may also be involved in folk groups, jam sessions, bluegrass festivals, and public singing events. Community music groups are generally not linked to formal centres of pedagogy such as conservatoria, universities, or schools. They tend to rehearse regularly with a group, and give periodic public performances within the community (*Sound Links*, 2009).

Professional musicians, tertiary students and teenage populations attending selective performing arts high schools) are more likely to focus their daily activities around their musical life. In contrast, the community musician must balance their music making around other aspects of life. They may be less likely to be technically, cognitively or emotionally prepared for performance. Musicians with greater exposure to performance, enhanced technical skill and/or superlative ability may develop the capacity to play through debilitating symptoms despite experiencing elevations in anxiety.

The literature is contradictory in this area. Some studies have shown that higher levels of professional performance experience and years playing an instrument result in

decreased music performance anxiety (Huston, 2001; Steiner, 1998). Likewise, musicians with higher levels of formal training and more advanced technique have also been shown to demonstrate elevated performance quality irrespective of elevated anxiety (Kokotsaki & Davidson, 2003). However, other studies have found that neither age nor experience are associated with decreased levels of music performance anxiety (Brotons, 1994; Cox & Kenardy, 1993; Wolfe, 1989).

Music performance anxiety can result in community musicians avoiding performing or giving up their musical pastimes (St George, 2004). Halls (2011) found that the majority of a sample of 25 community musicians did not endorse the statement, 'I remain committed to performing even though it causes me great anxiety' (K-MPAI). However, 60% of the sample agreed or strongly agreed with the statement, 'I am concerned about being scrutinised by others' (K-MPAI).

It is possible that the experience of music performance anxiety is qualitatively different between community musicians and the professional and tertiary populations. Performance breakdowns, escalated physiological symptoms and major lapses in technique and fluency have often been reported anecdotally to the researcher. Focus on the community population and the development of targeted treatment protocols for this population may be timely.

Consequently, the purpose of this preliminary study was to develop, deliver and evaluate two brief group treatments for music performance anxiety for community musicians. The popularity and benefits of community music making and the magnitude of its population of practitioners justify this focus. It was anticipated that this research would contribute to closing gaps in the literature identified by Brugués (2011).

A pilot trial of both treatments was first delivered to a small representative sample. Following this trial, and subsequent refinement to treatment protocols, a quasi-experimental group randomisation design was used to examine the comparative outcomes of the two treatments on a heterogeneous sample of community musicians. Measures included self-report surveys and expert judge ratings of performance quality.

The study aimed to determine whether implementing a brief group-based performance anxiety treatment would result in reduced anxiety and increased performance quality. It was hypothesised that, for both treatments, pre-performance anxiety would decrease and performance quality would improve compared to an individual's baseline performance following treatment and at follow-up. This preliminary study also aimed to investigate whether there were differences in measurement outcomes between the two treatments.

Chapter 4: Method

4.1 Design and Ethical Approval

This study aimed to develop and evaluate two brief group-based treatments for music performance anxiety. The study included a pilot and a main study. The main study employed a quasi-experimental group randomisation design, utilising a crossover approach where, prior to receiving treatment, each participant received a placebo treatment, which also served as a control. The Human Research Ethics Committee (HREC) at Macquarie University approved this research study. All participants gave written consent to participate in all components of the research. All treatment workshops were conducted between 31 August 2013 and 15 November 2013, mostly on weekend days and during the September–October school holidays (see Appendix A).

4.2 Description of the Treatment Protocols

4.2.1 Brief Online Supported Cognitive Behavioural Therapy for Music

Performance Anxiety

This CBT treatment was based upon the Macquarie University programme, *Chilled* (Rapee et al., 2006). *Chilled* is an empirically proven anxiety treatment originally developed for broad-based anxiety disorders in young people (Rapee et al., 2006). It is a group treatment programme administered by trained clinicians to young people who are either prodromal or exhibiting anxiety symptoms. Mifsud and Rapee (2005) found a significant treatment response in 95 participants meeting diagnostic criteria for anxiety after completing the programme, at both three- and four-month follow-up. Components of the *Chilled* programme relevant to the treatment of music performance anxiety include psycho-education, motivation and goal setting, avoidance,

the establishment of exposure hierarchies, managing emotion through emotion surfing and cognitive restructuring.

The researcher, with permission from the principal author of *Chilled*, adapted and further developed the intervention manual to target music performance anxiety. The researcher consulted with Dr Carolyn Schniering, one of the authors of *Chilled*, as the manual was adapted and further developed for music performance anxiety. Key adaptations to the manual for the treatment of music performance anxiety included: development of psycho-education about the nature of music performance anxiety; affect recognition; identification of thinking styles; cognitive restructuring; and an introduction to the concept of exposure using the stepladder approach presented in the *Chilled* manual (see Appendix B).

Exposure tasks were introduced on the workshop treatment day, but implementation of the exposure tasks by participants was undertaken in vivo in the three weeks following the programme. Participants were informed on the workshop treatment day that they were welcome to email suggested stepladder exposure tasks to the researcher between that day and follow-up data collection. Only two participants emailed exposure hierarchies to the researcher.

The treatment consisted of four sessions of equal length delivered across one workshop treatment day. The treatment day was followed by three weeks of suggested activities implemented by the participant (in the form of a take-home workbook with homework activities), but supported online by the researcher when required. The workbook provided reading on specific topics and selected tasks to reinforce the learning.

4.2.2 Anxiety sensitivity

The anxiety sensitivity (AS) treatment was developed by the researcher. The treatment targets the physiological symptoms of music performance anxiety and is based on a protocol developed by Gardenswartz and Craske (2001). Elevated anxiety sensitivity has been associated with the development of panic disorder, and Gardenswartz and Craske (2001) posited that a targeted, brief intervention addressing this factor would reduce the risk of the onset of panic disorder. In their original study, after treatment, participants were less likely to develop panic disorder in the following six months (Gardenswartz & Craske, 2001).

The original protocol was delivered in one day across five hours. The music performance adaptation in the present study was delivered as a didactic workshop consisting of four sessions of equal length, also delivered in one day (see Appendix C). The workshop content included psycho-education about the nature of anxiety, breathing retraining, and a brief progressive muscle relaxation session. Participants were introduced to interoceptive exposure techniques to mimic symptomology (running up and down on the spot, hyperventilation, holding breath, breathing through a straw). Participants then repeated these exercises, followed immediately by playing brief excerpts of music (several notes, scales) to experience their symptoms in vivo. Participants were also introduced to the concept of using self-assessment methods such as subjective units of distress (SUDS; Wolpe & Lazarus, 1966) to track their progress, and were encouraged to continue practicing these exercises in vivo over the following weeks.

4.3 Pilot Study

4.3.1 Pilot testing of treatment protocols

Prior to the beginning of the main study, the treatment protocols were subjected to pilot testing with a small representative sample of community musicians. This was to ascertain treatment efficacy and evaluate appropriate timings for each session.

4.3.2 Recruitment

Recruitment for the pilot study commenced in February 2013 and was completed by the end of May 2013. Five participants were the students of a woodwind teacher who attended an AMEB workshop in May 2013. Following a presentation by the researcher outlining the study at this workshop, the teacher approached the researcher and asked whether these students could be involved. The other five participants were students of Penrith Conservatorium who had responded to an email sent to all teachers at the Conservatorium in February 2013. This email outlined the study and asked for participants to participate in a trial of the interventions.

4.3.3 Participants

The sample for the pilot study consisted of 10 community musicians and singers from Penrith Conservatorium and a private music studio in the west of Sydney. They were aged between 16 and 41 years old (nine females and one male, mean age = 28.50, $SD = 15.92$). Of the 10 participants, five played wind instruments, two were pianists and three were vocalists. Participants had between 3 and 33 years of playing experience and skill levels ranged from third to seventh grade standard (AMEB). Six participants described their involvement in music making as a hobby and three indicated they may like to be professional one day, while one participant identified performance, teaching or a combination as their professional aspiration.

4.3.4 Procedure

Participants for the pilot study were randomly allocated to one of the two treatment groups (CBT or AS). Randomisation was conducted by a manual method: participant names were written individually on small pieces of paper and scrunched up with names not in view. These were placed in a container, mixed, and then removed one by one to be placed alternately in one of two containers representing the two treatments.

In the pilot study, both treatments were conducted across five sessions at weekly intervals (one placebo treatment and four treatment sessions). The first treatment ran between 5:00 and 6:00 p.m. on 15, 22 and 29 July and 5 August 2013, with a final treatment day on 12 August 2013. The second treatment was administered on the same dates between 7:00 and 8:00 p.m. Both pilot treatments were conducted in an ensemble room of the Joan Sutherland Performing Arts Centre in Penrith. The space comfortably seated all individuals, and the studio piano, a Kawai studio upright (K-600) was used by the pianists while the instrumentalists provided their own instruments. Follow-up data was collected two weeks after treatment cessation on 19 August. Collection of follow-up data had to be moved two weeks earlier than planned due to the lack of availability of four of the participants.

The pilot study was necessary to check the timing of sessions in the study protocols, to examine the feasibility of delivering the treatments in four short increments, and to gain feedback on the CBT workbook. The procedure for the pilot study and the assessment measures were as outlined in the procedures for the main study, with four exceptions. First, during the pilot study, three participants missed sessions due to illness, school and work requirements. Second, as a consequence of the missed sessions, and to adhere to research protocols, the researcher attended sessions

early on three occasions and individually administered missed treatment sessions to the participants who had not been able to attend the previous session. There was consequent concern that providing individual ‘catch-up’ sessions breached protocol conditions.

Third, participants in the pilot study who were treated with the CBT treatment did not receive the workbook as an integrated whole. Rather, notes from each session were provided to participants as a weekly hand-out to be kept in a loose-leaf folder provided by the researcher. This method allowed for ongoing editing of manual content throughout the protocol trial. Finally, session lengths were 15 minutes longer than the main study sessions. Given that participants were arriving from work and after-school activities, this allowed some leeway on either side of each session.

4.3.5 Evaluation of the pilot study

As a result of the pilot study and the difficulties that participants had in attending weekly sessions, it was decided that the intervention in the main study would be delivered in a one-day workshop format. In an informal discussion at the conclusion of the pilot study, participants indicated that they would have found it easier to attend one longer treatment day, rather than weekly sessions. This also reflected ongoing discussions with interested participants for the main study, and the complex organisation required in providing treatment across a wide geographic area.

The AS treatment protocol consisted of an adaptation of a one-day workshop didactic model, and the purpose of the study was to develop a brief, targeted intervention. Consequently, it seemed appropriate to adhere to this model for both treatments and to deliver the treatments in one-day workshop formats for the main trial. In the pilot study, the CBT workbook was delivered as loose-leaf sessional hand-outs;

after consultation with pilot study participants, it was decided that all material would be presented in one workbook for the main study.

4.4 Main Study

4.4.1 Recruitment

To recruit participants, contact was made via emails and circulars distributed throughout New South Wales to secretaries of community bands, orchestras and choirs; studios; regional conservatoria; music teachers; and members of the Music Teachers' Association of New South Wales. The researcher also presented overviews of the proposed research at AMEB information days, Music Teachers' Association of NSW HSC Workshops and Amateur Performers Club meetings, and distributed recruitment material at the conclusion of each presentation. Short articles introducing the study were also inserted in community band and choir newsletters and an article was also written for Flute Tutor, an online flute resource site. Various industry associates of the researcher were also contacted by email with an outline of the study.

After initial recruitment for the pilot study between February and May 2013, the recruitment process for the main study ran between May and August 2013. During the recruitment process, the researcher was contacted directly by 17 participants by email, phone or text. Three music teachers contacted the researcher and requested that a treatment workshop be administered either at their studio or at a location organised by the teacher (17 participants in total were referred by their instrumental teachers). One band conductor and one band secretary requested that the researcher deliver treatment at their band halls (this resulted in 18 participants being referred by their band conductor or secretary). Eight participants who were members of an amateur performing group volunteered as a group. The remaining eight participants belonged to an orchestra

attached to a regional conservatorium, and responded to publicity about the research as a group.

During the treatment period, an additional four music teachers, another regional conservatorium and an additional amateur performance club approached the researcher for inclusion in the study. This would have increased participant numbers by approximately one third; however, as group randomisation had already taken place, the researcher was unable to include additional referrals in the study. It was noted that the treatment period was conducted concurrently with the performance exam season in New South Wales, and the need for treatment become evident as candidates approached their exams.

All potential participants were furnished with an information package. The information letter outlined the two methods of data collection: first, the completion of the self-report surveys; second, the performance and recording of a brief own-choice musical item to be assessed on four occasions (three times on treatment day and once at one-month follow-up) by expert judges, together with an additional self-report survey to be completed prior to each performance. Contact details were also included in an information letter. Participants who contacted the researcher were sent the information package directly via Australia Post, while for those participants who were referred by teachers or by their performing group, the person making initial contact was furnished with a number of packages, again sent via Australia Post.

When interested participants had been identified, it was determined that participants were geographically located around four areas of the Sydney metropolitan region (Southern Sydney, the North Shore, Western Sydney and the Blue Mountains, and Sydney Central Business District [CBD]) and two regional areas (Canberra and the

Hunter Valley). Two of the music teachers who requested treatment for their students arranged for a suitable space to conduct the treatment (a private studio in Lindfield and a church hall in Kirrawee). In the case of the two bands, the Bexley School of Arts and the Canberra City Band Hall were booked for treatment days by the band conductor (St George Brass Band) and band secretary (Canberra City Band). The Kirribilli Community Centre was booked for the treatment workshop by the President of the Amateur Performers Club. The Muswellbrook Shire Band organised to use the Upper Hunter Conservatorium of Music as a venue for a treatment workshop in the Hunter Valley. In addition, the researcher arranged for treatments to be delivered at Penrith Conservatorium; AMEB Headquarters in Clarence St, Sydney; and a private studio in the Blue Mountains. Each location was booked for two dates approximately one month apart.

To be eligible for the study, participants were required to identify themselves as a community musician or singer; report a desire to decrease levels of music performance anxiety; be willing to attend a treatment workshop day of five to six hours' duration (depending on size of group and time taken to do testing) and be assessed on a range of anxiety measures and performance quality at three points in time across the treatment day; and finally, be willing to attend for follow-up testing of state anxiety and performance quality approximately one month after treatment.

4.4.2 Participants

A sample of 68 community musicians and singers (45 females and 23 males) aged 16 to 81 years ($M = 44.51$, $SD = 15.95$) participated in the study. The sample included participants from community bands (brass and military), community choirs, regional conservatorium networks and private music studios from around New South

Wales and the Australian Capital Territory. Of the participants, 35 played wind instruments, 21 were pianists and six were vocalists. Participants had between 18 months and 69 years of musical experience, and skill levels ranged from beginner (three participants) to doctoral or postgraduate performance diploma-level semi-professionals (five participants). Most participants described their involvement in music making as a hobby. Some participants (20.6%) identified performance, teaching or a combination of both as their professional aspiration.

4.4.2.1 *Group allocation*

To randomise groups into one of the two interventions, a manual randomisation technique was employed. Specifically, each group was identified by location, and each of the 10 locations was written on a separate piece of paper (South Western Sydney, Sydney Upper North Shore, Blue Mountains, Sydney CBD, Hunter Valley, Canberra, Sydney Lower North Shore, Southern Sydney, and two locations for Western Sydney). Each piece of paper with the location name was crushed into a ball to obscure identification and placed in a container. The paper balls were then scrambled and drawn from the container and placed alternately into one of two additional containers, labelled for either the CBT or AS conditions.

4.4.2.2 *Group descriptions*

Groups 1, 4, 5, 6 and 8 were assigned the CBT treatment. Combined, these groups comprised 34 participants (8 males and 26 females aged 16 to 81). Groups 2, 3, 7, 9 and 10 were assigned to the AS treatment. Combined, these groups comprised 34 participants (15 males and 19 females aged 16 to 64). All participants completed the study. Table 1 describes the group demographics and treatments assigned.

Table 1

Group Demographics and Treatment Allocation

Group and Location	Treatment	Workshop Dates		Group Demographics			
	AS or CBT	Initial	Follow-up	Male	Female	Total	Age range (years)
1. Western Sydney	CBT	31/8	25/10	1	5	6	17–81
2. South Western Sydney	AS	7/9	16/10	7	3	10	16–63
3. Upper North Shore, Sydney	AS	15/9	27/10	4	4	8	16–64
4. Blue Mountains	CBT	22/9	27/11	0	6	6	18–62
5. CBD, Sydney	CBT	23/9	28/10	4	2	6	16–45
6. Hunter Valley	CBT	27/9	3/11	1	7	8	16–72
7. Canberra	AS	12/10	1/12	3	7	10	35–52
8. Lower North Shore, Sydney	CBT	13/10	17/11	2	6	8	48–70
9. Southern Sydney	AS	26/10	2/12	0	3	3	33–45
10. Western Sydney	AS	15/11	18/12	1	2	3	16–61

4.4.2.3 Group 1

Six participants performing on flute, baritone, piano, baritone saxophone and vocals (one performing in the classical style and one performing in Western modern style) attended for the first treatment workshop in an ensemble room of the Joan Sutherland Performing Arts Centre in Penrith, Western Sydney. The space comfortably seated 10 individuals and the piano was a Kawai studio upright (K-600).

One participant was completing Year 12, two were full-time parents, two occupied middle management positions and one was retired but did some private music teaching. Four participants regularly attended private music lessons, with the exception

of the baritone saxophone player, who performed in a community wind ensemble in the lower Blue Mountains, and the baritone player, who played with a community brass band in the upper Blue Mountains. The flautist and both vocalists were intending to present for performance exams in the following weeks or months (the flautist and classical vocalist for AMEB exams, and the popular vocalist for the HSC Music One performance exam). Participants ranged in playing standard from early beginner (baritone player of 18 months) to diploma-level AMEB standard (pianist).

4.4.2.4 *Group 2*

The 10 participants in this group comprised four trumpeters, two cornet players, two euphonium players, one pianist and one clarinetist, and attended the Bexley School of Arts to take part in the treatment workshop. Located in South Western Sydney, the School of Arts is the rehearsal space of the St George Brass Band. In a somewhat dilapidated building approximately 80 years old, the room used for the workshop seated all 10 participants, the researcher and assistant in cramped circumstances. It was uncomfortably hot and lacking in ventilation. The main ensemble room had been double booked for the day, and the afternoon sessions were accompanied by the wafting aroma of a Macedonian feast being prepared in the adjoining kitchen for a community celebration that evening. Two participants reported feeling hot and nauseated during the final session due to the lack of ventilation. The pianist was assessed in another small room in the building that served to house both the battered and unresponsive old Beale upright (model number unknown) and a collection of band instruments.

The band conductor, a young woman in her late twenties, recounted her own experience with music performance anxiety upon first contact with the researcher. As a 13 year old, as she walked on stage to perform at the State Band Solo Championships,

she experienced a food poisoning episode with catastrophic gastrointestinal symptoms. Consequently, any further attempts to perform solo had resulted in the reoccurrence of the same gastrointestinal symptoms. She reported that, as a result of her own experience, she was acutely aware of music performance anxiety in members of her band, and referred eight band members so affected to the treatment workshop.

In addition to the eight members of the St George Brass Band, a clarinettist who occupied the second chair in a Western Sydney community orchestra and was presenting for a high grade AMEB exam also participated. Despite being geographically located in the west of Sydney, she opted to attend this workshop location as it co-ordinated better with her busy schedule. One of the trumpeters was a member of the Canberra City Band, but lived in the Snowy Mountains west of Canberra. As she was overseas at the time of the Canberra workshop, she was included in this group and travelled to South Western Sydney to take part in the workshop. Both out-of-area participants were included in the group prior to random allocation of treatments.

The pianist was also a member of the brass band, but reported acute music performance anxiety when accompanying band members in the annual State Solo Championships. He reported this being most prevalent when the official accompanist, and thus professional (a senior AMEB examiner) was present at the championships, so requested treatment as a pianist.

None of the band members reported having private music lessons, while both out-of-area musicians had regular private tuition on their respective instruments. Four participants were attending school or TAFE, two were employed in administrative roles, one trumpeter earned a part-time living as a freelance musician, one was an accountant, one a retired school principal and one a primary school teacher.

Follow-up data was collected at the Bexley School of Arts on 16 October. However, two trumpeters submitted sound files and mailed self-report data, as they could not attend for this date. Playing standards ranged from third grade level to the upper grades (AMEB).

4.4.2.5 Group 3

Eight participants attended the Kirribilli Neighbourhood Centre, the meeting space for the Amateur Performers Club, situated on the Upper North Shore of Sydney. This group meets on the last Sunday of every month and provides a venue for community musicians to perform to their peers. The upper-storey room was large and airy, with picture windows and panoramic views of the Sydney Harbour Bridge. The piano was a Kawai upright and well maintained (K-600).

The researcher was invited to present a talk on music performance anxiety to the club at the August 2013 meeting. Consequently, six club members contacted the researcher to attend a treatment workshop on Sunday 15 September. A semi-professional accompanist emailed the researcher about attending a workshop in Sydney in early September, and a teaching colleague of the researcher referred a young student to the study prior to the AMEB metropolitan exam season in August. As the latter two participants resided in the northern suburbs of Sydney, they were invited to attend the workshop at this location. These participants were included in the group prior to random allocation of treatment.

There were four pianists, three vocalists and one clarinettist at the Kirribilli workshop. Playing standards for this group ranged from approximately fourth grade AMEB to postgraduate level. With the exception of the participant engaged in full-time study in secondary school, and the accompanist, the participants were employed in

information technology, media and law. Follow-up data was collected on Sunday 27 October; however, one singer sent a sound file and emailed self-report data due to being overseas on the follow-up day.

One participant experienced intense music performance anxiety and appeared to be experiencing symptoms of a panic attack prior to the first performance. The 16-year-old clarinettist vacated the treatment room rapidly prior to participants being asked to withdraw to the adjoining room to wait as the participants completed their first assessment. The research assistant located the participant in the lavatory having just experienced a vomiting episode due to anxiety. The participant was moved to a retreat room adjoining the treatment room and spoken to in a calm, slow manner by the researcher. Attention was focused on a plant in the room, and the participant was encouraged to take slow deep breaths. Recovery was achieved in approximately five minutes. However, the first performance was adversely affected and the participant was only able to present one brief passage from the prepared work. After the first performance, the participant had settled and felt well enough to remain for the remainder of the workshop. Subsequent performances were undertaken without further escalation of symptoms. During this episode, other participants were asked to remain in the treatment room and talk amongst themselves.

4.4.2.6 Group 4

Six participants attended a private music teacher's studio in the Blue Mountains for the treatment workshop. This studio is in the grounds of a Blue Mountains character cottage and is aesthetically presented with white walls and red accents, pine timber floors and soft furnishing, and has excellent acoustics. It comfortably seated the participants. The piano was a small Kawai studio upright (K-400).

The group comprised two flautists, one clarinetist, one pianist and two euphonium players. One participant was completing an undergraduate degree, a further two participants were completing postgraduate degrees in music performance (University of New South Wales and Australian Institute of Music), one was a scientist and employed in land care, one was a retired primary school teacher and one worked in a family-run business.

Two participants played in their local brass band and did not take private lessons, while the other four participants were either presenting for AMEB certificate exams or university recitals, and reported many years of private tuition. While one of the band members had only played for 18 months, other participants in this group had played for more than 10 years. Follow-up was scheduled for October, but was delayed due to ongoing bushfire emergencies in the Blue Mountains during this period (October 2013). All participants attended follow-up in November (two participants and the researcher were evacuated from their homes during this time, and it was not possible to reschedule follow-up until late November).

4.4.2.7 Group 5

Six participants attended the treatment workshop at the AMEB headquarters, Clarence St, Sydney. The examining studio housed a Kawai grand piano (GX-2) and had very good acoustics. It accommodated all six participants and the researcher with some rearrangement of the furniture.

Five participants performed on piano and one played flute. Three of the pianists were students of the fourth pianist, who was also a student enrolled in a doctoral degree in piano pedagogy through Princeton University in the United States. One participant, a pianist, was in the process of establishing a piano teaching practice on the North Shore,

and had experienced significant music performance anxiety when presenting for a licentiate diploma exam in 2012 (failure to achieve this award was attributed to music performance anxiety).

The flautist was a student of the senior lecturer in flute at Sydney Conservatorium, who recommended that treatment be sought. The approximate levels of advancement ranged from approximately grade three (AMEB) to postgraduate. Two of the participants identified as professional musicians or teachers. One participant attended an inner city secondary school, one worked as an architect, one as a pharmacist, and one was not currently employed. One participant submitted a sound file and sent self-report data via online tool due to school commitments on the follow-up day.

4.4.2.8 Group 6

Eight participants attended a workshop in Muswellbrook in the Hunter Valley of New South Wales at the Muswellbrook Regional Conservatorium. Located in a former convent, this gracious old building provides teaching facilities and rehearsal space for a variety of community groups, and is supported by an enthusiastic group of community musicians. The workshop was conducted in a small recital hall that comfortably seated all participants, researcher and assistant. The piano was a Kawai grand (GX-3) housed on a small stage directly underneath a stained glass window with a religious motif. Light streaming through this window distracted the afternoon performances of the pianists.

Five community orchestral members and three local pianists attended the workshop. Of the orchestral members, two played cello, two played clarinet and one played oboe.

Three of the participants were local music teachers, one was an equestrian veterinary specialist, one a partner in a legal practice, one a retired primary school teacher and one was in Year 11 at the local high school. Two participants were unable to attend the follow-up session due to agricultural duties; both subsequently submitted sound files and emailed self-report data for analysis.

4.4.2.9 *Group 7*

Ten participants attended the treatment workshop at the band headquarters in a former school in the suburbs of Canberra. The large room in which the workshop was conducted was cold and windowless, with parquetry floor, smudged off-white walls and uncomfortable chairs.

No participant in this group was currently engaged in private music tuition, but all had played for significant lengths of time (between 6 and 36 years). There were two euphonium players, two clarinettists, one flautist, one trumpeter, one cornet player, one bugler, one trombonist and one bass clarinettist in the sample.

The workshop occurred in the midst of a divisive time for the band. In order to elevate the performance standard, the conductor had implemented a technical exam that all band members needed to pass in order to maintain membership. This was clearly causing much tension, and the group were divided as to the efficacy of such a requirement. Consequently, while some participants attended the workshop as a problem-solving approach to the technical exam, others were very angry about the exam. Several committee members were in attendance and this led to some acrimonious exchanges between band members and office holders during the workshop. The researcher was frequently called on to mediate between the group who supported implementation of the exam, and the group who felt threatened by the changes.

This workshop ran very late. Access to the building was some 30 minutes late due to a missing key, while two participants decided ‘to go out for breakfast’ on the way to the workshop. These difficulties, as well as frequent deviation into discussion about the technical exam, meant that the workshop finished 60 minutes overtime, and the lunch break was also shortened to accommodate these delays.

It was also noted that three of the participants were morbidly obese, and the researcher was reluctant to risk their health in administering the interoceptive exercises (running on the spot). Consequently, there was some modification to these parts of the workshop (walking slowly on the spot), though all participants engaged in all activities. All but one of the participants attended the follow-up session, and the missing participant subsequently emailed data to the researcher.

Six of the 10 participants reported being employed in technical or administrative roles. One was a nurse, one retired, one held a doctorate degree in linguistics and taught English as a second language, and one was completing an undergraduate degree in music.

One participant, a woman in her early thirties, disclosed after the researcher’s introduction and prior to the placebo treatment that she had been diagnosed with a personality disorder (borderline personality disorder), bi-polar, anxiety and depression. She also listed her current medications for these conditions (anti-anxiety medication: SSRIs), became tearful, and disclosed a trauma background. It was appropriate for the researcher to spend time containing the situation while explaining that it was not possible to provide support for these issues in the context of the day’s workshop, and referral information to seek appropriate support was provided during the lunch break. The first performance was affected by these disclosures, and performance quality

assessment was perhaps not a true indication at this point. Later performances were more fluent, and the participant reported that performances were not affected by concurrent mental health conditions.

4.4.2.10 *Group 8*

Eight participants attended the treatment workshop at a private music teacher's studio on Sydney's Lower North Shore. This studio is located in the lower story of a large red brick house located in a leafy suburb. The studio accommodated all participants comfortably and was furnished with the accoutrements of a busy teaching practice (music stands, metronome, busts of famous composers, music manuscripts). The studio had both a Kawai upright (K-600) and an older Steinbach grand piano (9 foot). The pianist participants chose to perform on the grand piano.

A colleague of the researcher, this piano teacher specialises in adult pedagogy. In a recent studio concert, several of these adult students had been crippled with music performance anxiety, motivating the teacher to approach the researcher to work with these musicians. In addition, in response to publicity about the study, a further two participants had contacted the researcher and were invited to join this workshop, as they were domiciled in the adjoining geographic areas. This was planned prior to random allocation of treatment.

The group comprised five pianists, one clarinettist, one vocalist and one violinist. The clarinettist did not take private lessons; the pianist and violinist did not take lessons, but played in a trio with the music teacher, who also played cello. All had been playing in excess of 15 years, with most beginning their studies in childhood, reporting completion of advanced performance exams, followed by a break of many years. These participants had returned to their music studies in middle age and were

very devoted, sometimes practising up to three hours a day. Anecdotally, they all reported experiencing much more elevated music performance anxiety compared to their younger years.

This group included three people in medical professions (one nurse, one general practitioner and one medical consultant in a large teaching hospital). One participant was a retired businessperson and one ran an information technology company. The remaining participants reported that they were engaged in home duties. All but one participant attended the follow-up session. The participant who was unable to attend posted a compact disc recording to the researcher's address, and completed and emailed the self-assessment tool.

This was a highly vocal group, and there was much lively discussion. However, two participants arrived late. To maintain treatment protocols, the workshop thus began one hour late, and the decision to delay the start until all participants had arrived was not popular with all. The late-running start to workshop resulted in quite lively anecdotal discussion about music performance anxiety prior to the beginning of the workshop. It is unknown whether this discussion affected subsequent data collection.

4.4.2.11 *Group 9*

The three participants in this group were all violinists, and attended the workshop in a Protestant church in a southern Sydney suburb. This treatment workshop was to include an additional five participants; however, due to bushfires, extreme heat and consequent road closures in Southern Sydney, not all participants were able to attend on the designated date (26 October 2013). The researcher subsequently delivered the treatment to the five participants who were prevented from attending, but data from this group was collected too late to be included in the study.

The church was approximately 50 years old, clad externally in red brick, painted off-white on its plaster walls, and was carpeted and furnished in the usual manner of a church, with altar, pews and religious artwork. With such a small group, only the altar area of the church was used during the workshop.

The workshop was organised by a local music teacher after contacting the researcher for information about the study. The teacher was also a participant, having experienced severe music performance anxiety as a tertiary music student. The other community musicians were adult beginner students of the teacher. One student was 39, and the other was 45 years old. The teacher was aged 33. The students has been taking lessons for around 18 months, while the teacher had played for more than 15 years and completed a performance degree at Sydney Conservatorium. As well as the violin teacher, one participant was a community arts curator and the other operated a mobile hairdressing business for people in care facilities. Follow-up data was completed electronically, and all three participants emailed sound files and self-report tools to the researcher by 2 December 2013.

4.4.2.12 *Group 10*

Three participants attended the workshop in the ensemble room of the Joan Sutherland Performing Arts Centre in Penrith, Western Sydney, as described for Group 1. One clarinettist was 55, a music teacher, who was soon to present for an advanced grade AMEB exam. The second clarinettist, a beginner musician, was a retired primary school principal of 61, about to complete an early grade exam. The final participant was 16 years old and played the piano, and was also presenting for an upper grade AMEB exam.

The music teacher had attended an AMEB training day in May 2013 at which the researcher presented an overview of the research. After the presentation, the teacher contacted the researcher, wishing to have some students take part in the research. Consequently, five students of this teacher took part in the pilot study. As the teacher had been overseas during the pilot study, the researcher agreed to run an additional workshop so that the teacher could participate. An additional three participants had planned on attending the workshop; however, bushfire activity in the river land area of Western Sydney affected other participants who were also students of this teacher. The researcher subsequently delivered the treatment to these participants who were prevented from attending; however, data from this group of five people was collected too late to be included in the study.

The same Kawai upright studio piano (K-600) as was used for Group 1 was used. Subsequent data was collected on 18 December, after the participants had completed their music exams. Anecdotally, this group reported that they had all received Honours grades for their exams. They attributed their success to having completed the workshop prior to exam.

4.4.3 Procedure

In the week preceding each treatment workshop day, participants or their music teacher, band conductor, secretary or club President were reminded about the date, time and location of the workshop by email, text or telephone. Participants were requested to prepare a two- to three-minute unaccompanied recital for assessment at four points during the study: prior to control session (Performance 1), after placebo session (Performance 2), after treatment sessions (Performance 3), and at one-month follow-up (Performance 4). Participants were asked to attend treatment workshops at least 30

minutes prior to start time to complete demographic and self-report measures. These were returned to researcher or assistant on treatment day prior to Performance 1. During the 30 minutes prior to the workshop, participants were requested to scrutinise their responses carefully to locate and thus complete any missing items.

Each treatment workshop was planned to commence at 10:00 a.m. and conclude by 4:00 p.m. However, due to October bushfires, the researcher's house being threatened and subsequent road closures, treatment days in October 2013 typically began up to one hour later and consequently concluded later. This emergency also led to eight participants being unable to participate in the study as planned, and also resulted in the need to reschedule follow-up data collection during this period. Thus not all follow-ups occurred exactly four weeks after the treatment workshop as originally planned. In addition, maintaining the timetable scheduled for each workshop day was often problematic, as participants arrived late or returned late from breaks. To maintain treatment protocols, all sessions were delayed until all participants were present for each session of treatment. All participants were able to stay beyond the planned 4:00 p.m. finish time. However, several participants needed to reschedule planned activities to accommodate this, and one participant complained privately and quite bitterly about these delays, prior to his follow-up performance.

During the workshop treatment day, each participant was informed that they were welcome to email the researcher at any time between the workshop and the follow-up data collection, with queries or for additional support. Approximately 10% of the sample contacted the researcher, mostly to reflect on their response to the intervention (see Appendix D for examples).

After completing preliminary self-report tools, and at the beginning of each treatment day, participants were provided with a timetable and brief overview of the day. Participants then left the treatment room and completed the state anxiety subscale (Spielberger, Gorsuch, Lushene, Vagg & Jacobs, 1983; marked 1 for recording purposes) in an adjoining room prior to Performance 1. This instrument was utilised to assess levels of arousal prior to each performance. Participants were randomly allocated performance order by selecting a piece of paper from a container with a number on it. This number became the participant's performance position for all subsequent performances. For each performance, participants entered the treatment room, handed the completed state anxiety form (marked 1, 2 or 3, according to performance time) to the researcher and performed their brief recital. All participants used their own instruments except for pianists.

All performances were recorded audio-visually for random assessment by expert judges. Performances were recorded using an Apple iPad (version 4) attached to a RØDE iXY recording microphone. The microphone was placed approximately one metre from the sound source of each instrument according to the layout of each treatment room.

One expert judge attended and evaluated the performances in person. The second expert judge evaluated the music samples in a quiet environment utilising aural closed-back stereo headphones (Sennheiser HD 650) while viewing performances on video screen. Expert judges sat at a desk furnished with the performance quality and behavioural observation protocols and pens to record their responses. Performance assessments were recorded by circling numerical grades on the protocols during

performances. Two-minute breaks were provided between each recording to allow Judge 2 to complete each protocol.

After Performance 1, all participants returned to the treatment room and participated in a one-hour PowerPoint presentation delivered by the researcher. This presentation was designed to act as a placebo and did not include any active treatment component (see Appendix F). After the control presentation, participants were asked once again to move to the adjoining room and complete a second state anxiety subscale (Spielberger et al., 1983; marked 2 for recording purposes) prior to Performance 2. Using the previously allocated order, each participant entered the treatment room and completed Performance 2.

Following a 10-minute break, treatment sessions one, two and three of either the CBT or AS treatments were delivered. There was a 10-minute break after the first treatment session and a lunch break of 30 minutes after the second session, and all treatment sessions were concluded by mid- to late afternoon. Following the final treatment session, participants withdrew to an adjoining room to fill in a third state anxiety inventory (Spielberger et al., 1983; marked 3 for recording purposes) and individually completed Performance 3 in the treatment room in the already-established order. At the conclusion of each treatment workshop, all survey tools and recordings were securely stored in a portable file for later collation.

Between four to eight weeks after treatment, the researcher returned to each treatment location (with the exception of Group 9, who all submitted their follow-up data electronically) for Performance 4, and the final administration of the state anxiety tool. Participants were greeted in the treatment room, then directed to the adjacent room

to complete the state anxiety subscale (Spielberger et al., 1983) and a treatment evaluation form prior to their final performance.

In the order randomly allocated on the workshop day, participants entered the treatment room, handed the researcher their completed state anxiety subscale and workshop evaluation form, and then completed their final performance. After Performance 4, the researcher thanked each participant and advised that they were free to go. There were 17 participants who were overseas, unwell or unable to return for the final performance, and instead submitted sound files (16 submitted via email, 1 submitted via a compact disc, sent via Australia Post) and self-report measures electronically. Sound files were saved for assessment by expert judges. These were of varying quality, but all were clear enough for the expert judges to make an assessment. All 68 participants made significant efforts to complete their fourth performance and accompanying self-report measures. Thus complete data sets were collected for all participants.

4.4.3.1 *Placebo presentation*

A placebo treatment was developed for administration after collection of the first set of data and prior to the first intervention session. This allowed participants to act as their own control, thus strengthening the statistical power of the study. Utilising the pedagogical experience of the researcher, this initial session included a PowerPoint presentation targeting practice preparation tips for musicians. While an educational and useful presentation, care was taken to ensure that all strategies and tips would need implementation over a period of months. Consequently, this workshop should not have resulted in improved performance quality or decreased anxiety on the workshop day or at the follow-up data collection.

The pedagogic presentation was titled *Performance Skills: How to Perform at Your Peak* (see Appendix E). It included sections on how to practice, the differences in practice techniques and appropriate times to apply each approach. A self-care section followed, including guidance around diet, exercise, sleep and rest strategies. Information in this section was collected from government websites and was thus easily accessible to the general public. General motivations for playing music were explored, and standard goal setting strategies applicable to music pedagogy were discussed. The final section included discussion on implementing a three-month programme of focused practice. The PowerPoint concluded with a brief case study presentation of two diverse practice approaches. Care was taken to avoid discussion of the underlying psychological constructs, and the researcher facilitated participants to provide examples of their own practice strategies and approaches.

4.4.3.2 *Evaluation of treatment interventions*

Pre, post-control, post-treatment and approximately one-month follow-up tests of both self-reported anxiety and independent assessments of performance quality were used to measure the treatment outcomes. On the treatment days, participants were pre-tested, the placebo treatment was delivered, and the participants were tested again on the state anxiety and performance quality measures. The four treatment sessions were then delivered, followed by post-treatment testing (state anxiety and performance quality), concluding the treatment day. Participants were tested for follow-up between four to six weeks after treatment (state anxiety and performance quality). Figure 1 provides an overview of the treatment workshop and evaluation.

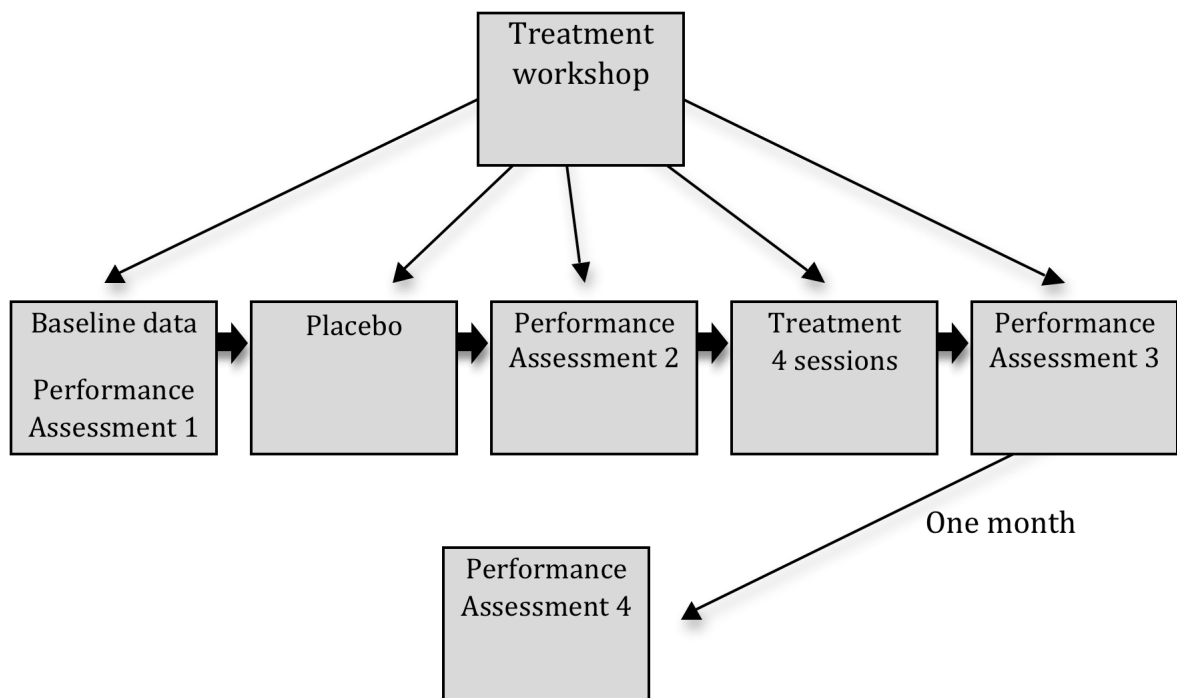


Figure 2. Overview of the treatment workshop.

4.4.4 Measures

4.4.4.1 Demographic information

Participants were asked to complete a form seeking participant demographics. This form requested participant age, gender and how many years they had studied music. Participants were asked to record their daily practice time and indicate with a ‘yes’, ‘no’ or ‘not sure’ whether they wished to be professional musicians. They also indicated whether they performed in public once per week, once per school term or once per year. To report performance context, participants were asked to tick any or all of the options of studio concert, exam, eisteddfod, parents or friends, and school. They were also asked to report performance patterns by nominating one of the following: solo only, mostly solo with some ensemble, mixed solo and ensemble, mostly ensemble, or ensemble only (see Appendix F).

4.4.4.2 *Kenny Performance Anxiety Inventory (K-MPAI; Kenny, 2004,2009)*

This instrument measures the symptomology of music performance anxiety as expressed through physiological, cognitive and behavioural domains (Kenny, 2011). Items in the K-MPAI operationalise the emotion-based theory proposed by Barlow (2000). The K-MPAI is the only tool currently used in assessing music performance anxiety that examines psychological characteristics that may contribute to music performance anxiety (Kenny, 2011). In 2009, 14 items were added to the original 26 items. Principal axis factoring of this 40-item tool using a sample of 59 tertiary students revealed 12 factors, which Kenny (2011) further extrapolated into three focal areas. These three focal areas are early relationships and attachment, general underlying psychological vulnerability, and performance concerns (Kenny, 2011). Further factor analysis with a sample of 357 professional musicians revealed a similar trend, with six identified factors (Kenny, 2011, p. 98): somatic anxiety (prior to, or during a performance I experience increased heart rate, like pounding in my chest), worry/dread ('I worry so much before a performance that I cannot sleep'), depression/hopelessness ('I often feel like I am not worth much as a person'), parental empathy ('My parents always listened to me'), memory ('I am confident playing from memory') and generational transmission of anxiety ('One or both of my parents were overly anxious'). Responses are gathered on a 7-point Likert scale ranging from 0 (least anxious) to 6 (most anxious). With a maximum score of 240, higher scores indicate greater levels of anxiety and possible psychological difficulties. The 26-item K-MPAI has demonstrated high internal consistency (non-standardised $\alpha = 0.94$; Kenny et al., 2004; see Appendix G for the 40-item K-MPAI used for the current study).

4.4.4.3 *State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983)*

This widely used 40-item scale measures both state (STAI-S) and trait anxiety (STAI-T). It has good to excellent internal consistency (Cronbach's alphas between 0.86 and 0.95) with adult, college, high school and military samples. Thirty-day test-retest reliability was reported as reasonable with a high school-age sample (state: $r = 0.71$; trait: $r = 0.75$). This tool has been used in conjunction with music performance anxiety survey tools, and distinguishes between proximal experience of anxiety before a stressful event (state) and a more distal and enduring inclination towards anxiety (trait). Kenny et al. (2004) found that high trait anxiety was three times more prevalent in a sample of opera chorus artists than the normative sample (see Appendix H).

4.4.4.4 *PRIME-MD Patient Health Questionnaire (PRIME-MD-PHQ; Spitzer, Kroenke & Williams, 1999).*

The Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PRIME-MD-PHQ-9) has been validated as a quick screening tool for depression (Dietrich, 2003). It applies criteria from the *DSM-5* (American Psychiatric Association, 2013) to determine whether an individual reports experiencing symptoms of depression during the preceding month.

Receiver Operating Characteristic (ROC) curves generated for STAI-T and PRIME-MD using different scores to dichotomise these instruments with K-MPAI as the scale measure identified a cut-point for K-MPAI using Youden's Index for STAI-T ≥ 65 (1.5 *SD* above mean) was 105.3; using the cut-point for STAI-T ≥ 60 (1 *SD* above mean), Youden's Index for K-MPAI was 104.5. For musicians answering yes to both depression questions on the PRIME-MD, the K-MPAI cut-point was 118.5; for

those answering yes to one of two questions, the K-MPAI cut-point was 110 (Kenny et al., 2015; see Appendix I).

4.4.4.5 *Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky & McNally, 1986)*

The Anxiety Sensitivity Index (ASI) is a 16-item tool in which respondents indicate on a 5-point scale the level to which their anxiety symptoms distress them (0 = ‘very little’, 1 = ‘a little’, 2 = ‘some’, 3 = ‘much’, 4 = ‘very much’). Scores range from 0 to 72. Psychometric and structural properties of the ASI are good; Cronbach’s alphas for subscales range from .73 to .91 across multiple samples (Taylor et al., 2007). The ASI has demonstrated good test–retest reliability. Anxiety sensitivity is conceptualised as multidimensional, and the 16 items evaluate across three factors: (i) fear of physical symptoms (e.g., ‘It scares me when I feel shaky’), (ii) fear of cognitive dyscontrol (e.g., ‘When I am nervous, I worry that I might be mentally ill’) and (iii) fear of social concerns (e.g., ‘It is important to me not to appear nervous’; Zinbarg, Mohlman & Hong, 1999; see Appendix J).

4.4.4.6 *Performance quality*

Two expert judges, each with over 25 years’ experience as senior examiners for the AMEB, assessed participants’ performances either live or via audio-visual recordings (Osborne et al., 2007). Expert Judge 1 assessed performances at pre-control (Performance 1), pre-treatment (Performance 2), post-treatment (Performance 3) and approximately one-month follow-up (Performance 4) for all participants. Expert Judge 2 assessed 25% of recorded performances, chosen randomly (across Performances 1, 2, 3 or 4). These scores were then compared to those of Expert Judge 1 to control for reliability (Shedler et al., 1991).

As the judges were most familiar with assessing music exam candidates with alphabetic grades (D, C, C+, B, B+, A, A+), they were asked to apply these ratings to the numerical categories. Thus, zero represented a D grading (unsatisfactory) and six was equivalent to an A+ grading, representing an outstanding performance. The expert judges were first asked to assess components of a performance considered in the literature to constitute the necessary qualities of a performance (Stanley et al., 2002). These criterion measures were: technique (including fingering, articulation, bowing, breathing, tone production), accuracy, dynamic contrasts, tempo and rhythm, phrasing, musicianship and creativity.

The participants' level of advancement was determined by the difficulty of each participant's own choice of musical item and its placement within the various examining boards' graded exam syllabi (preliminary grade through to eighth grade and associate and licentiate diploma). Judges assessed each performer from the criteria defined in the syllabus for that grade level. Each participant was awarded a final overall grade based on scores derived from those awarded by Expert Judge 1 (see Appendix K).

4.4.4.7 *Treatment adherence*

4.4.4.7.1 Implementer/researcher

The researcher, a provisionally registered psychologist, completing doctoral postgraduate studies in clinical psychology, delivered all treatments. Prior to research commencement, the researcher had completed an eight-month placement at the Psychology Clinic at Macquarie University. Treatment interventions at this clinic included a range of modalities and also training in psychometric assessment.

Specifically in preparation for this research, the researcher also completed a four-month placement at the Nepean Anxiety Disorder Clinic, at Nepean Hospital in the

outer western suburbs of Sydney. This placement provided rigorous training in the delivery of CBT interventions across all anxiety disorders. The researcher was also an experienced music educator with over 30 years' pedagogic and more than 25 years' examining experience, across grade levels, associate, licentiate and fellowship diplomas and a variety of musical disciplines.

4.4.4.7.2 Research assistants

The researcher and two trained research assistants with postgraduate research qualifications collected the data for the study. The research assistants were not involved in the design or the implementation of either treatment. One research assistant was employed to assist the researcher, while the other provided support out of interest in the study.

4.4.4.7.3 Programme integrity training for researcher and research assistants

The research assistants were trained by the researcher to identify important components and complete the checklist to ensure that participants had completed all items in measures and to assist the researcher in administering the workshop in a timely manner. The researcher and research assistants met for a period of one hour and 30 minutes prior to the first treatment workshop. At this meeting, the researcher systematically worked through a checklist, explained the data collection process and study design, and answered any questions.

Chapter 5: Results

5.1 Sample Characteristics

The sample comprised 68 musicians and singers from community bands (brass and military) and choirs, regional conservatoria networks and private music studios from around New South Wales and the Australian Capital Territory. Table 2 presents the demographics of the participants and Table 3 summarises their musical profiles. Participants’ musical skill levels ranged from the earliest beginners ($n = 3$) to doctoral or postgraduate performance diploma-level semi-professionals ($n = 5$). Daily practice ranged from no regular practice to three hours a day ($M = 56$ minutes, $SD = 40.56$ minutes). Thirteen participants reported that they did not have private music tuition, while the remaining 53 reported having regular music tuition.

Table 2

Demographic Characteristics of Participants (n = 68)

Demographics		
Age	Mean (range)	44.51 years (16–81)
	<i>SD</i>	15.95
Gender	Male ($n = 23$)	33.82%
	Female ($n = 45$)	66.18%
Years of Experience	Mean (range)	(1.5–69)
Years of Studying Music	Mean (range)	16.96 (5–61)
	<i>SD</i>	15.26

Of this sample, eight participants studied at secondary education facilities (Years 11 and 12); six were retired; and five were currently enrolled in undergraduate or postgraduate tertiary music programmes (Bachelor of Music, University of New South Wales: $n = 1$; Bachelor of Music, University of New England: $n = 1$; Postgraduate

Diploma, Australian Institute of Music: $n = 2$; Doctor of Music, Princeton University: $n = 1$). Of the tertiary undergraduate students, one was in first year and one was in third year; the postgraduate students were all in their second year of study. A further 34 participants were currently employed as professionals (medical, legal, information technology, architecture, education) and 10 were in administrative or technical roles. A further five participants reported that their primary daily occupation was home duties.

Table 3

Sample Characteristics: Desire to Be a Professional Musician, Performance Context, Frequency and Pattern, and Musical Instruments Played

Sample Characteristics		Number (%)
<i>Desire to be a Professional Musician</i>		
No		45 (66.2%)
Yes		14 (20.6%)
Unsure		9 (13.2%)
<i>Performance Context</i>		
Studio Concert	Yes	38 (55.9%)
	No	30 (44.1%)
Eisteddfod	Yes	22 (32.4%)
	No	46 (67.6%)
School/University	Yes	17 (25%)
	No	51 (75%)
Exam	Yes	30 (44.1%)
	No	38 (55.9%)
Family/Friends	Yes	33 (48.5%)
	No	35 (51.5%)
Educational Settings	Yes	17(25%)
	No	51 (75%)

(table continues)

Table 3: Continued

Sample Characteristics		Number (%)
<i>Performance Pattern and Performance Frequency</i>		
Solo only		16 (23.5%)
Mostly solo, some ensemble		8 (11.8%)
Mixed solo, ensemble		9 (13.2%)
Ensemble only		17 (25%)
Once a month		9 (36%)
Every school term		14 (56%)
Once a year		2 (8%)
<i>Musical Instruments Played</i>		
Wind Instruments (total $n = 35$)	Flute	5 (7.35%)
	Oboe	1 (1.47%)
	Clarinet	10 (14.71%)
	Bass Clarinet	1 (1.47%)
	Baritone Saxophone	1 (1.47%)
	Trumpet	6 (8.82%)
	Cornet	3 (4.41%)
	Euphonium	5 (7.35%)
	Baritone	2 (2.94%)
	Trombone	1 (1.47%)
String Instruments (total $n = 6$)	Violin	4 (5.88%)
	Cello	2 (2.94%)
Vocalists		6 (8.82%)
Piano		21 (30.88%)

5.2 Pre-tests at Baseline

The mean and standard deviations for the two groups are presented in Table 4. A series of one-way between-group analyses of variance (ANOVA) was conducted to explore group differences in age, years learnt and daily practice times across the two treatment groups at baseline. The ANOVA assumptions of normality and homogeneity of variance were not violated. There were no statistically significant differences between the treatment groups in age, $F(1, 66) = 0.30, p = 0.60, \mu = 0.00$; years learnt, $F(1, 66) = 0.95, p = 0.33, \mu = 0.01$; or daily practice, $F(1, 66) = 1.1, p = 0.30, \mu = 0.02$.

Table 4

Descriptive Statistics for CBT and AS Treatment Groups

	Treatment	<i>N</i>	Mean	<i>SD</i>	<i>df</i>	<i>F</i>	<i>P</i>
Age	CBT	34	43.48	16.68	1	0.30	0.60
	AS	34	45.57	15.36	66		
	Total	68	44.51	15.95	67		
Years Learnt	CBT	34	14.01	10.80	1	0.95	
	AS	34	17.06	14.62	66		
	Total	68	12.85	15.54	67		
Daily Practice	CBT	34	60.75	40.48	1	1.1	0.30
	AS	34	50.43	40.58	66		
	Total	68	55.6	40.56	67		

Note. CBT, Cognitive Behavioural Therapy; AS, AS.

A Pearson's chi-square test for independence indicated no significant differences in the distribution of males and females across the CBT and AS treatment groups at baseline, $\chi^2(1) = 0.58, p = 0.61, ns$. The two groups were not significantly different regarding the distribution of performance formats: studio concerts, $\chi^2(1, n = 68) = 0.54, p = 0.46, ns$; exams, $\chi^2(1, n = 68) = 0.00, p = 1.0, ns$; eisteddfods, $\chi^2(1, n = 68) = 3.3, p = 0.07, ns$; for families and friends, $\chi^2(1, n = 68) = 0.94, p = 0.33, ns$;

and educational settings, $\chi^2(1, n = 68) = 0.00, p = 1.0, ns$. Further, a chi-square test for independence indicated no significant associations between performance patterns (solo only, mostly solo, some ensemble, mostly solo with some ensemble, mostly ensemble with some solo and ensemble only) between the CBT or AS groups, $\chi^2(1, n = 68) = 3.49, p = 0.48, ns$. A moderate association between professional aspiration and the CBT group was evident, $\chi^2(1, n = 68) = 6.7, p = 0.03, c = 0.29$, where more participants in the CBT group expressed the aspiration to be a professional musician than in the AS group, although the effect size was small.

5.2.1 Pre-tests on psychological measures

5.2.1.1 Anxiety

Table 5 provides a summary of the psychological tests for anxiety. A one-way between-group ANOVA series was used to investigate whether there were differences in anxiety scores between the CBT and AS treatment groups at baseline. There were no significant differences in the K-MPAI scores by treatment group, $F(1, 66) = 0.01, p = 0.91, \mu = 0.00$, nor in the ASI scores, $F(1, 66) = 0.97, p = 0.33, \mu = 0.01$, or STAI-T scores, $F(1, 66) = 3.25, p = 0.078, \mu = 0.04$.

Table 5

Baseline Scores for ASI, K-MPAI and STAI-T for the CBT and AS Treatment Groups

	Treatment	<i>N</i>	Mean	<i>SD</i>	<i>df</i>	<i>F</i>	<i>P</i>
ASI	CBT	34	42.2	10.9	1	0.973	0.33
	AS	34	44.9	11.2	66		
	Total	68	43.6	11.1	67		
K-MPAI	CBT	34	138.0	32.8	1	0.012	0.91
	AS	34	138.8	29.6	66		
	Total	68	138.4	31.0	67		
STAI-T	CBT	34	47.5	10.32	1	2.05	0.16
	AS	34	60.0	12.27	66		
	Total	68	62.0	11.43	67		

Note. ASI, AS Index; K-MPAI, Kenny Performance Anxiety Inventory; STAI-T, Trait Inventory-STAI; Cognitive Behavioural Therapy, CBT; Anxiety Sensitivity, AS.

5.2.1.2 Depression

Table 6 summarises responses on the PRIME-MD-PHQ for depression. There were no significant differences between the CBT and AS groups in responses to the two questions in the PRIME-MD-PHQ in the sample. In a two (CBT or AS group) by two (depression or no depression categories) chi-square test for question one ('During the past month, have you been bothered by feeling down, depressed, or hopeless?'), there were no significant group differences in category membership, $\chi^2(1, n = 68) = 0.60$, $p = 0.44$, $C = 0.09$. Responses to question two ('During the past month, have you been bothered by little interest or pleasure in doing things?') likewise showed that there were no significant group differences between the CBT and AS treatment groups in affirmative answers, $\chi^2(1, n = 68) = 1.07$, $p = 0.60$, $C = 0.12$.

Table 6

Responses to PRIME-MD-PHQ Questions

Depression Responses	Treatment	Depression Categories	Number	%
During the past month, have you been bothered by feeling down, depressed or hopeless?	CBT	Yes	13	38.2
		No	21	61.8
	AS	Yes	10	29.4
		No	24	70.6
During the past month, have you been bothered by little interest or pleasure in doing things?	CBT	Yes	8	23.5
		No	26	76.5
	AS	Yes	8	23.5
		No	26	76.5

Note. PRIME-MD-PHQ, Patient Health Questionnaire (PRIME-MD-PHQ); CBT, CBT; AS, AS.

5.2.2 Baseline measurement means

5.2.2.1 ASI

The mean score on the ASI for this sample of community musicians was 43.6 ($SD = 11.1$; range = 24–77). This mean score placed the sample in the clinical range for anxiety sensitivity. Scores were comparable to those reported by samples with social phobia and panic disorder with and without agoraphobia, and also to those reported by clinical samples with specific phobias (Taylor et al., 2008).

5.2.2.2 K-MPAI

The overall sample mean for the K-MPAI was 138.4. Comparatively, in a sample of 373 professional orchestral musicians, the sample mean was 83.7 (Ackermann, Kenny, Driscoll, O'Brien & Driscoll, 2015). In a ROC analysis identifying cut-off scores for a clinically significant anxiety disorder, a score of 104.5 on K-MPAI equated to scores greater than one standard deviation above the mean on the STAI-T (Kenny, in press).

5.2.2.3 STAI-T

As the sample was 66% female and the mean age was 44.51 years ($SD = 15.95$), percentile rankings were derived from the female adult population aged between 40 and 49 for both trait and state anxiety. Overall, this sample of musicians' mean score for trait anxiety fell into the 92nd percentile.

5.2.2.4 PRIME-MD PHQ two-question screen for depression (psychological vulnerability)

Musicians responded to two questions from the PRIME-MD-PHQ. Responses in the affirmative have been reliably shown to be indicative of the need for further investigation for depression. Fifty-seven per cent ($n = 39$) of musicians in the sample responded with yes to the first ($n = 23$, 33%) or second ($n = 16$, 23%) questions only, or to both questions ($n = 13$, 19%). Thus, pre-treatment and across both treatment groups, the majority of musicians in this sample reported symptoms of depression consistent with the need for further investigation.

In summary, musicians in this study reported baseline levels of anxiety and depression well above those reported in non-clinical populations. This was evident across self-report instruments that measured music performance anxiety (KMPA-I), trait (STAI-T) and state anxiety (STAI-S, at Performances 1, 2 and 3), anxiety sensitivity (ASI) and depression (PRIME-MD-PHQ).

5.2.3 Inter-rater reliability

An intraclass correlation coefficient (ICC) was conducted on 25% of performances co-rated by a second expert judge. A high degree of reliability was found between judges: a single-measure ICC was 0.84 with a 95% confidence interval from 0.75 to 0.90.

5.3 Pre- and Post-test Analyses

5.3.1 State anxiety

As shown in Table 7, in the state anxiety sub-tests the sample means fell into the 87th, 81st, 64th and 55th percentiles (across Performances 1, 2, 3 and 4) of the normative population.

A mixed between- and within-subject ANOVA was conducted to assess the effect of the two treatments on participants' scores on the measure of state anxiety prior to each of the four performances (pre-treatment, after placebo, post-treatment, and at four- to eight-week follow-up). State anxiety scores were normally distributed for both interventions as assessed by Shapiro-Wilk's test ($p < 0.5$).

Table 7

Mean Scores for State Anxiety for CBT and AS Treatments Across Four Performances

Time	Treatment	Mean	SD	Percentile
Pre-treatment	CBT	63.48	12.34	
	AS	58.98	13.92	
	Total	61.22	13.25	87 th
After placebo	CBT	58.99	11.36	
	AS	58.85	12.96	
	Total	58.47	12.10	81 st
Post-treatment	CBT	54.18	10.75	
	AS	49.26	10.98	
	Total	51.72	11.07	64 th
Follow-up	CBT	50.71	9.55	
	AS	47.00	11.37	
	Total	48.85	10.58	55 th

Note. CBT, Cognitive Behavioural Therapy; Anxiety Sensitivity, AS.

Levene's test for homogeneity of variances was non-significant ($p < 0.5$). Box's test of equality of covariance was also non-significant ($p = 0.27$). Mauchly's test of

sphericity indicated that the assumption of sphericity had been violated ($\chi^2 = 12.94$, $p = 0.02$). However, inspection of the sphericity-assumed, Greenhouse-Geisser and Huynh-Feldt values revealed that these tests yielded the same results.

There was a statistically significant interaction between the two treatments and performance times on state anxiety, $F(3, 64) = 2.90$, $p = 0.04$, $\mu = 0.12$. The CBT treatment group showed a decrease in reported state anxiety between Performances 1 and 2, while the AS treatment group maintained a similar level of anxiety between these performance times. The main effect of time for state anxiety scores was statistically significantly different, $F(3, 64) = 28.49$, $p < 0.0005$, $\mu = 0.57$. Both groups reported reduced state anxiety across Performances 2, 3 and 4. The main effect comparing the two types of treatments showed that there were no statistically significant differences in reported levels of state anxiety between treatments, $F(1, 66) = 1.77$, $p = 0.19$, $\mu = 0.3$.

A series of pairwise comparisons indicated that there were decreases in state anxiety across the four performance points. All simple pairwise comparisons were run between the different time points for state anxiety scores. A Bonferroni adjustment was applied. Prior to treatment, mean scores for all groups were 61.22 ($SD = 1.6$), while state anxiety after the placebo treatment was 58.47 ($SD = 1.5$). Mean scores for state anxiety after treatment was 51.72 ($SD = 1.3$), representing a statistically significant difference of -9.51 ($SD = 1.47$, $p = <0.0005$). At follow-up, state anxiety score means were 48.85 ($SD = 1.3$), representing a statistically significant difference of -12.37 ($SD = 1.5$, $p = 0.0005$). Figure 2 depicts the state anxiety mean scores across the four time points for both the CBT and AS groups.

Visual inspection of Figure 3 suggests that there may have been a greater decrease in state anxiety from time points 2 to 3 for the AS group than for the CBT

group. At time point 2, means were almost identical. An independent measures t-test at time point 3 was conducted to see whether state anxiety was significantly different between the AS and CBT group at that time point. However, the analysis revealed no reliable difference in state anxiety between the two groups at that time point, $t(66) =$, 0.05, ns.

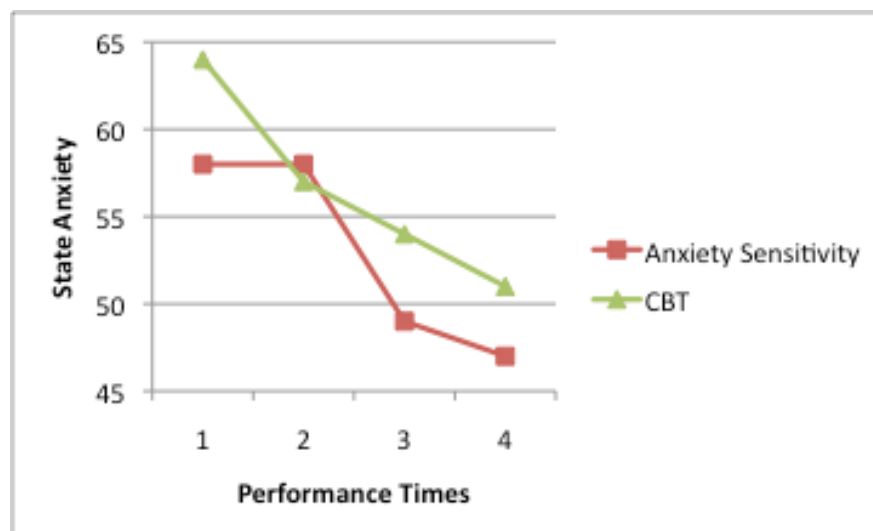


Figure 3. State anxiety scores across times 1–4.

5.3.2 Performance quality

Performance quality grades across all four performances were rated on a 6-point scale with a minimum of 0 (unsatisfactory) and a maximum of 6 (outstanding). The expert judge rankings for performances ranged from 0 to 6 for Performance 1, 1 to 6 for Performance 2, and 2 to 6 for Performance 3 and at follow-up. The mean scores and standard deviations for each of the four performances are presented in Table 8.

Table 8

Mean Scores for Performances for CBT and AS Treatments Across Four Performances

Timepoint	Treatment	Mean	SD
Pre-treatment	CBT	3.45	1.14
	AS	2.65	1.17
	Total	3.06	1.22
After placebo	CBT	3.99	1.09
	AS	3.33	1.26
	Total	3.65	1.21
Post-treatment	CBT	5.04	0.74
	AS	4.72	1.14
	Total	4.89	1.07
Follow-up	CBT	5.12	0.90
	AS	5.34	1.09
	Total	5.23	1.00

Note. CBT, Cognitive Behavioural Therapy; AS, Anxiety Sensitivity

A mixed within- and between-subject ANOVA was conducted to assess the effect of the two treatments on participants' overall performance quality scores across the four performances (pre-treatment, after placebo, post-treatment and at four- to eight-week follow-up). The mean and standard deviations are presented in Table 8. There were 10 outliers in the data across all performance times (assessed by inspection of a box plot for values greater than 1.5 box lengths from edge of the box). The outliers were included in the analysis, as they were not considered to materially affect the result.

The Shapiro-Wilk's statistic was used to test assumptions of normality. Performance quality was normally distributed, with the exception of Performance 3 in the AS treatment ($p = 0.12$). As the mixed ANOVA is robust to deviations from normality, the decision to run the test was taken. There was homogeneity of variances as assessed by Levene's test of homogeneity of variances ($p > 0.05$). There was also

homogeneity of covariances, as assessed by Box's test of equality of covariance matrices ($p = 0.11$). Mauchley's test of sphericity indicated that the assumption had been violated, $\chi^2(5) = 30.88, p = 0.0005$. However, the sphericity-assumed, Greenhouse-Geisser and Huynh-Feldt values all yielded the same result.

There was a significant interaction between treatment type and time, Wilks's Lambda = 0.80, $F(3, 64) = 5.25, p = 0.003$, partial eta squared = 0.20. Thus while participants in the CBT treatment group performed at similar levels at Performances 3 and 4, participants in the AS treatment group demonstrated an elevation in performance quality at Performance 4. There was also a significant main effect for time, Wilks's Lambda = 0.16, $F(3, 64) = 114.45, p = 0.0005$, partial eta squared = 0.84, with both groups showing increases in performance quality across performances. The main effect for comparing the two types of intervention approached significance, $F(1, 66) = 3.02, p = 0.09$, partial eta squared = 0.04. This suggests that elevation in performance quality may be affected by treatment type, with AS treatment indicating possible elevation in performance quality between post-treatment and follow-up assessment. Figure 3 depicts performance quality over the four time points for the CBT and AS treatment groups.

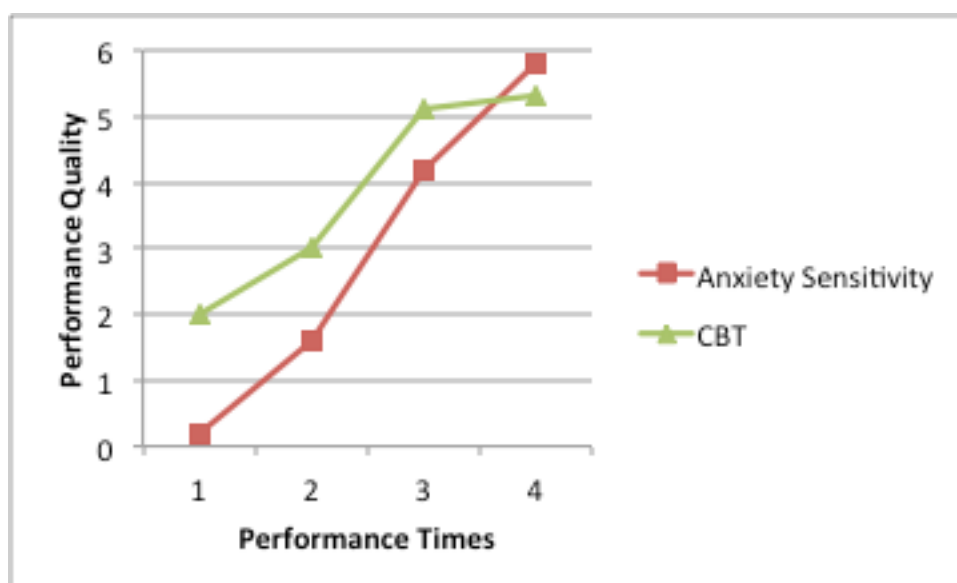


Figure 4. Performance quality scores across times 1–4.

5.4 Feedback Data

Responses to the feedback survey are presented in Table 9 and representative written comments provided by participants are presented in Appendix L. Participants responded to five questions on a 5-point Likert scale: ‘strongly agree’, ‘agree’, ‘unsure’, ‘disagree’ and ‘strongly disagree’. Sixty-six (41 females and 18 males) participants returned the survey. Across the five questions there were no ‘strongly disagree’ responses, one ‘disagree’ and seven ‘unsure’ responses. All other responses fell into the ‘strongly agree’ or ‘agree’ categories.

Table 9

Satisfaction with the Workshop Content and Experience

	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
I was satisfied with the workshop overall.	43 (65%)	22 (33%)	1 (1.5%)	0	0
I felt satisfied with the way the material was communicated.	44 (66%)	26 (39%)	2 (3%)	0	0
The workshop has provided me with strategies to manage my anxiety around performing.	38 (57%)	26 (39%)	2 (3%)	0	0
The workshop has provided me strategies to improve my performance in public.	39 (59%)	26 (39%)	1 (1.5%)	0	0
I would recommend this workshop to others.	50 (75%)	14 (21%)	1 (1.5%)	1 (1.5%)	0

Chapter 6: Discussion

6.1 Summary

The purpose of this study was to develop, administer and evaluate two brief, focused group treatments for music performance anxiety aimed at reducing anxiety and improving performance quality. Treatments were administered in a workshop format over one day via four treatment sessions. Treatment was preceded by a pedagogic practice skills session delivered between Performances 1 and 2. The practice skills session functioned as a placebo treatment and included no active treatment component.

The CBT treatment, Brief Online Supported Cognitive Behavioural Therapy for Music Performance Anxiety, was developed for the study from an existing empirically proven treatment developed by Macquarie University, *Chilled* (Rapee et al., 2006). The CBT treatment included a take-home workbook providing additional reading, specific topics and suggested tasks to reinforce the workshop activities. The AS treatment, based on a protocol developed by Gardenswartz and Craske (2001), focused on the symptoms of panic. It aimed specifically to address the physiological symptoms of music performance anxiety and provide relaxation strategies. All active treatment components for the AS condition were provided at the treatment workshop. A quasi-experimental group randomisation design was implemented to compare the two treatments in a heterogeneous sample of community musicians.

The study aimed to determine whether implementing a brief group-based performance anxiety treatment would result in reduced anxiety and increased performance quality. This preliminary study also aimed to investigate whether there were differences in measurement outcomes between the treatments.

The results suggest that both treatments demonstrated significant gains for the participant musicians; their anxiety was reduced and performance quality improved after treatment. The results of feedback data and qualitative data (see Appendix L) suggest that the majority of participants were satisfied (98%) with the treatment workshops overall, and felt that the treatment had given them strategies for managing anxiety (98%) and for improving their performance quality (99%).

The significant decreases in anxiety reported by these participants reflect recent findings of Braden, Osborne and Wilson (2015) in a CBT treatment study delivered to 62 Australian adolescent musicians. However, in contrast to the present study, the latter study found no changes to performance quality when rated by expert judges.

6.2 Clinical Implications

The findings of this thesis have important clinical implications. Significant levels of music performance anxiety were reported by these musicians, as were elevated levels of anxiety sensitivity, trait anxiety and depression. Studies of other musician populations have also found co-morbid symptoms of mood and anxiety disorders (Kenny, Driscoll & Ackermann, 2014). The community musicians in this study demonstrated scores in the clinical range, and even more elevated than those reported in other studies, for these disorders (Kenny, Driscoll & Ackermann, 2014). Previous studies have suggested that music pedagogy has failed to provide appropriate support for musicians experiencing symptoms of music performance anxiety (Fehm & Schmidt, 2006; Ryan & Andrews, 2009). This indicates that the development of effective treatments for music performance anxiety for this demographic is both necessary and timely.

The findings also suggest that focused group treatment delivered in a day workshop format can have a significant effect on both the quality of a performance and the level of anxiety prior to performing. The two treatments had common elements, yet the theoretical underpinnings of each treatment suggest a different mechanism of action. However, this study did not find any significant differences in effectiveness between the two treatments. The simplest explanation for these results is that the two treatments were of equal value to this group of community musicians. However, it may be that there are differences that were not detected in the study. Following is a discussion of why this may be the case.

6.2.1 Elements common to both treatments

6.2.1.1 *Therapeutic alliance*

The researcher administered all treatments throughout the study. Both treatments were scripted, and every attempt was made to maintain the script as much as possible. The researcher/clinician also used a manual for both treatments. One aim of the study was to investigate differences in treatment efficacy between the CBT and AS groups, and the theoretical models discussed in the literature review provided empirical support for each treatment. The researcher was not wedded to either treatment, and unconscious bias towards one approach over another is unlikely to have been an issue.

Rosenzweig (1936/2002) argued that the value of implicit factors, such as the therapeutic relationship, catharsis, or the therapist's personality, is seen as common to all helpful therapies, and so underlies the success of the therapy. The different methods may then have equal success, and any psychological intervention may be therapeutically effective—what is required for the treatment to be effective is its sufficient relevance to the client.

In 1975, Luborsky, Singer and Luborsky reviewed the psychotherapy outcome literature, examining 130 comparative treatment studies. The results showed insignificant differences in intervention outcomes across different forms of psychotherapy. These results support Rosenzweig's (1936/2002) hypothesis (Wampold et al., 1997). In contrast, Smith, Glass and Miller (1980) found clear evidence for significant differences between psychodynamic, behavioural, CBT, humanistic treatments and developmental treatments.

Shedler (2010) referenced the Dodo bird from *Alice in Wonderland*, who cries, 'Everybody has won and all must have prizes' (p. 105) when discussing treatment efficacy between treatments for psychological disorders. Kenny (2011) made the comment that significant differences in treatment efficacy have only been demonstrated when active treatments are compared with non-active or placebo treatments. In contrast, comparisons between active treatments demonstrate that 'the differences will necessarily narrow or disappear' (p. 260).

Kenny (2011) suggested that 'patient characteristics, programme integrity, study quality and the skill of the clinician delivering the treatments' (p. 260) are all important considerations when comparing which treatment is effective for which disorder. Further, the timing of follow-up may affect the study's representation of treatment efficacy: some treatments will continue to show gains after treatment cessation. For example, the AS treatment in this study demonstrated further decreases in self-reported anxiety prior to follow-up performance, despite there being no active treatment in the intervening weeks.

Therapeutic alliance has been identified as a significant predictor for treatment efficacy across theoretical models (Anderson et al., 2009). Further, research has shown

that the quality of the relationship between therapist and client, and the perception that the therapist is empathic to the client's situation, can result in therapeutic change (Langhoff, Baer, Zubaegel & Linden, 2008). It may be that having the researcher acting as clinician across all treatment groups was a strength for the consistency of the research, yet a confounding variable when trying to explore for significant differences between treatments.

6.2.1.2 *Psycho-education*

Both treatment protocols included psycho-education. This included information on the unconscious activation of the fight/flight/freeze response and its protective nature when in the face of physical danger. The facilitative benefits of this physiological response was presented and an evolutionary perspective was provided (Kenny, 2011, p.176,). Finally, a social phobia model based on Rapee and Heimberg (1997) was briefly presented.

6.2.1.2.3. *Exposure*

Performance quality was assessed at four time points in the study. Performance situations were replicated across all performance times irrespective of treatment protocols. The only exception to this was the minority of participants who submitted their final performances electronically.

It is standard conservatorium practice to recommend that undergraduates experiencing music performance anxiety perform as often as possible to combat their symptoms. Current evidence-based practice guidelines advocate exposure for a range of anxiety disorders, including phobias and social anxiety. Exposure generally results in habituation and some level of symptom relief, although in some cases exposure without adjunct psychological support can result in sensitisation and escalation of symptoms

(Kenny, 2011). Anecdotally, and through an examination of results, no participants appeared to have sensitised as a result of this exposure.

In developing a virtual environment tool for musicians, Williamon, Aufegger and Eiholzer (2014) suggested that current international training programmes for musicians lack exposure to meaningful performance situations. This research demonstrates that participants exposed to simulated performance environments report elevated state anxiety and heart rate variability commensurate with actual performance situations (Williamon, Aufegger & Eiholzer, 2014). It may be that the mechanism of action most effective across the two treatments in the present study was the repeated exposure to the performance situation. The addition of a control group to this study would have provided additional data and further explication of this possibility.

In the present study, musicians in the AS treatment group reported a plateau in state anxiety between the first two performances, a marked decrease following active treatment at Performance 3, and another smaller decrease at Performance 4. Thus, for these musicians, the placebo treatment between Performances 1 and 2 had no effect. In contrast, immediately following treatment, there was symptom attenuation. Further, despite receiving no active treatment between Performance 3 and follow-up, there were further treatment effects between Performance 3 and follow-up assessment.

A different pattern was evident for the musicians in the CBT treatment group. They reported steady, regular and less dramatic decreases in anxiety prior to performance across all four performance times. Thus, despite homework activities and weekly email contact with the researcher, significantly different treatment gains in this group were not evident between Performance 3 and the follow-up performance, when compared to the AS group. However, it is not known how many of the sample

completed the homework activities and implemented the exposure hierarchies. Future studies may need to review homework compliance in the CBT group to further explicate these findings.

6.2.2 Ceiling effects in performance quality

A small minority of performers were graded as ‘outstanding’ in their first performance and in subsequent performances. These participants were performing at an advanced level, and the criteria used to assess performance quality for this study, aimed at the community level, failed to discriminate between advanced performances. In this regard, one participant who had completed undergraduate and postgraduate studies in performance stated that for him, music performance anxiety affected his expressive ability. While he never lost technical control, he felt that phrasing and sensitivity became compromised when he performed.

This participant described an experience of playing a Chopin Nocturne in his graduate recital. He was concerned that his interpretation would become static, and he resolved to focus on using more *rubato* (rhythmic freedom) in his performance. Just prior to walking on stage he reported that the word ‘flow’ popped into his head. He then described being unable to stop repeating this word throughout the performance. He felt as though his playing became submerged into the background as he repeated the ‘flow’ over and over again. He also described spelling the word as he played, backwards and forwards, and visualising it in different fonts, colours and sizes throughout the performance. Consequently, he felt his performance was robotic and desensitised.

It is likely that, due to the heterogeneous and inclusive nature of the study, the assessment tool used to measure the performance quality of musicians performing at a

semi-professional to professional level may have failed to differentiate such aesthetic graduations in their performances.

6.2.3 Psychopathology and co-morbidity

Kenny, Driscoll and Ackermann (2014) found elevated levels of anxiety and depression in a sample of 377 professional Australian orchestral musicians. The authors reported a mean score of 83.7 on the K-MPAI in this population. The musicians in the present study reported a mean score of 138.4 (Kenny et al., 2012). The K-MPAI explores physiological, cognitive and behavioural aspects of music performance anxiety under the theoretical construct of Barlow's (2000) emotion-based theory. It is possibly the only tool specifically developed to provide a comprehensive overview of a musician's psychological functioning. Such elevated K-MPAI scores demonstrate that the community musicians in this study were experiencing distress at clinical levels.

Significant positive relationships between music performance anxiety, trait and state anxiety have also been found in different populations of musicians. The community musicians in this study demonstrated scores in the 92nd percentile. In an unpublished Honours study, the mean score for trait anxiety in a sample of 25 candidates for performance exams was in the 76th percentile of the normative population (Halls, 2011). Similarly, a study of 20 tertiary-level flute players demonstrated a mean score in the 86th percentile (Fortune, 2007). In a study of opera chorus artists, Kenny et al. (2004) found scores that were three times higher than the normative sample. Another study of 43 second- and third-year vocal students in Guildhall, United Kingdom, found that females demonstrated higher-than-normative trait anxiety scores (Kokotsaki, Davidson & Coimbra, 2001).

In the present study, scores on the Spielberger State Sub-Test (Spielberger et al., 1983) prior to Performance 1 were in the 87th percentile. While there was a decrease in these scores across performances, the community musicians were still slightly elevated, in the 55th percentile, prior to their final performance. The student tertiary population has also demonstrated elevated levels of state anxiety prior to performance (Kokotsaki, Davidson & Coimbra, 2001).

The ASI conceptualises the fear of anxiety symptoms as multidimensional across physical, cognitive and social concerns. The musicians in this study reported clinically elevated ASI scores, indicating that the musicians in the study were experiencing fears related to the symptoms of their anxiety.

It was also found that 57% of the musicians endorsed one or both of two statements representing symptoms of depression. In contrast, 20% of the Australian population are affected by depression and mood disorders (Parker & Manicavasagar, 2005), while 14.4% of the population meet criteria for an anxiety disorder (Tiller, 2012). Thus the musicians in this study were experiencing symptoms of anxiety and mood disorders well above what would be expected in the normative population. The means of the psychological tests placed them in the clinical range for depressive and anxiety-related disorders.

6.2.4 Summary of clinical implications

Treatment studies have consistently demonstrated that CBT is effective in symptom attenuation for a range of psychological disorders (Borkovec & Ruscio, 2001; Butler et al., 2006; Covin et al., 2008; Gould et al., 1997; Norton & Price, 2007). Treatment implementing interoceptive exposure that focuses specifically on anxiety sensitivity has also been shown to be effective in treating the symptoms of anxiety and

panic disorder (Gardenswartz & Craske, 2001). The musicians in the study reported clinically significant co-morbid anxiety and depression as well as music performance anxiety.

Despite being reluctant to engage in treatment for psychological issues, the musicians in this study demonstrated remarkable commitment. Prior to the study it was decided that an ‘intention to treat’ process would be implemented as discussed by Kenny (2011, p. 168). Thus all treatment starters and not just completers would be included in the statistical analysis. However, as there was no attrition between treatment and follow-up, this was not necessary.

Perhaps these community musicians do not perceive music performance anxiety as pathology. Crome and Baillie (2014) suggested that as social phobic conditions are more prevalent in the population, and thus fall more within the normative range, treatment may not need to be as intensive as for other anxiety conditions. For some musicians, music performance anxiety may mask other symptomology, and attending a workshop for music performance anxiety is less intimidating than seeking treatment for a mental health condition.

Consequently, it was observed that despite the clinical levels of psychopathology reported by this group of musicians, and for the reasons outlined above, few had accessed psychological support. It is conjectured that common aspects of both treatments provided the opportunity to develop insight and strategies for previously untreated and possibly undiagnosed co-morbid conditions. This may have resulted in symptomatic improvement across the sample, making it complex to locate the specific mechanisms of change that may differentiate between treatments.

6.3 Strength of the Study

The present study has made significant contributions to the literature in several ways. First, existing evidence-based treatments have been adapted specifically for music performance anxiety. Second, an anxiety sensitivity treatment for music performance anxiety has been implemented for the first time. Third, treatment workshops for music performance anxiety have been trialled successfully. Fourth, invaluable data about a previously understudied population, community musicians, has been collected. Finally, results from this preliminary study indicate that both treatments decreased anxiety and increased performance quality.

6.4 Limitations of the Study

6.4.1 Pre-post analysis and sample size

The study was limited in that the design did not include a control group who received no treatment, but were tested across the four time points. This may have been of particular interest in that the exposure alone that was inherent in the study design, without treatment, may have served to attenuate symptoms. Likewise, increased skill development across the study period may have also played a part in treatment success. Larger groups of participants would have allowed for greater statistical power of analyses.

6.4.2 Consistency of treatment implementation

Treatment studies conducted under laboratory conditions can achieve purity in data collection by employing strict exclusion criteria and maintaining consistency across a range of variables. Treatments administered in the clinical setting or in the field cannot be so rigidly controlled (Borkovec & Castonguay, 1998). This can result in less robust results and less symptom reduction (van Balkom et al., 2008).

One of the difficulties encountered in comparing treatments is in ensuring that the treatments are implemented consistently and that there is no diffusion across treatments and treatment groups. In this study, treatments were administered across a variety of locations and settings.

Some treatment locations were more comfortable than others. For example, one group of 10 was crammed into a small, hot and poorly ventilated space with an overpowering aroma of barbequed meat wafting into the room in the later hours of the workshop. Another treatment workshop was located in a large, very cold room with inadequate heating. It is possible that such conditions would have affected participants' responses to the treatment.

6.4.3 Heterogeneous nature of the sample

The common elements among participants in the sample were that all participants self-identified as community musicians and perceived that they had experienced some level of music performance anxiety. While various checks were put in place to maintain treatment fidelity (including the use of only one treatment administrator) across each location and group, there were inevitable differences that occurred due to both the heterogeneous study cohort and the field nature of the study.

There was diversity within the sample across ages (16–81); musical aspirations and experiences (high school students, undergraduate and postgraduate tertiary music students); identification of community musicians, some of whom had played for many years (1.5–69 years) and several who were late-age beginners; daily practice time (0–180 minutes); and performance quality (0–6).

There was also diversity in the behaviour of individual participants and groups across the study. For example, two participants experienced panic attacks prior to

Performance 1. Some individuals were more likely to contribute verbally during the workshop, and others barely spoke at all. One group was locked in acrimonious conflict due to band politics, and at the time the clinician was required to play a mediatory role to maintain equilibrium. Another group that received the AS treatment included three participants who were obese, and the interoceptive exposure activities were adjusted slightly to cater for their physical limitations.

6.4.4 Session times

Each treatment workshop was planned to run within the same time frame. Every attempt was made to maintain planned timings; however, various events prohibited consistency across all treatment days. In some cases, participants arrived late or returned late from scheduled breaks, and the workshop was thus delayed with follow-on consequences to the overall timing of the day.

6.4.5 Group size

Another variable was the varying sizes of the groups. Much of the research was conducted during a time of extreme heat and bushfire emergency across New South Wales. This resulted in a number of participants being unable to attend their scheduled workshops. The researcher subsequently delivered treatment for these participants over the following months, but data collected did not contribute to the study. Group numbers consequently ranged between three and 10. Individuals in the smaller groups may have received greater personal clinician attention, while for the larger groups, delivery by necessity was more prescriptive and didactic rather than collaborative.

6.4.6 Performance quality gains independent of treatment

Collecting follow-up data is considered best practice in treatment studies. However, improvements in performance quality may not only be reflective of treatment

gains, but could well be the result of further musical development or practice. Several participants reported that they signed up to the study as they had impending performance exams. For at least six of the participants, the researcher was aware that their exam took place between Performances 3 and 4. It is likely that an approaching exam may have resulted in greater time, effort and concentration being given to music studies, leading to improved performance quality scores irrespective of treatment gains.

6.4.7 Time lapse between treatment and follow-up

Due to weather conditions, time between treatment and follow-up was not always four weeks as originally planned. The pedagogic presentation required three months for full implementation; however, with up to six weeks between treatment and follow-up in some groups, improvements in performance quality may have been due to greater practice efficacy.

6.4.8 Electronic submission of follow-up data

It is conjectured that those participants who recorded their final performance may not have experienced such elevated levels of music performance anxiety as those who returned to the workshop location and performed again in a live situation.

6.5 Future Research

The research presented in this thesis represents a preliminary treatment study for music performance anxiety in community musicians. Further research is required both to replicate and to explicate these findings. This is particularly important in exploring whether either of the treatments have a greater efficacy rate. The following points may be pertinent to such future research.

6.5.1 Convenience sample

While treatment groups were randomly allocated to treatments, the participants in this study could be construed as constituting a ‘convenience’ sample. Publicity for the study was limited to the resources and networks of the researcher. A proportion of participants were encouraged to attend treatment workshops by teachers or band conductors, who in some cases organised or provided the workshop venue. These facilitators all actively supported the study and, by implication, demonstrated an interest in the area. This is likely to be reflected in their pedagogy as teachers or conductors. For example, one teacher who provided her studio expects students to perform regularly. Thus they attended performance classes and studio recitals once a term in addition to examinations, eisteddfod and school performances. It is possible that these students, having had more exposure to performance, may have experienced less anxiety than many community musicians, and may thus be less representative of the population.

Likewise, some members of this divergent population were teachers themselves, or had professional aspirations, and were actively seeking enrichment activities. In contrast, some participants had taken up their music studies as recently as 18 months earlier, while others had played for up to 69 years. While most took lessons, some played only in their local band, and while some performed solo, others only ever performed in-group situations. Convenience sampling may have led to both dilution of results and the possible concealment of differences between the two treatments. It is recommended that future research source a wider population base to further generalise findings.

6.5.2 Age range

The broad range of ages (16–81) was not predictable when planning the study, and there was some anecdotal evidence to suggest that some questions on the K-MPAI and the STAI state and trait sub-tests were difficult for some participants to understand; for example, one younger participant commented that he did not know what the word ‘evaluate’ meant. Future research should consider using the adolescent versions of the above measures for younger participants.

6.5.3 Gender

Another important factor reported in the literature is that of gender. Females have expressed higher levels of anxiety on self-report measures, yet males have often exhibited heightened physiological responses (Kenny, 2011). This important factor was not explored here due the weighting of female participants to male (45:23). Differences between genders are nevertheless an important consideration, and future research should make an effort to study samples with equal gender numbers.

6.5.4 Sample size

Overall, this study was limited by a small sample size. A wider pool of participants would be more representative of the very large population of community musicians, and the divergent genres in which they practice. This would allow future studies to explicate trends in subsets or homogeneous groups of community musicians. Thus it is suggested that this study be replicated with a larger sample for greater statistical power and more homogeneous population groupings for greater purity of results.

6.5.5 Clinician characteristics

The researcher delivered treatment to all participants, and consistency was thus established. However, the researcher was an early career clinical psychologist with concurrent senior and extensive experience in the music industry as a teacher, examiner and performer. It is possible that the interface of the two professions affected research outcomes.

6.5.6 Methods of assessment and data collection

6.5.6.1 Qualitative and intra-personal assessment

Kenny (2011) posited that music performance anxiety is multifaceted, with symptoms experienced across cognitive, behavioural and physiological domains not necessarily presenting in a synchronous manner. Further, Kenny (2011) suggested that music performance anxiety may not be a dimensional construct, but rather a series of subtypes that manifest in various degrees of severity. Its underlying aetiology may be diverse, and thus its complexity should be examined by co-ordinating data from a range of measures, with emphasis on exploring underlying intra-personal factors (Kenny, 2011).

Kenny (2011) stated that idiographic analysis can ‘provide rich and novel information and insights that nomothetic researchers can subject to verification’ (p. 67). In the most current and definitive text on the subject of music performance anxiety, Kenny (2011) included a chapter of in-depth interviews with sufferers of severe music performance anxiety. These analyses explore life experiences that contribute to the development of music performance anxiety.

Comments made by participants during the study provide a tantalising indication that case study analysis may complement quantitative analysis in future research. For

example, two participants referred to a disembodied shaking that began after their first performance and continued for several minutes after the performance. The nature of the present research did not allow for such anecdotal evidence to be systematically documented and correlated with quantitative data; however, additional intra-personal and qualitative data collection is recommended for future research.

6.5.6.2 *Physiological data*

Clinical treatment studies for anxiety and depression traditionally rely on self-report and clinical interview assessment methodologies. However, studies of music performance anxiety have also employed physiological measurements. Measurements of stress hormones, heart rate and heart rate variability have been used in previous research, albeit on limited sample sizes.

Salivary cortisol is considered an appropriate measure of stress arousal (Hamilton, Rellini & Meston, 2008), and elevation in cortisol levels has been shown in studies of test anxiety across both anxious and non-anxious groups (Sadeghi, Eidi, Eidi & Bahar, 2007). Likewise, the sports psychology literature has also demonstrated elevation between baseline and performance time (Alix-Sy et al., 2008). In addition, cortisol has been shown to elevate at the viewing of a distressing video and remain elevated for some time (Takai et al., 2004).

Osborne, Kenny & Cooksey (2005) found a trend towards cortisol increases between baseline and pre-performance in a sample of eight gifted teenage musicians; however, there were difficulties with collecting baseline samples at the appropriate time. In unpublished Honours research, Halls (2011) found elevation in cortisol between baseline, pre- and post-performance in twenty performance exam candidates. While significance of results was not reached, the effect size indicated that future

research should utilise a larger sample size to achieve adequate statistical power to replicate this result. Gill, Murphy and Rickard (2006) also found a non-significant increase from baseline to performance in a sample of 35 undergraduate tertiary musicians. Boucher and Ryan (2011) also established significant increases in cortisol between baseline and performance in preschool musicians.

Heart rate elevation prior to performance has also been measured. Ryan (2004) measured heart rate prior to performance and during performance in a sample of primary school-age children, and found that while females exhibited elevated heart rate prior to performance, males experienced more elevated heart rate during performance. Thurber (2006) used training to control heart rate variability as a treatment method for music performance anxiety. With a small sample of 14 student musicians, Thurber's study demonstrated that four to five training sessions were effective in decreasing anxiety symptoms. However, as Kenny (2011) pointed out, this study was limited by a small sample size, confounding treatment elements and an inactive control group.

More recently, heart rate variability is indicated as a promising area of study. Recently, Williamon, Aufegger and Eiholzer (2014) measured electrocardiographic data to measure musician responses to simulated performance contexts. Heart rate variability was comparable to actual performance contexts.

These results recommend the addition of physiological measures such as stress hormones, heart rate and heart rate variability for future study. While these measures have been trialled in previous research, sample sizes have been limited, and few studies have used physiological data collection to measure treatment efficacy. Likewise, issues such as sample contamination, confounds between measures and timing of data collection have impeded the utility of physiological measures. Collection of

physiological data may yield additional evidence of treatment efficacy for the two treatments for music performance anxiety trialled in this study.

6.5.7 Other considerations

6.5.7.1 *Correlations between trait/state anxiety and artistic pursuits*

Kenny (2011) posited that musical giftedness and trait anxiety might be associated. Being a professional musician, or selection to elite tertiary training, reflects musical talent; however, the community musicians in the current study reflected a far wider range of musical ability when assessed by expert judges. Nevertheless, a concordance of high mean trait anxiety across the sample was revealed, and is supportive of results in other populations. Perhaps elevated trait anxiety is linked to artistic pursuits irrespective of ability. There is a need for further study to explore this possibility.

The self-reported state anxiety scores of this sample were higher at all performance times than those of the normative population. Spielberger and colleagues (1983) suggested that trait and state anxiety are associated. Rae and McCambridge (2004) found trait and state anxiety to be correlated in their study of teenage performance exam candidates in Northern Ireland. Similarly, in a study of 26 primary school-age piano students, Ryan (1998) also found a significant correlation between state and trait anxiety.

Craske and Craig (1984) found high synchrony between high-trait anxiety participants and their reports of music performance anxiety and state anxiety when performing under the scrutiny of an expert audience. Cox and Kenardy (1993) found similar patterns in a study of tertiary music students: self-reports of elevated music performance anxiety corresponded with elevated trait anxiety. Music performance

anxiety was best predicted by trait anxiety and gender in a study of 298 musically gifted teenagers (Osborne, Kenny & Cooksey, 2005). Likewise, moderate, positive and significant correlations were found between music performance anxiety and trait and state anxiety in a teenage sample from both Australia and the United States (Kenny, Osborne & Holsomback, 2005). Liston, Frost and Mohr (2003) also found that trait anxiety was a predictor of music performance anxiety in a study of 118 undergraduate and postgraduate South Australian music students.

6.5.7.2 *Social phobia*

Music performance anxiety has also been linked to social phobia (Osborne et al., 2005). In their study of gifted teenagers, Osborne and Kenny (2005) found that music performance anxiety was related more to social anxiety than to trait anxiety. Cox and Kenardy (1993) also found a high prevalence of social anxiety in their sample of tertiary music students. Similarly, almost half (48%) of the present sample endorsed the statement, 'I am concerned about being scrutinised by others' in the K-MPAI.

Kenny (2011) made the point that individuals who experience social phobia avoid situations that incur anxious feelings. Musicians, however, continue to perform despite experiencing crippling discomfort. This was reflected in the present study, in which musicians indicated ongoing commitment to performing, yet endorsed—at significant percentages—items in K-MPAI pertaining to cognitive, somatic and physiological anxiety symptoms.

Thus, as Kenny (2009, 2011) postulated, music performance anxiety may be too multifaceted and complex to be defined as a subtype of social phobia. There is a need for greater explication of the underlying motivation that propels even community musicians to expose their performance to the scrutiny of a discerning audience.

6.5.7.3 *Motivation and aspiration*

Wilson (2002) posited that music performance anxiety might be the result of a lack of concordance between task mastery, trait anxiety and situational stress. From this model, Papageorgi, Hallam and Welch (2007) proposed a conceptual framework linking individual propensity to experience anxiety with task mastery and environment. Kenny (2011) critiqued this construct as lacking empirical support, while its linear progression fails to account for the interaction between the elements that contribute to music performance anxiety.

Further research also needs to explore how aspiration can be influenced by self-efficacy and motivational beliefs. In two studies of performance exam candidates, McCormick and McPherson (2003) and McPherson and McCormick (2006) found that self-efficacy was the most important predictor of performance grade. Self-report measures explored participants' own perceptions of self-efficacy and the ways in which they prepared for their exam.

6.6 Conclusion

In sum, this thesis contributes to the field of music performance anxiety generally, and has important clinical implications. The community musician population numbers in the hundreds of thousands worldwide, yet there have been few studies specifically focused on this demographic (McCormick & McPherson, 2003). This research helps to address that gap. It also demonstrates that CBT and AS treatments can be adapted as successful treatments for music performance anxiety in community musicians. Treatment for the musicians in this study resulted in significant attenuation of anxiety symptoms and elevation in performance quality from baseline measures. Further, the study shows that treatment can be successively delivered in one-day group

workshop formats. While evidence of the superiority of either treatment was not found, the results of this preliminary study provide a foundation for further replication and explication. This will ultimately lead to the enrichment of the musical experiences of the large and diverse population of community musicians.

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Appendix A: Consent Letter to Participants



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Music Performance Anxiety Study

Student: Naomi Halls

Principle Supervisor: Professor B. Thompson

Macquarie University

Dear Musician,

I seek your permission for you to take part in a research project conducted to meet the requirements of above named Student's Doctor of Clinical Psychology Dissertation under the supervision of Professor Bill Thompson. Much research attests to the benefits of studying music and many musicians present for graded examinations, eisteddfods and HSC exams and perform as part of their music making. However performing in front of others can be associated with anxiety and can detract from the pleasure of music making. This study will explore treatments for music performance anxiety so that strategies can be developed to help musicians perform to their optimum in all situations.



Participation in this study would involve completing anonymous surveys prior to attending a workshop, and just after performing a short musical item four times to be assessed by an expert judge who will also provide anonymous data for the research. All information will only be reported in-group form, and will not identify individual participants.

Completing the surveys will take about fifteen minutes and attending and performing in the workshop will take approximately six hours. For the purposes of performance assessment recitals may be videotaped but all recordings will be destroyed once assessed.

Participation is anonymous and voluntary and you will only take part if you agree. No identifying information will be evident in any resulting publications. If you agree to participate and then change your mind about taking part even after the study has begun please contact Naomi Halls and any information already collected will be destroyed. If you consent to take part please complete the attached form and return to the researcher.

When you have read the above, please feel free to contact Naomi Halls for any further information.



I (the participant) have read (or, where appropriate, have had read to me) and understand the information above, and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw at any time. I have been given a copy of this form to keep.

Participant's Name: _____ (block letters)

Participant's Signature: _____ Date: _____

Investigator's Name: _____ (block letters)

Investigator's Signature: _____ Date: _____

Signed by: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix B: CBT Treatment

Brief On-line Supported Cognitive Behavioural Therapy for Music Performance Anxiety

Authors:

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Reading and Activities**Reading and Activities for Week 1**

- Goals Sheet (Activity).
- Feelings Scale (Activity).
- Thinking Styles (Reading).
- Anxious Thinking Styles (Reading).
- Everyday Situations and My Thoughts (Activity).
- Linking Thoughts and Feelings (Activity).
- The Realistic Thinking Process (Reading).
- Applying Realistic Thinking to Other People's Worries (Activity).
- Rewards and Fun (Reading and Activity).

Reading and Activities for Week 2

- Fighting Fear by Facing Fear (Reading).
- Making a Fears and Worries List (Reading).
- Creating a stepladder (Activity).
- Stepladder (Activity).
- Planning to Face Fear (Reading).
- Step Planning (Activity).
- In Your Mind, Realistic Thinking (Reading).
- Surfing Emotions (Reading).
- Revising Your Stepladders (Reading).
- When the going gets tough (Reading).
- Acting As If (Reading).

Reading and Activities for Week 3

- Experimenting With Reality (Reading).
- The Importance of Feedback (Reading).
- Eliciting Feedback (Activity).

Goals

This program should help you to deal with negative feelings around performing, so you can feel more in control when you perform in front of others.

To get the most out of the program have a think about what areas of performance you would like to change and then write some down some goals below.

Goals should be interesting and challenging but not overwhelming. They should also be realistic and achievable.

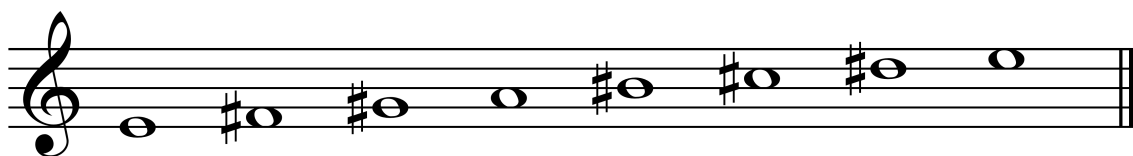
State your goals as positive outcomes, focus on what you want, not what you don't want.

Some examples of goals from would be:

- "I want to be calm and efficient in preparing for exams" and not "I don't want to freak out over exams".
- "I want to volunteer to play lead in the band".

Write down some goals you would like to achieve in the program. You may wish to share them with everyone or keep them private.

GOAL 1	
GOAL 2	
GOAL 3	

Feelings Scale

Feeling Scale: Think about your first performance for the program, fill in some more descriptive words and circle how much MPA you experienced in that performance.

10	<i>Worst</i> <i>Imaginable</i>	
9		
8		
7	<i>Severe</i>	
6		
5	<i>Moderate</i>	
4		
3		

2	Mild	
1		
0	OK	

Feelings of anxiety can result in a range of body sensations from dizziness and shaking to tiredness and lethargy. These body sensations are normal changes that occur with anxiety. The stronger the feeling is, the more likely you will notice changes in your body and mind.

Over the next week consider the feelings below and if you experience the feeling, write a note of what you experience. Think about what changes happen in your body when you experience strong feelings. Scan your body from head to toe and work out what body sensations you experienced at the time.

Ecstatic	
Worried	
Cheery	
Terrified	
Excited	
Angry	
Content	
Confident	
Miserable	
Disgusted	

Thinking Styles

Every person develops a set of thoughts, assumptions and beliefs that you hold about yourself, your experiences and others and are used to interpret situations in your life. Thinking styles can be realistic or unrealistic. Realistic views increase your chances of feeling good or succeeding in achieving a goal (e.g. I can do this, they will like my performance). Unrealistic or negative views are generally self-critical, make you feel bad, and can reduce your chances of achieving goals (e.g. I'll fall apart, I can't get it together).

Thinking styles are shaped by life experiences and constantly change as we experience different situations and have new experiences. By focusing on our thinking styles we can make changes that work to our advantage by strengthening thoughts and beliefs that work well and changing those do not helping. Very strong negative feelings are typically caused by thinking styles that are unrealistic and the thoughts and beliefs are actually distorted. When thoughts are distorted you are not seeing things as they really are. A good analogy is putting on coloured glasses-the glasses influence your perception of everything you see. It is like when you focus on a few wrong notes and become convinced that a performance is ruined because of this.

Examples of some negative thinking styles:

- ☛ Expecting the worst outcome.
- ☛ Thinking that you know what someone is thinking.
- ☛ Expecting that you will never make a mistake.
- ☛ Reaching a conclusion without considering all the possibilities.
- ☛ Predicting future performances based on one performance.
- ☛ Assuming if it was bad once it will always be bad.
- ☛ Expecting that you will be able to do anything instantly.
- ☛ Believing that other people are naturally better than you.
- ☛ Overlooking your strengths and abilities.
- ☛ Attributing success to luck and failure to ability.
- ☛ Attributing success to luck rather than effort.
- ☛ Expecting that everything will remain the same.

Anxious Thinking Styles

People who worry a lot about their performances tend to think in very similar ways. In particular they tend to think in ways that are not realistic. The two most common thinking styles that will make a person anxious about performing are when they overestimate how likely it is that something bad will happen or they overestimate how terrible it will be if something goes wrong in a performance.

An example is if one performance doesn't go well, then we think all future performances will not be good. This thought ignores the fact that you may have given some good performances in the past.

Negative thinking styles have a direct impact on how you feel. If you think negatively about performing most of the time, it will be virtually impossible to feel relaxed and ok when you next perform. By changing these thinking styles, you will go a long way to reducing the negative feelings, and increasing positive feelings towards performing. When you notice unhelpful thought and beliefs, you must do something about them. If you don't control them, they will control you and help to keep you stressed.

Many people make the mistake of taking their thoughts as facts. In truth, many thoughts are just ideas that may or may not be true-you don't know until you check them out. So one of the first things to remember when you are feeling anxious is that what you expect will happen is only an idea. It could be true or it could be an error.

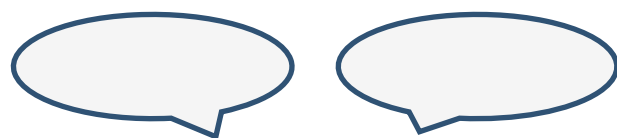
To control worry we need a way of deciding whether the thoughts behind the feelings are realistic. That way we can change the anxious thoughts and keep the realistic ones. We should point out that we aren't necessarily aiming for positive thoughts-there is no denying that sometimes a performance will not be great and we need to use coping skills to manage the performance if it isn't the best, but we need to address the underlying thoughts that make us anxious before a performance.

A useful realistic thinking style is one that you can genuinely believe. You are most likely to believe that thought if it is based on evidence. When faced with an

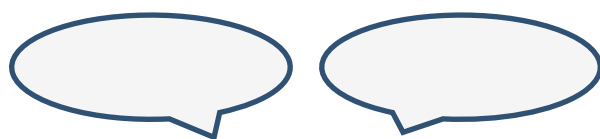
anxious thought it is helpful to look for clues or evidence. The evidence you will find will either provide that your thought is realistic or it will help you to create a new thought.

Everyday Situations and My Thoughts

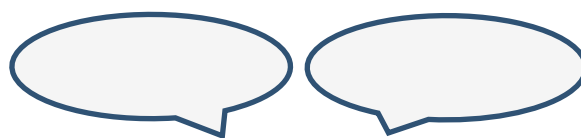
Below are examples of situations. For each example write down two contrasting interpretations of the situation: one thought should be helpful and the other not so helpful. How might the person feel with each interpretation?



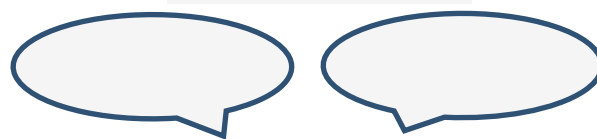
Playing at home



In a lesson-your



Band conductor is



In an exam the

How you think affects the way you feel

Linking Thoughts and Feelings**How you think affects the way you feel**

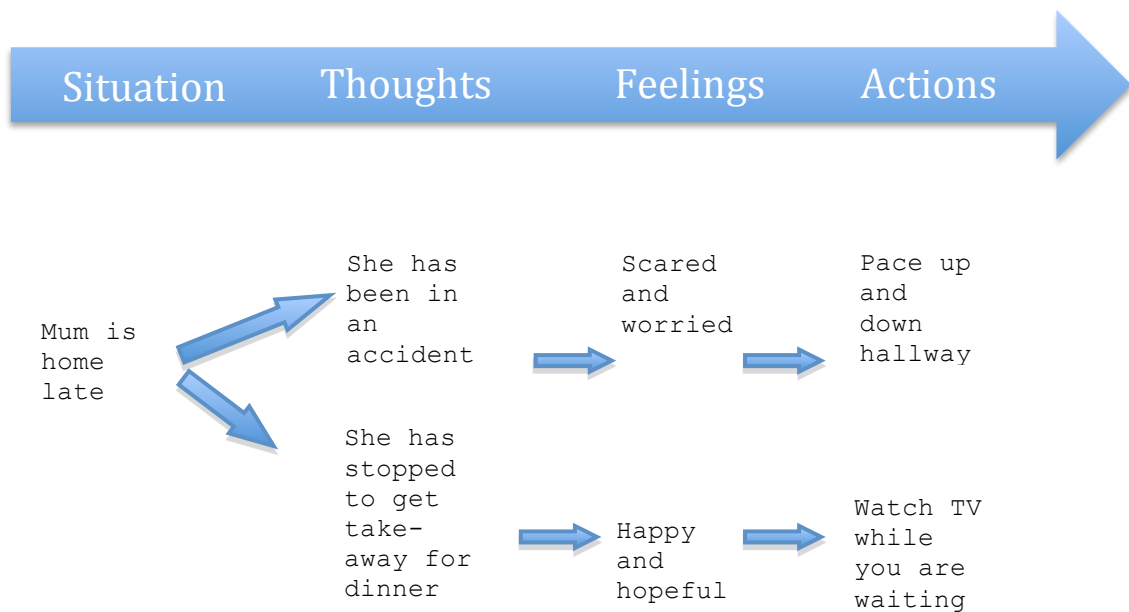
To practice identifying your thoughts, think of a couple of recent times when you felt upset or stressed. Write down what was happening. What was going through your mind and what you were feeling?

Situation What was happening?	Thought What were you thinking?	Feeling What were you feeling? Rate your feeling from 0-10	Situation What was happening?	Thought What were you thinking?	Feeling What were you feeling? Rate your feeling from 0-10

Understanding Thoughts and Feelings

How I feel Depends on What I Think

Most people think that events happening outside them cause feelings. In other words, if you experience a certain event, then certain feelings will be the inevitable result. For example, have you ever said “that noise startled me”, or “the examiner scared me”. However, outside events such as a noise or another person cannot be fully responsible for your feelings. One way to understand this is to realise that two people can experience exactly the same event and feel differently about it. Even the same person can experience the same event at different times and feel quite differently about it each time. The answer lies in your beliefs, thoughts or self-talk – in other words your feelings depend on what you are telling yourself about an event or situation. For example, you can probably think of people you know who always see the glass as “half-empty”. They see the negative side of things in themselves, their family, their friends and situations. The more you think negatively, the worse your mood gets. When you are faced with a situation, you can have helpful and not-so-helpful thoughts about it. Helpful thoughts are ones that are flexible and realistic, and will lead to more positive feelings about the situations (e.g., “It’s ok to make mistakes”). Unhelpful thoughts tend to make us feel stressed, down, or angry (e.g., ‘I’m going to fail my exam’, ‘I will make lots of mistakes’). So, it’s not the situation that causes your feelings, but the way you think about the situation. So as we said before the way you think affects the way you feel. Think about a young person in the following example.



Chronic negative thinking is one of the most common reasons that people can't break out of anxious thinking about certain events. In particular, extreme types of thoughts (e.g. 'I'm a failure') lead to strong, out-of-control emotions (e.g., despair).

This means that if you can change your negative thinking, you will go a long way to changing your negative feelings. Most of us don't even notice the thoughts we're having half the time – things happen and next thing we know, we experience an emotion. Thoughts can become like habits – they happen automatically without much awareness or control on our part.

The Realistic Thinking Process

- 1) Identify the event:
 - On a scale of 0-10 (zero being nothing) how high do I rate this negative feeling about the event?
- 2) Identify the thought behind the feeling:
 - What am I worried about?
 - What is it about this situation that is concerning me?
 - What do I think will happen?
- 3) Look for realistic evidence:
 - Consider alternative outcomes
 - Have I seen it happen to others and what happened to them?
 - How much does this happen to people generally?
- 4) Examine the realistic consequences:
 - If I did perform less well than I would like then what would happen?
 - How would I cope?
 - How do other people handle this?
 - How long would I feel bad about the performance for?
 - What is the most likely outcome?
- 5) Identify a realistic thought:
 - What is a realistic thought that I could think about the situation?

How would it feel I thought this thought?

Applying Realistic Thinking To Other Peoples Worries

It is time for you to be the coach. Ask someone to tell you one of their worries, find out the event and the negative thought and then help them to discover evidence and come up with a new more realistic thought. Then get them to help you with a thought of your own.

Event and Thought (Feeling Intensity)	Reality – What is the evidence?	Realistic Consequences	What is a realistic thought based on this evidence? (Feeling intensity)
<i>I will fail exam</i>	<i>Never failed before. Teacher says I'm ready. Play well at studio concert. Have practiced enough. Love playing.</i>	<i>Can do it again. Can pass with an C, B, A. Won't remember this in 10 years. Lots of paths to achieve.</i>	<i>I will pass but may not play as well as at home.</i>

One of the things you will be practising over the coming weeks is facing different fears and challenges. As you practice that skill, you'll need to have some rewards planned to help keep you motivated. Rewards make you feel good and are a great way to lift your mood.

You would reward yourself for two things: a) the personal effort needed to face challenges, and b) success in overcoming fears and challenges. Facing fears and challenges involves enormous effort in terms of your commitment, courage, persistence, ability to tolerate distress, and problem solving. By just having a go you have used many of these skills and deserve credit for your effort. As you achieve your goals over the coming months, you should give yourself larger rewards.

If you tend to be perfectionist, you will need to be particularly careful not to be too hard on yourself. Reward yourself for partial steps, or attempts, regularly.

Write down some ideas for rewards below. Include things you can say to yourself like "That was pretty good", material things, time hanging out with friends, activities or outings, not having to do things you don't enjoy or getting extra time to do the things you like to do. For some people, a reward might be something as simple as making time to watch their favourite TV show. It might mean going shopping watching the football with a friend, or even listening to music in the bath. The possibilities are almost endless!

Rewards and Fun

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

Fighting Fear by Facing Fear

Fears often cause us to avoid doing things we would otherwise be able to do. Fear can make us miss out on fun things and leave us feeling bad. Fear is persistent and doesn't go away unless we actually face the situations that fear has told us to avoid.

Do you remember the first time you rode a bike or went for a swim? You were probably very nervous and quite worried about whether you could do it or if you might get hurt. Most people go through this worry. Typically when you first get on (or in), the worry is really high, about an 8 in terms of feeling intensity. As you get more practice the worry gets a little less. If everything goes well on the first attempt, the second time you try your worry would be a little less, say about a 3. After a few attempts, you start to enjoy it and not worry at all. If you take a long break from riding your bike or swimming, because you're out of practice, the worry might go back up to a 5, not as high as it first was, but not as good as the last time you rode or swam. After a few minutes of practice, the worry dives back down again to 1 and you start to enjoy yourself again. By not letting fear stop you from riding or swimming, you are able to conquer the fear. By facing the fear often, it slowly disappears.

Try to work out Paul's problem. Paul's best friend is having a farewell party before he moves to America. Of course, Paul really wants to go, but there's a problem- he's very afraid of heights and the party is at the top of Millennium Tower. Millennium Tower is 100 stories high. Paul is terrified just thinking about going up that high and he doesn't think he can do it. Paul has 4 weeks before the party to try to find a way to face his fear.

What do you think Paul could do to solve his problem?

Keys to Stepladders

We have seen how unrealistic thinking is linked to worrying about different situations and found out how to make things more realistic, but this isn't enough. If we continue to avoid situations we fear, we never really get an opportunity to put our realistic thinking to the test.

The next step in overcoming worries and fears is to gradually face the situations that we feel anxious about, just like Paul did. This skill is called 'exposure' or 'stepladders', because you're exposing yourself to feared situations in a graded way- like the equally spaced steps on a ladder.

There are several important things to remember about stepladders:

- 🗨️ They are gradual. You start with steps that make you just a little anxious, (say a 2 or 3 on the feeling scale) and work up to things that are much harder (a 9 or 10 rating). This way, you get to feel comfortable at one level before moving on to the next, which is much better than being thrown in the deep end!
- 🗨️ You use coping skills like realistic thinking to help you manage how scared you are. It's important that you stay in each situation long enough for your anxiety to drop- even though the first time you try, you might worry that you'll be too anxious to stand it. If you take off too early, you don't get the chance to see what happens when your anxiety starts to drop.
- 🗨️ REPETITION – Do it again and again- once is never enough! Make sure you try each step several times- until you are bored, rather than worried.
- 🗨️ Don't be discouraged by hiccups or setbacks- there will be easy days and difficult days. Remember, each time you are still fighting those fears.
- 🗨️ MOST IMPORTANTLY-REWARD *YOURSELF!*

Creating a Stepladder

You can now make a step- by -step plan for performance situations that worry you. To achieve the goal, break it down into easier versions, work your way through the steps and each time you try to step you find a way to reward yourself for the effort that you put in. The first step will have a worry rating of 2 or 3 and the highest step might have a worry rating of 9 or 10. You need to create enough steps in between the first and the last so you can break your fear into small bits you can handle.

1. Set a goal that is practical and achievable. For example if you wrote that performing a solo was a hard thing to do, your goal might be to play a short solo at your teacher's next studio concert.
2. On a separate piece of paper, brainstorm a list of some possible steps you can think of to break down that goal. You may include other situations that you worry about. You can also create new steps by changing some of the ways you do each step. Some of the things that can change between steps include:
 - The people you perform for, so you may begin by performing for members of your family, then friends, then work colleagues or fellow students.
 - The situations that you perform in – you may begin in your own home, your teacher's studio and then your work -space.
 - How long you perform for – you may begin by playing a few notes, then a scale and then a short piece.
 - The difficulty of the piece – begin with an old and fairly easy piece, gradually increasing the difficulty.
3. For each step you created give a rating as to how worried you would be if you were to do that step in the next few days. You may need to imagine in your mind being in the situation to get an accurate idea of how worried you would be.
4. Choose enough steps so that almost all of the possible worry ratings have a step next to them (5-10 steps usually). You may have to add extra steps so

that there will be no big jumps in the intensity of your worry as you work through the ladder.

5. Write your chosen steps in order from lowest to highest on a stepladder. Keep notes on other possible steps as they may be useful when you begin to revise your stepladder.
6. Next, decide what rewards will go with each step. Remember, small rewards go with easier steps and bigger rewards go with the harder steps.

Examples of Step-by-Step Plans

<i>Stepladder</i>
1. Play for yourself and record your performance.
2. Play for a family member
3. Play for your teacher
4. Play for a friend
5. Play in a Performance Class
6. Perform in a Student's Concert
7. Perform in a master-class
8. Perform in an eisteddfod
9. Exam performance

Or

<i>Stepladder</i>
1. Play three notes for our group
2. Play a scale for us
3. Record yourself playing an easy piece and play it for us
4. Play half the piece for us
5. Play the second half of the piece for us
6. Play the whole piece for us

Planning to Face Fear

Over the coming weeks you will work through the stepladders that you created. It is important to plan in more detail how and when you will try each step so that you know where to focus your efforts in the coming week.

Using the step planning form to plan steps during the coming weeks. There are two parts of the form, a planning side and a review side. You will complete the planning side of the form before you try a step and then fill out the review each time you complete a step.

Before you try a step for the first time, it is helpful to do some realistic thinking to make sure you have a realistic thought in your head about what will happen. Soon we will add another coping strategy called emotion surfing to assist with any fear you feel when completing a step.

It is important to do each step until it gets boring or your worry rating comes down to less than 3. Only then should you move on to the next step on your ladder.

Remember to practice steps often and regularly!

What step will I do? When will I do it?	What strategies will I use?	Worry Rating	What did I learn?	Did reward myself?
Play the lead part in a band rehearsal.	Remind myself that it is only a rehearsal and everyone makes mistakes and no one will notice.	Before 6 After 2	Even if it starts a bit shaky it got better and no one seemed to notice the odd mistake.	Chocolate!

Stepladder



Step Planning

What step will I do? When will I do it?	What strategies will I use?	Worry Ratings	What did I learn?	Did I reward myself?
		Today: _____ During: _____ After: _____		YES <input type="checkbox"/> NO <input type="checkbox"/>
		Today: _____ During: _____ After: _____		YES <input type="checkbox"/> NO <input type="checkbox"/>
		Today: _____ During: _____ After: _____		YES <input type="checkbox"/> NO <input type="checkbox"/>
		Today: _____ During: _____ After: _____		YES <input type="checkbox"/> NO <input type="checkbox"/>

In Your Mind Realistic Thinking

You've had some time to practice realistic thinking now. Writing it out can be time consuming so we need to personalise the process to fit you best. We want to create a quick process suited to your daily life and needs. Our aim is to replace your old thinking habits with new ones. Like any habit it takes time and practice to change but persistence will pay off.

Most Useful Questions and Thoughts

The first step for taking an 'in your mind' approach to realistic thinking is to identify the types of negative thoughts that you have most often. Look through the realistic thinking forms that you have completed and find the most commonly occurring thoughts, do you mind read a lot or overestimate how bad a situation will be, do you take a lot of responsibility for things that are not your problem or do you generalise negative thoughts to all events?

From my realistic thinking I often think the following things.

The next step is to write out the questions that are most useful for that type of thought. You can write them onto a wallet -sized card to carry with you, in your diary or anywhere that is easy to access when you start to feel bad. You can write out the questions suggested as useful for that type of thought and you can add other questions that you have found particularly useful so far. Choose between 3 and 5 questions to write on your 'in my mind' card.

Elijah's in your Mind Cue Card

- Do other people do this?
- How likely is it that I will make mistakes?
- If I do make mistakes how bad will it be?

Saskia's in your Mind Cue Card

0. Is there another explanation?
1. What would I think if I was him/her
2. Would other people find this hard?

When you are in a performance situation and you recognise that your thoughts are making you anxious, you can first try asking these questions and using that evidence to evaluate how realistic your thought is. If these questions are not enough then you can return to the more detailed worksheet.

Another helpful process is to identify a few realistic thoughts that combat the negative thoughts that bother you most often. The ones where you have done one or two full sheets already and have had to read over several times as the particular negative thought occurs a lot. The idea is that when you are in the same or similar situation rather than having to complete the full realistic thinking process you can remind yourself of the realistic thought that you discovered previously and then focus on this thought in the situation. Write out between 3 and 5 realistic thoughts that will be useful in a performance situations that make you anxious, either on a cue card or something that you typically have with you when the situation occurs (e.g. inside your wallet). You may even be able to get the thoughts down to one- word cues that mean something only to you. What cues would work for you?

Surfing Emotions

Ride it... don't fight it...

Like we said right at the beginning of the workbook, emotions like worry are very normal. We can use realistic thinking to get our emotions down to a manageable level but we may still have some negative feelings particularly in certain situations. Let's face it, events like a musical performance make most people anxious – a little anxiety can actually help us to perform. In these situations we need a way despite the feelings. This is where surfing emotions can be helpful.

Emotions are like waves – they rise up out of a sea of thoughts, get bigger (and sometimes scarier) but eventually they wash out, disappearing onto the beach. Emotion waves can be big or small, and if you don't see them coming they can knock you over.

You can see a real wave coming when you are swimming and you can choose to surf the wave and ride it all the way to beach. You can also surf emotions like anxiety or worry. If you surf worries or the physical feelings of anxiety, you get to keep doing the things that you want to do without the feelings getting in the way.

Surfing emotions like worry and anxiety is a way of building your tolerance to the feelings. It is a very useful coping skill to use after you reduced your concern through realistic thinking. Often there is still some negative feeling left over which surfing can help you cope with. Surfing can take some time to learn, so the best time to start trying to surf your emotions is now. You might not get it perfectly right for a few weeks!

Surfing Worry

Worry surfing consists of four steps:

1. Notice the worry

As soon as you notice that you are worrying, choose to do something constructive about it. Either complete a realistic thinking sheet or start to surf.

2. Identify what you are meant to be doing

Once you notice that you are starting to worry don't purposely find something to distract your attention – just get on with whatever you should be doing.

3. Start surfing the worry

This is the tricky bit. To surf a worry, you need to concentrate purely on what it is that you are meant to be doing. That means focussing really hard on every little thing that is happening. Don't think about the worry at all. Completely ignore it by concentrating on the little things that make up what it is that you are trying to do. You have to let the worry stay by itself – you've got better things to do!

If you notice that the worry is creeping back into your mind, you have to take your concentration away from the worry and put it back on the thing that you should be doing.

4. Reward yourself

Continue to surf the worry until it stops bothering you. That is usually the point when you realise you haven't been thinking about the worry for quite a while. You might not even remember when you stopped trying to concentrate so hard – you just started to get on with it! If you remember using your worry surfing successfully – reward yourself!

Surfing Physical Feelings

When you can sense that the physical feelings of anxiety are becoming stronger:

1. Recognise the physical feeling

Tell yourself what you notice – e.g. '*I can feel myself starting to blush*'. Describe the physical feelings you are experiencing. Don't try to distract yourself from your feelings.

2. Accurately rate your level of anxiety

Tell yourself something accurate about your level of anxiety – ‘*I’m feeling more anxious*’. Try not to say things to yourself that are not absolutely true. Don’t say ‘*It’s a catastrophe*’ if it is not. Remind yourself that these physical feelings are your body’s natural reaction to anxious thoughts like ‘I’m worried by this because I believe that others will notice it and think I’m a fool’.

3. Start to Surf the Physical Feeling

Give yourself time. Being in a rush to get through the feelings can show that you fear them. Stay in the situation where the feelings started to give you a problem, this might mean that you keep on doing what you have been doing. The most important thing is to persist, remember that the feelings naturally wash out after a while – it may help to rate your feelings every 5 minutes to see this happen.

4. Reward Yourself

Keep surfing the physical feelings until you stop noticing them. You often won’t notice the point when they disappear but reward yourself later on for coping well with a challenging situation.

Learning to use Emotion Surfing

To learn how to surf emotions, it is helpful to first practice concentrating really hard on everyday activities when you are not worried, so you know you can do it when you do get worried. Try to practice concentrating on different activities. When you are first learning this, it helps to talk out loud about all the things that you are doing and noticing. Do this until you can concentrate extra hard for 5 minutes on everyday activities.

Once you can concentrate well, start to use emotion surfing on small worries and slowly work up to using it on bigger worries – just like you do with stepladders.

It is unlikely that you will be able to do this perfectly the first time. However, if you continue, you will get better at it and slowly reduce your sensitivity to emotions like anxiety. The more you surf, the more you will gain confidence in your ability to cope with strong feelings.

Example: Mark surfs his feelings before a band comp.

Mark was at a band competition. He was waiting off-stage as the band before his completed their test piece. As he was waited he noticed a wave of negative feelings rising up – he suddenly felt self-conscious anxious and miserable. He felt a strong urge to just leave and hide away in the corner by himself. He decided to stay and try to surf the negative thoughts and feelings he was experiencing. He concentrated on the beat of the music and warming his instrument. As he focused on these things the negative feelings were less overwhelming and he continued to stay. From time to time, the feeling would build up again but he repeated the surfing technique and eased his attention back to the music and his instrument. Thirty minutes or so later, while on stage he realised that surfing his feelings had really worked.

Emotion surfing goes with realistic thinking. Realistic thinking can be used to reduce the intensity of a feeling to something that is tolerated. Surfing can then be used to allow the feeling to ‘wash out on the beach’. Try not to use safety behaviours or avoidance tactics. In particular don’t run or escape or flee. These actions can reinforce your negative thoughts and help to convince you that your feelings are unbearable.

Ride it don't fight it!

Revising Your Stepladders

You have written your first stepladder to help you reach a particular goal.

Sometimes when you start working on a stepladder, you find there are problems with it which make it seem that the stepladder isn't working. Common problems with stepladders include:

- The steps are too big. The next step seems way too difficult and makes you very anxious. This means you're too scared to give it a go.
- The steps are too small. After doing one or two steps, you find that the next step on the ladder doesn't bother you at all and you think it will be too easy.
- There are too many goals on one stepladder and that's making it difficult.

The ways to deal with the problems are as follows:

- If a step is too big, you need to find a step to go in between the one you just did and the next one on the list.
- If steps seem too small, you should still do each step at least once so that you know for sure that it doesn't bother you. Then you can move on to the next step without having to do the easier step several times.
- If there are too many different worries on one stepladder, the best thing to do is break the ladder into two or more different ones so that you can work on each worry separately. We will do this in the next activity.

Have a look at the stepladder you wrote. Are there any steps which seem to be too big?

Yes

No

If there are, what step could you add in between to make it into two smaller steps?

Step that seems too big:

New steps that will help you reach the big step (your brainstorm list might help here):

Write these steps into your stepladder so you can do them at the right time.

New Stepladders

When you filled out your fears and worries list, you made a note of the different types of situations that you find difficult, your worry themes. Remember also that each area is to have its own stepladder. So you will need to complete some more stepladders.

1. Write down a practical goal of what you would like to be able to do by the end of this stepladder.
2. Brainstorm all the possible steps you can break the worry down into.
3. Give each step a worry rating.
4. Choose steps that cover the full range of feeling ratings, with no gaps greater than 2 points.
5. Write out your new ladder.
6. Plan some rewards to go with particular steps.

Now spend some time on your new stepladders. Create one for each area of worry on your fears and worries list.

Stepladder Worksheet

Stepladder

Stepladder

Stepladder

Stepladder

When the Going Gets Tough

Facing fears is not an easy thing to do. By now, there are probably been a few times when things haven't gone as well as you'd planned. Here are some hints and tips about what may be going wrong if things are going so well.

Sometimes the fear is too much to handle or it's not hard enough.	Remember to pick a fear that's hard, but doesn't freak you out.
Sometimes the step isn't very practical or is vague and you're not sure what you're meant to be doing.	Remember to make the step clear and make it something that can be practised every day or every couple of days.
Sometimes we get carried away with our anxious thoughts and we don't think realistically.	Remember to read over or complete a realistic thinking sheet before attempting each step.
Sometimes we don't believe our realistic thoughts.	Remember that believing thoughts comes through using them. Set up an experiment where you can test your thought out.
Sometimes we get out of a situation so quickly that we don't ever learn that the situation is safe.	Remember to stay in each situation long enough for your feeling rating to come down.
Sometimes our worry ratings don't go down the next time we try a step, so we want to give up.	Remember that each step has to be done often enough and sometimes-lower steps need to be repeated many times before you can do higher steps.
Sometimes we do a step but think it's no big deal.	Remember that fighting fears is a big deal and you should reward yourself every time!
Sometimes we forget where we are up to.	Remember to fill in part of a step planning form every time you practice.
Sometimes we move too quickly because we're doing really well, but suddenly on the next step we get very scared.	Remember to go up a step only when you're getting bored or when you're only a bit scared.
Sometimes when we do a step, we are secretly using something to distract ourselves from the fear, like listening to a radio, but this means we never learn how safe the situation really is.	Remember; always face a fear full on and with no help.
Sometimes we take a friend or something like a mobile phone along to make us feel better, but later we think we were only safe because we had that thing or person with us.	Remember to face fears on your own so you know YOU can handle them.

When facing fears, hiccups are OK. You should expect that some days will be good and it will be easy to face your fears whereas other days will be tough and even the easy steps will seem difficult. However, it's also important to keep in mind that you can't expect to have no anxiety – the goal is to have anxiety you can handle.

Don't give up, keep putting into place the strategies you have learned.

Think back to the steps that you have tried over the last couple of weeks. Have you had any of the problems described above? If so, which ones?

What will you try to do this week to overcome these problems? Write your solutions here.

Acting As If

Sometimes no matter how much evidence we find against a negative thought we still have strong negative emotions. The difficulty is that we still need to face up to the situation. For example you may, despite doing a realistic thinking worksheet, still be worried that you will mess up a performance. From the realistic thinking you found a realistic thought to have in the situation would be “Even if I make mistakes, the worst thing that can happen is I don’t play as well as I do at home and lots of people might not even notice”. Until you have tried out the situation it is hard to really believe the realistic thought. Somehow you have to take the risk and do the task even though you are worried.

One way to take the risk is to act as if you believe the thought. You imagine that you are a person who has this thought and this thought only, then you imagine what they would do and say in the situation. You try to imagine a lot of details and then you act as if this is you. You do exactly as you imagined.

So a person who thought, “Even if I make mistakes, the worst thing that can happen is I don’t play as well. So they would practice as usual and on the performance day feel a bit nervous but could be distracted by the normal things that they have to do that day. As the performance time got closer they would get more nervous but remind themselves that a few mistakes won’t really matter. The key for someone who is acting as if they truly believe the realistic thought would be to follow this imagined scenario as closely as possible.

Let’s think of an example:
Realistic thought
Actual thought and behaviour
If acted AS IF

Experimenting With Reality

Every now and then we need concrete evidence to help us decide whether our expectations are reasonable. This is particularly the case when we do not have a lot of prior experiences to base our decisions on. To discover this concrete evidence it can be helpful to experiment with reality. When you experiment with reality you create a situation where you can test out whether your expectations for that situation are realistic. It is possible that your expectations will come true or you may find evidence of other possibilities.

For example Saskia believed that whenever she performed in front of an audience her face went beetroot red; which was very embarrassing. She decided to experiment with reality to find out how obvious her red face was to other people. Saskia first developed a redness rating scale using pictures from magazines. First with a friend Saskia performed some steps from her stepladder. Each time she predicted how red her face was according to the magazine picture scale. She then rated herself after looking in a mirror. Saskia found out that if her face felt warm you couldn't actually see any redness but if it felt really hot she could see red cheeks but they certainly were not bright red. Saskia was able to add this new piece of evidence to her realistic thinking worksheet.

You're Experimenting with Reality Worksheet

Identify your expectation		Experiments are a useful way of discovering the reality of a situation when we are short on other evidence. Some experiments may end up being part of a stepladder – that's fine; remember the aim of the experiment (and many steps) is to discover evidence for your expectations.
Design an experiment. Ask yourself "How can I find out if this is or isn't true?"		
What do you think will happen during the experiment?		
What actually happened? (write this after you do the experiment)		
What should I expect next time? (add this to your realistic thinking evidence)		

The Importance of Feedback

Many people actually have very good performance skills and come across to others really well. But they often THINK they are hopeless. We call this a biased perception.

For example, you may know people who think “I’m really unattractive” but to you and everyone else, they look perfectly normal. Others may think “I stink at giving talks”, but people in the audience might think they spoke really well.

It is possible that there that you think your performance is really bad but others would not agree with. If this is true, then it’s really important to find this out because it can really help to boost your confidence. The best way to find out what others really think of you is to get feedback from them.

For example, how often have you honestly been told how good-looking (or not) you are? We don’t mean by your mother, who would think you looked beautiful even if you looked like a chimpanzee, but real, honest feedback. Or do you know how you come across in an interview, while giving a talk, or even singing a song? Getting honest feedback from people is a rare and difficult thing. But it can be really useful to help you realise either: a) you are not as bad at some things as you thought, or b) what things you can work on improving.

It is worth mentioning that you also need to keep in mind the quality of feedback you receive. You want people who are likely to have good judgment and always check out the quality of the feedback given. If you don’t agree with it, you can always just ignore it.

Getting (and Giving) Good Feedback

When you decide to ask someone for feedback, it is important to ask for specific things. Most of us are pretty bad at giving feedback, we say ‘you did great’ when a better statement would be ‘you played with good tonal projection and you had some really good dynamics. Before you think about asking for feedback yourself, think through how you can phrase feedback to someone else – this can help you to see what is useful and what is not. Think about someone

in your family, what could you say to them to give them feedback on their appearance or contribution to your household?

Good feedback should be...

HONEST – You won't believe it if you think it's not truthful.

CONSTRUCTIVE – You need to know ways you might improve what you are doing and about the good things you already do. You don't want someone to be as critical as possible.

SPECIFIC AND DETAILED – You need to know exactly what was good and what could be improved. For example, '*you played really well*' doesn't tell you anything. But '*you shaped the phrases well and there was lots of tonal variation*' tells you exactly what is good and why.

NOT TOO MUCH – It is too difficult to give or hear a lot of feedback all at once. You need to pick one or two things that you want to know and ask specifically about that.

Now Work Out How To Get Feedback For Yourself

Pick an area of your performance that you would like to improve.

Who do you know who has seen you in this situation who you trust to be honest with you?

Ask this person if they would be willing to give you some honest, constructive, specific and detailed feedback. It is important to let them know that you are interested in their opinion as a way of improving your performance.

Let them know what you are particularly interested in knowing. Remember you need constructive, specific and detailed information about one or two things. Asking 'How'd I do' isn't going to be as helpful as 'Do you think that I covered the most important points', 'Do I look ok?' isn't as helpful as the question 'do you think this top matches these pants?' Often you can ask about the thing you specifically fear could be wrong. If they give you general feedback, you may need to ask some very specific questions.

Tai's Feedback Plan

I want to know how I sound to an examiner.

Who can tell me? My uncle, he has completed his licentiate diploma.

What I want to know? Did I play with clear articulation and was I in tune in the upper register?

What he said? You played with good stylistics characterization and excellent articulation but you are sharp in the upper register.

Is this useful feedback? Yes it points to **positives and how I can improve.**

What can I change? I need to relax my embouchure and use better breath support for my upper notes, and to listen to pitch-maybe use an electronic tuner.

Practice asking for feedback first on trivial matters and then on things you really care about.

Eliciting Feedback Form

What do you want feedback on?

Who do you know who has seen you in this situation who you trust to be honest with you?

What specific questions do you want answered?

What did they say you did well?

What did they say could be improved?

How can you use this information in the future?

What To Do If You Get Negative Feedback?

First check your interpretation, can what they said be taken in a positive way as well as a negative one?

What positive things did they say? Are there more positives than negatives?

Is the feedback negative or constructive? Is it something that you can work on improving? If so focus on the improvement.

Was the person being honest or critical? Sometimes people can be nasty and their feedback isn't actually useful.

Truly negative feedback is rare. People rarely perform so badly that there isn't something that was done well. So focus on what you already do well and then think about how to improve other areas.

NOT TOO MUCH- It is difficult to give or hear a lot of feedback all at once. You need to pick one or two things that you want to know and specifically ask about that.

Appendix C: Anxiety Sensitivity Treatment

Brief Anxiety Sensitivity Treatment for MPA

Session 1: (1.5 hours)

- Session begins with brief ice- breakers (e.g., introduce yourself by name and an adjective that begins with the first letter of your name that also describes yourself) and brief discussion of group rules (respect, sharing, supporting and confidentiality).
- Overview of the day is written on board and any questions addressed.
- At this point therapist will provide confidence in the program and give them a sense of hope that the day can make a difference.
- It will also be reiterated that there is no magic pill and that they will need to practice the skills developed, over a period of time for success. The evidence - based nature of the program will also be emphasized. It will also be stated that participants may need to have personalized treatment with a psychologist and they can see their GP to be referred on.
- First performance assessments are then completed and participants fill in questionnaires as they wait for their performance.
- Following performance 1 and questionnaires, each participant gives a brief summary of their “musical” story and what they most want to get out of the day (Handout: Goals sheet). A few minutes is given to write these down and briefly share goals.
- Throughout the day therapist will make parallels between shared symptoms and performance situations, to encourage alliance between participants. The therapist

will also repeat throughout the day that it is not the situation but the response to physiological symptoms that escalates the anxiety.

- Performance Skills Workshop (see power point) – 1 hour presentation.
- Second Performance Assessment and questionnaires.

Break (10 minutes)

Session 2: (45 minutes)

- Begin with brief film clip introducing fight/flight and its unconscious activation.
- Facilitate discussion of why humans respond in this way and discuss protective nature of fight/flight.
- Discuss the facilitative affects of each physiological response and describe how each one feels; heart rate, breathing, sweating, shaking, digestive, dizziness and cognition.
- Film clip on Adrenalin-Fight/Flight response to reinforce this discussion.
- Explore how its origins are in evolution. Explore the safety of hunter/gathering societies needing to “herd” together and the dangers of separating from group in primitive cultures.
- Use this discussion to lead to model of social phobia and draw a simplified version on board (use Rapee & Heimberg, 1997).
- Ask group members to describe their experiences and physiological symptoms and any strategies they have used to combat it.
- On board draw a basic diagram of the brain stem, limbic brain, and pre-frontal cortex and how and why, when flight/fight is activated, there is no time for communication between limbic brain and pre-frontal cortex.

- Use “Fawlty Towers” clip, of Basil forgetting his name when nervously meeting an important guest to illustrate this – “Sibyl, whats my name?”
- Now pose the “million dollar questions” – Can we turn it off? If not why not? What can we do about it?
- Briefly discuss habituation and use snail antennae as an example.
- Introduce taking heart rate and break into groups to practice.

Break-30 minutes.

Session 3: (45 minutes)

- Draw a chart on board- with each participant’s name and four conditions; resting heart rate; heart rate after being guided though an imaginal performance (therapist to describe this); after a playing a scale or brief sequence of notes in front of each other; and after jogging/walking on the spot for 30 seconds (for bigger groups and/or older groups hand out record sheets).
- Review the results and ask them to describe how it felt after physical activity and after their brief performance.
- Describe SUD process and write each participant’s name on board (for bigger groups hand out record sheets).
- Introduce interoceptive exposure and purpose as a treatment for MPA.
- Introduce hyperventilation and record SUDS.
- Introduce holding breath and record SUDS.
- Introduce breathing through straws and record SUDS.
- Re-do hyperventilating task and then get each participant to play a quick scale/passage and get group to assess the performance and notice that while

participant will report an elevated SUD and/or heart rate the quality of the performance is not always affected.

Break-10 minutes.

Session 4: Relaxation Strategies (1 hour)

- Begin by measuring breathing rate for 30 seconds and doubling it and record on a chart on board.
- Psycho-education on breathing and introduce simple breathing exercise – breathe in for four, hold for two and release for six (use CCI protocols here).
- Activity – Measure breathing rates after practicing breathing for three minutes and compare with breathing rate at the beginning.
- Psycho-education on PMR and introduce upper body relaxation sequence (use CCI protocols here).
- Activity – on board using scale of 0-10 to record before and after measurements- take participants through a three muscle sequence.
- Handout final questionnaires, and feedback sheet and do final performance assessments.
- After performances check in with how they felt on final performance and discuss date, time and place for meeting in a month to check maintenance performances and stress why this is so important for the study.
- Thank them for their involvement and reiterate that they will need to practice the activities for improvement. Also remind that they may need to see a psychologist for ongoing treatment if their symptoms continue.

Appendix D: Examples of Participant Emails

- Since I saw you, I've played a couple of times with a small group of musicians and singers and my performance has been a lot better – some nerves but not enough to affect my performance. Thank you for the tips.
- Overall in the exam, I didn't match the best of what I have done in some practices, but am glad I did it. ... Trying to manage selected performance situations certainly made a difference ... I've really enjoyed the times we've been involved with the study and the reading etc!
- I thought you might like to know that I got a job as accompanist at ... school. I definitely benefited from the workshops with you and combined with much more performing in the last 6 months I was able to audition more confidently.
- I thought I should give you some follow-up experiences from the workshop, just in case the participants don't think to do so.

*Firstly ... successfully did his Performance Certificate (Bplus). He had a sensation of nerves after starting the Beethoven, but then consciously held the belief that he would survive and had the end of the page as his goal, and this strategy worked.

*... our most nervous one ... played at our soiree, one mistake from left of field, then settled down and consciously embraced the nerves, and played the rest of the Satie well.

*... was able to think "music" and not be self-conscious about the audience ... ignored them.

*... didn't really feel she suffered from nerves (I'm not sure if I'm convinced of that, actually), but as a result of our including ..., ... joined the choir organized by ... and they did a concert the other night and she sang a solo!

So lots of positives!

- Thanks for the MPA workshop. Initially I thought my MPA wouldn't be cured, but after a few weeks of practicing the thinking, step ladders and particularly playing in front of people I noticed a differences within myself. It is not just music performance, I can see improvement socially as well. I become a bit more out-spoken and relate better with people, especially unfamiliar ones.

Appendix E: Performance Skills PowerPoint



Performance Skills

How to Perform at Your Peak

+ Overview



- The “P” bomb!
- Play fit, not Flat-Self Care for Musicians.
- Goal- Setting and motivation.
- Mental Imagery.
- Focus.
- Pre-Performance Routines.



+ ...and the answer is 10,000 hours

- Acquiring skill takes practice.
- Link between practice and quality of performance.
- Research shows students take same amount of hours to achieve the same exam grade, whether it takes 1 year or 10!
- **Formal Practice**-Tone, Technique, Repertoire
- **Informal Practice**-Improvising, Ear, trial and error.

+ Automaticity

- Cognitive-conscious practice.
- Associative-refinement and greater accuracy.
- Automaticity-Has become automatic and does not require conscious attention.
- Shift from short term memory to long term memory.



+ How to Practice?

- **Chunking**-Isolate problem and solve one by one.
- **Holistic**-Larger passages are practiced and refinement increased with repetition.
- **Slow Practice**-use metronome to increase the tempo.
- **Which method to use?**
Depends on time-line to performance.



+ Practice Tips.

- Keep a practice diary.

Consider Interpretation by:

- Listen and watch good performances
- Sing instrumental lines to connect notes with phrase shape.
- Study the score carefully.



+ Peak Practice for Peak Performance.

- Maximise accuracy.
- Eliminate inaccuracy.
- Transfer practice to performance.
- **How can we do this?**
- Practice relaxing during practice, so this will also be automatic.
- Challenge “I can’t do this” thoughts during practice.

+ Think Like an athlete!

- Practice long slow runs and short sprints.

Peak practice well before performance.

Achieve muscle memory and build glytrogen.

Decrease practice hours closer to performance.

- Prior to performance-rest physically and mentally.



+ Think Fit, not Flat (Ackermann, 2006).

- Exercise.
- Diet.
- Hydration.
- Sleep.
- Why does it matter?



+ Goal Setting and Motivation:
Intrinsic Motivation is;

- Experiences = Growth, learning.
- Talent/Abilities/Skills can be developed.
- Hard Work and Training = Learning and development.
- Its all about the journey!



+ Goal Setting: Extrinsic Motivation is;

Performing to impress people.

Playing to win.

Feels good when you are better than everyone is.



+ New Messages:

- Mistakes are good-shows you want to need to do next.
- Seek guidance-it's ok not to know how to do something.
- Don't compare yourself to others, focus on becoming a better musician.
- Have mastery goals for a performance-eg " I want my articulation to be clear" rather than " I don't want to embarrass myself".

+ Goals

- Long Term.
- Short Term.
- Specific.
- Realistic.
- Be habitual.
- Track Performance.
- Have plans to grow and improve.



+ Mental Imagery:

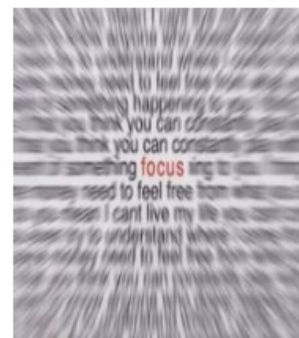
- Prepare to perform by visualizing.
- How will it sound?
- How will it look?
- How will it feel?
- **Mental Images should be detailed, realistic and specific.**

+ Pre-Performance Routines:

- Visit and practice playing in the venue before performance.
- Plan ahead: travel time, equipment, costumes organized.
- Use relaxation and thought strategies from practice to calm down.
- Its ok to have a lucky charm-if it works!

+ Focus:

- Decide what to play attention to in each performance.
- Stay in the here and now.
- Practice shifting focus and maintaining concentration



+ Emotional Control:

- Performance will create arousal.
- Use this arousal to motivate not interfere.
- Recognize and accept that you will experience arousal.
- Develop strategies to help you stay calm prior to, and during performance.

+ Trust:

- You have worked hard (practice) to build up a nest egg in your musical bank.
- Now you can make a big withdrawal knowing you have done the work and can enjoy the performance.



Jack:

- Practice, practice, practice.
- Chunks and chunks and forgets to put performance back together.
- Is angry with himself about mistakes he made in yesterday's practice.
- Forgets to eat, sleep drink and exercise, socialize in week before performance.
- One last practice.....late!

+ Jill:

- Practices by using chunking and holistic strategies.
- Mentally imagines the performance.
- Decides to focus on a specific performance goal for this performance.
- Balances life/practice/self-care and develops re-performance rituals.
- Reminds herself that she is prepared and the odd mistake won't ruin the performance.



Appendix F: Demographic Information



Demographic Information

Gender –

Age –

Age first started learning an instrument –

Years learning instrument –

Time practicing per day –

Desire to be a professional musician – No Yes Not Sure

Frequency performing in public

A: Once a week

C: Every school term

D: Once a year

Performance context – tick any or all

- Studio concert
- Exam
- Eisteddfod
- Parents/friends
- School

Performance Pattern – tick

- Solo only
- Mostly solo, some ensemble
- Mixed solo, ensemble
- Mostly ensemble, some solo
- Ensemble only

Appendix G: Kenny Music Performance Anxiety Inventory

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		
1. I generally feel in control of my life	6	5	4	3	2	1	0	
2. I find it easy to trust others	6	5	4	3	2	1	0	
3. Sometimes I feel depressed without knowing why	0	1	2	3	4	5	6	
4. I often find it difficult to work up the energy to do things	0	1	2	3	4	5	6	
5. Excessive worrying is a characteristic of my family	0	1	2	3	4	5	6	
6. I often feel that life has not much to offer me	0	1	2	3	4	5	6	
7. Even if I work hard in preparation for a performance, I am likely to make mistakes	0	1	2	3	4	5	6	
8. I find it difficult to depend on others	0	1	2	3	4	5	6	
9. My parents were mostly responsive to my needs	6	5	4	3	2	1	0	
10. Prior to, or during a performance, I get feelings akin to panic	0	1	2	3	4	5	6	
11. I never know before a concert whether I will perform well	0	1	2	3	4	5	6	
12. Prior to, or during a performance, I experience dry mouth	0	1	2	3	4	5	6	
13. I often feel that I am not worth much as a person	0	1	2	3	4	5	6	
14. During a performance I find myself thinking about whether I'll even get through it	0	1	2	3	4	5	6	
15. Thinking about the evaluation I may get interferes with my performance	0	1	2	3	4	5	6	

	Strongly Disagree				Strongly Agree			
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	
17. Even in the most stressful performance situations, I am confident that I will perform well	6	5	4	3	2	1	0	
18. I am often concerned about a negative reaction from the audience	0	1	2	3	4	5	6	
19. Sometimes I feel anxious for no particular reason	0	1	2	3	4	5	6	
20. From early in my music studies, I remember being anxious about performing	0	1	2	3	4	5	6	
21. I worry that one bad performance may ruin my career	0	1	2	3	4	5	6	
22. Prior to, or during a performance, I experience increased heart rate like pounding in my chest	0	1	2	3	4	5	6	
23. My parents almost always listened to me	6	5	4	3	2	1	0	
24. I give up worthwhile performance opportunities due to anxiety	0	1	2	3	4	5	6	
25. After the performance, I worry about whether I played well enough	0	1	2	3	4	5	6	
26. My worry and nervousness about my performance interferes with my focus and concentration	0	1	2	3	4	5	6	
27. As a child, I often felt sad	0	1	2	3	4	5	6	
28. I often prepare for a concert with a sense of dread and impending disaster	0	1	2	3	4	5	6	
29. One or both of my parents were overly anxious	0	1	2	3	4	5	6	
30. Prior to, or during a performance, I have increased muscle tension	0	1	2	3	4	5	6	
31. I often feel that I have nothing to look forward to	0	1	2	3	4	5	6	
32. After the performance, I replay it in my mind over and over	0	1	2	3	4	5	6	
33. My parents encouraged me to try new things	6	5	4	3	2	1	0	
34. I worry so much before a performance, I cannot sleep	0	1	2	3	4	5	6	

	Strongly Disagree				Strongly Agree			
35. When performing without music, my memory is reliable	6	5	4	3	2	1	0	
36. Prior to, or during a performance, I experience shaking or trembling or tremor	0	1	2	3	4	5	6	
37. I am confident playing from memory	6	5	4	3	2	1	0	
38. I am concerned about being scrutinized by others	0	1	2	3	4	5	6	
39. I worry about my own judgement of how I will perform	0	1	2	3	4	5	6	
40. I remain committed to performing even though it causes me great anxiety	0	1	2	3	4	5	6	

©Kenny, D.T. (2009). Kenny Music Performance Anxiety Inventory (K-MPAI)

Appendix H: Permission to Use the State-Trait Anxiety Inventory for Adults

For use by Naomi Halls only. Received from Mind Garden, Inc. on June 6, 2011



www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: ***State-Trait Anxiety Inventory for Adults***

Authors: ***Charles D. Spielberger, in collaboration with R.L. Gorsuch, G.A. Jacobs, R. Lushene, and P.R. Vagg***

Copyright: ***1968, 1977 by Charles D. Spielberger***

for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most
Mind Garden, Inc.
www.mindgarden.com

Sample Items from the State-Trait Anxiety Inventory

For use by Naomi Hallis only. Received from Mind Garden, Inc. on June 6, 2011

SELF-EVALUATION QUESTIONNAIRE

STAI Form Y-2

Name _____ Date _____

DIRECTIONS

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you *generally* feel.

ALMOST NEVER
SOMETIMES
OFTEN
ALMOST ALWAYS

- | | | | | |
|---|---|---|---|---|
| 21. I feel pleasant | 1 | 2 | 3 | 4 |
| 22. I feel nervous and restless | 1 | 2 | 3 | 4 |
| 23. I feel satisfied with myself | 1 | 2 | 3 | 4 |
| 24. I wish I could be as happy as others seem to be | 1 | 2 | 3 | 4 |
| 25. I feel like a failure | 1 | 2 | 3 | 4 |

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Appendix I: PRIME-MD

Prime-MD Patient Health Questionnaire (PRIME-MD PHQ).

Please circle the appropriate answer.

1). During the past month, have you often been bothered by feeling down, depressed, or hopeless? Yes No

2). During the past month, have you often been bothered by little interest or pleasure in doing things? Yes No

Appendix J: Anxiety Sensitivity Index

Reiss-Epstein-Gursky A.S.I.

Name _____ Today's Date _____

Circle the *one* phrase that best represents the extent to which you agree with the item. If any of the items concern something that is not part of your experience (e.g., "It scares me when I feel shaky" for someone who has never trembled or had the "shakes"), answer on the basis of how you think you might feel *if you had* such an experience. Otherwise, answer all items on the basis of your own experience.

1. It is important to me not to appear nervous.

Very Little A Little Some Much Very Much

2. When I cannot keep my mind on a task, I worry that I might be going crazy.

Very Little A Little Some Much Very Much

3. It scares me when I feel "shaky" (trembling).

Very Little A Little Some Much Very Much

4. It scares me when I feel faint.

Very Little A Little Some Much Very Much

5. It is important to me to stay in control of my emotions.

Very Little A Little Some Much Very Much

6. It scares me when my heart beats rapidly.

Very Little A Little Some Much Very Much

7. It embarrasses me when my stomach growls.

Very Little A Little Some Much Very Much

8. It scares me when I am nauseous.

Very Little A Little Some Much Very Much

9. When I notice that my heart is beating rapidly, I worry that I might have a heart attack.

Very Little A Little Some Much Very Much

10. It scares me when I become short of breath.

Very Little A Little Some Much Very Much

11. When my stomach is upset, I worry that I might be seriously ill.

Very Little A Little Some Much Very Much

12. It scares me when I am unable to keep my mind on a task.

Very Little A Little Some Much Very Much

13. Other people notice when I feel shaky.

Very Little	A Little	Some	Much	Very Much
-------------	----------	------	------	-----------

14. Unusual body sensations scare me.

Very Little	A Little	Some	Much	Very Much
-------------	----------	------	------	-----------

15. When I am nervous, I worry that I might be mentally ill.

Very Little	A Little	Some	Much	Very Much
-------------	----------	------	------	-----------

16. It scares me when I am nervous.

Very Little	A Little	Some	Much	Very Much
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Appendix K: Expert Judge Ratings Form

Expert Judge Ratings: Performance Quality

Rank each area of performance from 0 (very poor) to 6 (outstanding)

Technique (this includes fingering, articulation, bowing, breathing, tone production.)	0	1	2	3	4	5	6
Accuracy	0	1	2	3	4	5	6
Dynamic Contrasts	0	1	2	3	4	5	6
Tempo/Rhythm	0	1	2	3	4	5	6
Phrasing	0	1	2	3	4	5	6
Musicianship	0	1	2	3	4	5	6
Creativity	0	1	2	3	4	5	6
Emotional Impact	0	1	2	3	4	5	6
Overall Grade	0 <65%	1 65-70%	2 70-75%	3 75-80%	4 80-85%	5 85-90%	6 90%+

Appendix L: Selection of Written Comments on Feedback Form

- Opened new channel of thought but time control! Longer than expected.
- Liked most the step-wise approach to tackling anxiety.
- Liked friendly atmosphere and well prepared material to use at home-would love future workshops....Thank-you Naomi for great planning, presentation and support.
- Liked explanation of brain functioning-didn't like the follow-up work, which will be the real test.
- Liked simple strategies and to the point. Would like another section.
- I especially liked the step ladder process, this will be greatly beneficial in the future in relation to both music performance and other life situations.
- GREAT!!!
- The practice sessions were excellent but it was too short!
- Naomi was very personable and it was great to have a presenter who can relate to how I feel. Least liked feeling anxious and crying.
- The teacher understands the problems and non-judgemental from everyone. Has been very helpful but not long enough.
- Liked the practical elements and performance and behavioural tips and information-but hard to do all in one day, would be more beneficial in shorter classes over a longer period.
- I did not like having to perform so many times.

- It was very well delivered and the concepts are clear and understandable and believable.
- It was very constructive and specifically addressed strategies relating to music performance anxiety. The workshop is going to help me a lot but it would have been good to have more time doing the step exercises.
- Rather long time to remain seated but confirmed some strategies I have tried before.
- I particularly liked the explanation given about how performance anxiety arises and ways to prepare for it-would have been better spread over a few days to absorb it all.
- Great atmosphere and could contribute, friendly everyone.
- Excellent-fantastic and very, very interesting, the science of the brain stuff was a bit boring though!
- Liked understanding causes of anxiety but too short.
- Loved learning about fight/flight and coping strategies, least liked the uncomfortable practice panting thingies.
- Really liked the exercises we did when we measured our pulse and the played our instruments. This gave me a clear insight into the way I feel when I perform, and ways to manage MPA. Not so keen on the brain stuff.
- All the strategies that we did really helped me and it was a comfortable environment- ps-I didn't not like anything (sic).
- Overall use of time was well structured and informative. Topics covered were relevant, informative and helpful. I least liked the power-point notes.
- Easy tips and helpful information-very well organized and all on time.

- Liked relaxed atmosphere, did not like lack of air in room.
- Useful strategies, everything was clear and understandable but I didn't get nervous (Naomi too friendly). Maybe more pressure could be applied to participants.
- I was very happy with the content and the tools provided to use for the future. I learned so much that I can apply and nothing negative to add.
- I liked realizing that practicing the situation, feeling horrible, helps. Also having something I can try quite easily by myself. I least liked feeling hungry! I should have had more breakfast!

Appendix M: Ethics Approval

From: "Ethics Secretariat" <ethics.secretariat@mq.edu.au>
Subject: Approved- Ethics application- Thompson (Ref No: 5201200825)
Date: 24 January 2013 3:13:44 pm AEDT
To: "Prof Bill Thompson" <bill.thompson@mq.edu.au>
Cc: "Ms Naomi Halls" <Naomi.Halls@students.mq.edu.au>

Dear Prof Thompson

Re: "Effectiveness of cognitive-behavioral intervention for music performance anxiety in a community-based sample" (Ethics Ref: 5201200825)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Ms Naomi Halls
Prof Bill Thompson

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 24 January 2014
Progress Report 2 Due: 24 January 2015
Progress Report 3 Due: 24 January 2016
Progress Report 4 Due: 24 January 2017
Final Report Due: 24 January 2018

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or

not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy/>

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and fund will not be released until the Research Grants Management Assistant has received a copy of this email. Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely
Dr Karolyn White
Director of Research Ethics
Chair, Human Research Ethics Committee