

**Music Performance Anxiety in Children and Teenagers:
Effects of Perfectionism, Self-Efficacy, and Gender**

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Abstract

Music Performance Anxiety is something that has affected a number of musicians and numerous studies have been conducted on performance anxiety in adult musicians. However, research on performance anxiety in children and adolescence is still lacking when compared to literature on adult and music performance anxiety. This study examined the signs and symptoms that children (ages 8-12) and teenagers (ages 13-17) feel and the levels of performance anxiety they perceive. In addition, this study also examined levels of perfectionism, self-efficacy and gender as predictors of anxiety and compared these with levels of anxiety. Sixty-five participants completed three questionnaires and a demographic survey. Results suggest a tentative increasing relationship between music performance anxiety and age while no relationship between gender and anxiety was found. Strong relationships between perfectionism and self-efficacy with anxiety indicate that students with high levels of perfectionism and low levels of self-efficacy are more likely to have high levels of performance anxiety. Just as previous studies with adults have found, our findings in children and adolescents suggest that perfectionism may render people vulnerable to performance anxiety while self-efficacy may be an important buffer against this anxiety.

***Keywords:* music, performance anxiety, children, teenagers, self-efficacy, perfectionism**

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Chapter 1: Review of Literature

1.1 Introduction

While being a musician involves many different aspects, public performance is one of the most important features. Although most musicians experience some feelings of nervousness before a performance, the symptoms and signs differ greatly between individuals. If the level of symptoms reaches a point that goes beyond typical performance nervousness, researchers (Wilson & Roland, 2002; Ryan, 2004; Kesselring, 2006; Kenny, 2011) classify it as Music Performance Anxiety (MPA). As professional musicians, music students and children face this increasingly recognized problem (Wilson & Roland, 2002), more research is needed in this area, particularly for children between the ages of 8 and 12 and teenagers between the ages of 13 and 17.

Despite the growing amount of research being done on Music Performance Anxiety, a definition that adequately describes this condition is difficult to find. Wilson and Roland (2002) define performance anxiety as an “exaggerated, often incapacitating fear of public performance” (p. 47). Ryan (2004) states that performance anxiety “causes physical and psychological discomfort and has been known to affect performance quality” (p. 89), and Kesselring (2006) defines this condition as “a state of arousal and anxiety occurring before or while a person is performing non-anonymously in front of an audience producing a valuable or evaluated task touching on his/her self-esteem” (p. 309). All of these definitions describe some of the effects of Music Performance Anxiety. For the purposes of this study, Kenny’s (2011) shortened definition will be used as it combines the main ideas of the above definitions. It states that Music Performance Anxiety is “an experience of persistent anxious apprehension related to musical performance and is manifested through a combination of psychological, physiological, cognitive and behavioural symptoms. It often occurs in situations involving an evaluative threat (audience)” (p. 433).

Physiological symptoms of music performance anxiety stem from our body's natural "fight or flight" response when faced with a dangerous situation (Sinden, 1999). When placed in a threatening position, the autonomic nervous system becomes aroused. Upon receiving a signal from the brain, various chemical messengers are released throughout the body, including epinephrine. Epinephrine, commonly referred to as adrenaline, causes a burst of energy in the body by binding to liver cells, facilitating the production of glucose. This burst of energy is known as an adrenaline rush. As well, epinephrine is responsible for a number of physiological changes such as shaking, slowed digestion, and increased heart rate which help prepare the body to respond quickly to danger. The hormones released into the body also cause a rise in cortisol levels, increasing blood pressure and blood sugar, contributing to the body's preparation to "fight or flight" (Martini, Timmons, & Tallitsch, 2012). The presence of an audience during performance often signifies a threat to the musician, causing activation of the autonomic nervous system, and the presence of physiological symptoms (Ely, 1991). Physiological symptoms may occur before going on stage, triggering negative cognitive or psychological responses, or negative thoughts and fears may occur first, prompting the onset of physiological symptoms. However, both situations develop as the result of a perceived sense of danger with regards to performing (McQuade, 2009).

1.2 Studies on Music Performance Anxiety

A number of studies have been conducted in the field of Music Performance Anxiety in recent years. The following review of literature summarizes a number of studies that have been conducted in this area: studies using professional adult musicians as subjects will be presented first, followed by studies involving university students. The last part of this section will include studies written on teenage participants, and concludes with studies involving child subjects. Each subsection is organized chronologically.

Fishbein, Middlestadt, Ottati, Strauss & Ellis (1988) conducted one of the largest studies done to date on Music Performance Anxiety. Twenty-four percent of the 2122 professional orchestral musicians surveyed reported stage fright as being a problem, with 16% defining it as severe, making it the most frequently mentioned non-musculoskeletal medical challenge in the survey. The size of orchestra did not create a significant impact on the levels of anxiety, but small orchestras still had higher levels of severe performance anxiety than large ones. In a similar study done by Lockwood (1989), one fourth of the orchestral musicians reported having performance anxiety, and one sixth of this group described their performance nervousness as a major problem. It is interesting to note that 20% of people who have a major problem with performance anxiety also were concerned about their alcohol consumption, and an equal number of people worried about their prescription and nonprescription drug use. These numbers seem to indicate that musicians who are suffering from performance anxiety need help managing their anxiety in a productive way.

In another study, 238 musicians completed a questionnaire that assessed levels of music performance anxiety. Severity of anxiety varied between performers, but some level of anxiety was present for most musicians. Performers with higher levels of anxiety also tested as more likely to worry about performance beforehand (Lehrer, Goldman, & Strommen, 1990). Clark & Agras (1991) completed a study using 34 musicians between the ages of 8 and 65, using mostly adult musicians, but also some children and teenager students. While the main goal of this study was focused on determining the effectiveness of specific treatments for performance anxiety, the initial questionnaires established that most of the musicians avoided performing because of their anxiety, and three musicians had stopped performing altogether. Increases in heart rate during performance were also observed from most musicians, which is another indicator of anxiety. In 1995, van Kemenade, van Son & Heesch's study of orchestral musicians, 59% of the participant group experienced a negative impact on their personal or professional life to varying levels of severity, due to performance anxiety, while seventy percent of the

people surveyed in James's study (1997) reported being negatively affected by performance anxiety (as cited in Osbourne & Kenny, 2005). Of the 59% that suffered from anxiety in van Kemenade, van Son & Heesch's study, 32% described a slight anxiety, 32% a moderate intensity, 27% a distinct intensity, and 9% a strong intensity. These musicians also felt anticipatory anxiety leading up to a performance, with 5% feeling anxiety months before the performance, while 10% exhibited symptoms weeks before and 21% days before.

In 2002, a study done in Switzerland asking 50 orchestral musicians if they ever experienced anxiety found that 25 out of 32 women experience MPA sometimes, with 6 women experiencing it often. Meanwhile, 12 of the 18 men experienced anxiety sometimes with 4 of the men indicating often (as cited in Kesselring, 2006)¹. In the same year, Sandgren (2002) interviewed professional singers individually in a number of different sessions to gain a better understanding of issues that vocalists consistently face. The answers from these interviews were used to construct a questionnaire that was administered to 49 active opera singers in Sweden. The results from both the interviews and the questionnaires demonstrated that the singers experience high levels of performance anxiety, specifically before significant events such as opening night. In contrast to other musicians, singers' anxiety was focused on a preoccupation with vocal health, with most of their nervousness fixated on threats to their voice functioning. Another study using vocalists as participants had thirty-two Australian opera artists complete five questionnaires during a typical opera season to determine their levels of performance anxiety. Similarly to the above mentioned study, vocalists in this study experienced high levels of performance anxiety. One of the main occupational stressors contributing to anxiety among this group was concern about the working environment. Factors that threaten vocal health, such as dust and

¹The name of the original researcher of this study is not mentioned in the secondary source by Kesselring. The author simply refers to a survey conducted in three orchestras in Switzerland. This is why the original researcher's name does not appear in the review of literature.

inappropriate temperature conditions, caused the most amount of worry among musicians (Kenny, Davis, & Oates, 2004).

Studies on Music Performance Anxiety using university students as subjects found that this age group experiences MPA similarly to professional adult musicians. Ninety university music students participated in Hamann's (1982) study on music performance anxiety. Participants were asked to perform in an enhanced anxiety condition (situation where audience was present) and a reduced anxiety condition (situation where no audience was present). Students completed questionnaires after each performance, and an analysis of their answers showed an increase in anxiety during performance situations where an audience was present, indicating that situations where others are present are perceived as more threatening. Also, students with a high number of training years performed better during the enhanced anxiety condition, suggesting that experience can help reduce levels of music performance anxiety in musicians. A similar study done by Hamann (1983) replicated the results of the previous experiment. Sixty university music students completed questionnaires after performing in non-jury and jury situations. Confirming the results of the preceding study, anxiety levels were increased during jury situations. Interestingly, the majority of musicians received higher evaluations during their jury performances, which is another indicator that experience and years of training can aid anxiety management.

Steptoe and Fidler (1987) administered questionnaires to professional orchestral players, music students, and amateur orchestral members. The questionnaires measured performance anxiety, everyday fears, neuroticism, self-statements and coping strategies. Music students had higher levels of performance anxiety than professionals, which could be the influence of age, experience or both. The amateur group of musicians also had lower levels of anxiety than the students. Again, a higher level of anxiety in students could be due to lack of experience or age. While there were differences in the levels of anxiety, all three groups focused their self-statements on catastrophizing, making them prone to

exaggerate the severity of a mistake. This exaggeration, paired with a fear of loss of control, can contribute to higher levels of anxiety during performance for musicians. In another study also using undergraduate university majors, Salmon, Schrodt, and Wright (1989) investigated levels of anxiety in a performance situation. Similar to the study mentioned above, even seasoned performers experienced anticipatory anxiety when performing in front of a live audience, although whether the anxiety continued during performance depended on each musician's level of experience and preparedness.

Wesner, Noyes, and Davis (1990) conducted a study at the American University School of Music and found that 21% of students and faculty experience marked distress caused by anxiety, while 40% experience moderate distress. The participants of this study rated their anxiety according to different performance situations and the results indicate that solo performance is a main cause of anxiety. Solo performances caused 64% of participants quite a bit of anxiety while 52% of participants responded with extreme anxiety. Small ensembles, lessons, and large ensembles also caused some anxiety, but the response was much lower than for solo performances. In addition, this study examined common symptoms of MPA, finding poor concentration affected 63% of the people polled, 57% rapid heart rate, 46% trembling, 43% dry mouth and 43% sweating. Among the musicians surveyed, 9% admitted to avoiding performance opportunities because of anticipatory anxiety. Twenty-two undergraduate music students completed baseline anxiety tests for heart rate and blood pressure, as well as self-report tests on anxiety in Abel and Larkin's (1990) study. The same tests were re-administered one to six weeks later prior to a jury performance. A comparison of the two different tests revealed that physiologic and self-reported anxiety levels significantly increased between the baseline and jury assessments, indicating that the undergraduate musicians experienced anticipatory music performance anxiety.

Cox and Kennardy (1993) also examined the effect of different performance situations on self-reported anxiety levels with 32 university music students. Level of experience, trait-anxiety and degree of social phobia was also recorded. Different performance settings had the most significant impact on

levels of performance anxiety. Students reported feeling the most nervous during solo situations, somewhat nervous during group public performances, and least nervous during practice sessions. Students with high levels of trait-anxiety also experienced higher levels of performance anxiety, indicating that people with naturally higher trait-anxiety levels may be more prone to performance anxiety. The majority of students reported that performance anxiety negatively affected their performance, regardless of what type of situation they were in, with an increase in negative thoughts and a greater awareness of physiological symptoms. In yet another study looking at music anxiety in varied performance situations, Brontons (1994) conducted a study with university students to determine if a noticeable difference in symptoms was present during a juried versus a non –juried performance. After being evaluated by a heart-rate monitor and a modified STAI questionnaire during practice and jury performance, musicians demonstrated performance anxiety symptoms in both scenarios, including increased heart rates and higher scores on the STAI. However, heart rates and scores were significantly higher during jury situations as opposed to practice times, indicating that the presence of an audience increases performance nervousness.

While the majority of studies use adult or university students as participants with regards to MPA, certain studies in recent years have focused on children and their experiences with performance anxiety. Brugues (2011) wrote a review of literature that includes 16 articles on MPA and concluded the review by stating that while adolescent musicians show symptoms of music performance anxiety that are comparable to adults, young children rarely present signs of MPA. However, Boucher's (2008) study found conflicting results. In a study done with young children, children as young as 3-4 years old found performance situations stressful. As well as having a rise in cortisol levels, young children exhibited stressful behaviours before the concert, which includes avoidance, refusal, and emotional reactions, such as crying onstage.

While there is not enough information on young children and performance anxiety to support either side of this argument, research done with older children and teenagers is much more conclusive. In 1995, Shoup discovered that 55% of the high school and junior high school students interviewed were negatively affected by performance anxiety. A group of high school students performed under three test conditions in Leblanc, Jin, Obert and Siivola's (1997) study: performing in a room alone, performing in the presence of one other person, and performing in the presence of a larger audience. Based on questionnaire scores and heart rate measures, the 27 participants associated the presence of an audience with higher levels of anxiety, experiencing increased heart rates and higher scores on self-measured anxiety surveys. This coincides with the idea that an audience affects musicians' levels of performance anxiety found in adult studies.

Lorenz discovered that over three quarters of female students in a high school choral ensemble experienced music performance anxiety in a 2002 study. Of the 20 symptoms present on the performance anxiety questionnaire, 19 were reported by at least one student, with general nervousness, perspiration/sweating, worry, panicky feeling, dry mouth and shortness of breath being the more common signs. Singers reported experiencing performance anxiety before and during solos, auditions and ensemble performances, and most participants found that their nervousness sometimes interfered with their performances. Similarly, seventy-five percent of ninety-seven students surveyed from youth orchestras reported feeling nervous while performing. Interestingly, the level of nervousness increased as they got older. The fact that they were orchestral players may have some significance to this statistic, as older students in orchestras tend to start getting more solos, which would increase anxiety (Britsch, 2005).

Felm and Schmidt (2006) measured performance anxiety levels of 74 teenagers attending a German special music school. Results of this study demonstrated that high school students experience significant levels of performance anxiety, with a third of teenagers feeling their performance was

negatively affected, and a tenth feeling that their career would be negatively impacted by anxiety. As with other studies mentioned above, anxiety levels increased during performance with an audience, or during solos. There was no significant difference in gender for levels of anxiety, but it is significant to note that most students wished they had more help in managing their anxiety. Osbourne & Kenny (2008) took a different approach, finding a correlation negative performance experiences and higher levels of MPA. Students from music performance schools between the ages of 11 and 19 completed self-report measurements. Along with completing questionnaires on normal anxiety and music performance anxiety, students described their worst performance experience. While most students experienced some level of anxiety, students who recalled having a negative performance experience also had higher levels of music performance anxiety. Brugue's (2011) review of literature concluded that young adolescents (ages 14-19) present the highest scores on MPA tests compared to other age groups and often show symptoms that are similar to adults, a conclusion which is supported by the studies mentioned above.

Simon and Martens (1979) tested 9-14 year old boys participating in required school activities, nonrequired non-sport activities (eg. band), and nonrequired sports activities. Out of the three categories surveyed, nonrequired non-sport activities produced the highest levels of pre-event anxiety, while band solos produced the highest level of anxiety out of all the activities. Ryan's (1998) study also found that 12 year old children do experience music performance anxiety. Students wore heart rate monitors during a recital performance and measurements during the performance, as well as directly before and after. Upon completing the recital, students immediately completed self-report anxiety questionnaires. Both types of measurements were retaken six weeks after the recital to provide baseline comparisons. Students showed an increase in heart rate as well as high scores for performance anxiety when walking on stage, which persisted throughout the performance. In individual interviews, many participants also expressed negative thoughts about performance, centering on their feelings of

nervousness and fears of making mistakes. In another study done by Ryan (2005), 173 participants between grade three and seven filled out the State-Trait Anxiety Inventory for Children. The test was completed on a regular school day as well as on the day of a music concert, and a comparison of the scores indicated that levels of anxiety were significantly higher on concert days than on regular school days. The two genders seemed to perceive anxiety differently in this study, as boy and girls across different age groups had varying levels of anxiety.

It's obvious from reviewing these studies that music performance anxiety is a common problem among adult musicians. While the severity of symptoms ranges from mild to severe, most musicians experience some form of performance anxiety at one point in their career. Although studies on children and teenagers are rarer, the available results show that young musicians also experience signs of performance nervousness. Though music performance anxiety has been established as a prevalent problem in both adults and children, individuals experience this condition quite differently. A variety of symptoms are associated with music performance anxiety, and the next section discusses some of the more common signs of nervousness.

1.3 Symptoms/Signs of Nervousness

A variety of different symptoms can be observed in adults with Music Performance Anxiety. When subjects were questioned about symptoms felt during performance in the Lorenz (2002) study, the most commonly reported signs were general nervousness, perspiration/sweating, worry, panicky feelings, dry mouth and shortness of breath. These however, are just some of the symptoms that can be found in individuals with MPA. Table 1 displays a list of symptoms and compares how often they are mentioned in four different studies (Brandfonbrener & Lederman, 2002; Hallam, Cross, & Thaut, 2009; Kesselring, 2006; Wilson & Roland, 2002), as well as the symptoms that are presented in the Music Performance Anxiety Inventory for Adolescents (MPAI-A) (Osbourne & Kenny, 2005). As there is a long

list of potential symptoms, only symptoms that were mentioned at least twice in these different sources will be discussed in the review of literature. However, all symptoms found in the sources will be presented in Table 1.

While people experiencing performance anxiety display many different symptoms, these symptoms can be grouped into four general categories (Kenny, 2011). The four categories are psychological symptoms, physiological symptoms, cognitive symptoms and behavioural symptoms. The most easily recognized symptoms are physiological symptoms, which can manifest as increased heartbeat, sweating, shaking, numbness, dry mouth, shortness of breath or changes in breathing, increased urination, trembling, muscle tension and gastrointestinal disturbances. The physiological symptoms result from the over arousal of the body's autonomic nervous system, and are associated with the body's natural "fight or flight" response (Bourne, 1995). Psychological symptoms stem from one's perception of a given situation and the resulting effect on a performer's responses (Ely, 1991). Examples of psychological symptoms experienced include apprehension or worry, increased irritability, panic, feeling faint or dizzy, fright and "butterflies in the stomach." The last two groups of symptoms, cognitive and behavioural, are categorized by "thoughts and worries about a given situation," and "changing the way we think or behave to avoid anxiety-causing situations" (Ely, 1991, p. 35). Worry, lack of concentration, memory problems, imagined criticisms or comments from the audience and interfering negative thoughts are examples of cognitive symptoms while avoidance behaviours and changes in facial expression or body language are instances of behavioural symptoms present in individuals with MPA (Brandfonbrener & Lederman, 2002; Hallam, Cross, & Thaut, 2009; Kesselring, 2006; Wilson & Roland, 2002).

Some projects have distinguished between symptoms more related to physical aspects of performing (physiological) and symptoms more related to emotional aspects of performing (psychological and cognitive). Research shows that the physiological symptoms resulting from the

activation of the autonomic nervous system do not necessarily have harmful effects on a musician's performance. Yerkes and Dodson (1908) proposed the Inverted-U hypothesis that states that "the relationship between arousal and performance is curvilinear, and that a performer reaches an optimal level of performance when there is neither too much nor too little arousal" (Miller, 2004, p. 17). An optimal level of arousal exists for each performer and as arousal increases to this point, the musician benefits from the resulting physiological changes and the performance improves. However, if the level of arousal passes the optimal point, the quality of the performance deteriorates and the negative symptoms of music performance anxiety become apparent (Gould, Greenleaf, & Krane, 2002). Simoens (2012) conducted a study on music performance anxiety where 204 professional musicians and 116 students completed a number of questionnaires. The study examined not only the negative side effects of music performance anxiety, but also the positive effects that might exist when a certain level of arousal is present. Results showed that musicians perceiving a task as a challenge demonstrated physiological changes leading to an increase in energy, or a "boost". However, musicians who identify a task as a threat experienced physiological changes that hindered their performance. Endo, Juhlberg, Bradbury, and Wing (2014) examined the effect of a panel of judges on the performance of 24 professional cellists. When conducting a postural analysis on the left elbows of the cellist's, the results showed a correlation between the heart rate and the angle of the elbow. However, the correlation depended on the musician's subjective experience of anxiety. Performers who had higher heart rates and perceived a high level of anxiety played with a more flexed elbow, increasing the difficulty of certain movements. In contrast, musicians with elevated heart rates and a low level of perceived anxiety performed with a more extended elbow. Both of the above studies indicate that the thoughts and feelings of a musician before or during performance can impact how a performer will perceive their physiological symptoms.

While different symptoms observed in individuals can help determine whether musicians are feeling performance anxiety and to what degree, personality factors can help predict the occurrence of MPA. The next section will discuss which factors have been shown to have correlations with music performance anxiety.

Table 1: Symptoms of Music Performance Anxiety

| Symptom | Wilson & Roland (2002) | Kesselring (2006) | Hallam, Cross & Thaut (2009) | Brandfonbrener & Lederman (2002) | MPAI-A Osbourne & Kenny (2005) |
|--|------------------------|-------------------|------------------------------|----------------------------------|--------------------------------|
| "Butterflies" in the stomach | X | | X | | X |
| Avoidance Reactions | | X | | X | X |
| Changes in facial Expression or body language | | X | | X | |
| Chewing finger nails | | X | | | |
| Concentration or Memory Problems | | X | | X | X |
| Confusion | | X | | | |
| Diarrhea | | X | | | |
| Difficulty Swallowing | | | | X | |
| Dry mouth | X | | X | X | |
| Fear/Fright | | X | | | X |
| Feeling faint/dizzy | | X | | X | |
| Feeling happy with Performance | | | | | X |
| Feeling inadequate/worthless | | X | | | |
| Feeling tense | | X | | | |
| Fidgeting | | X | | | |
| Gastrointestinal disturbances | | X | | X | |
| Imagined Criticisms from audience/anticipation of negative reactions | | X | | X | X |
| Increased heart rate/palpitations | X | X | | X | X |
| Increased irritability or agitation | | X | X | | |
| Increased urination | | X | | X | |
| Insomnia | | X | | | |
| Interfering Negative Thoughts | | X | | | X |
| Loss of appetite | | X | | | |
| Loss of Control | | X | | | |
| Loss of sensitivity/numbness in fingertips | | X | | X | |
| Muscle Tension | | | X | | X |
| Nervous | | | | | X |
| Pacing | | X | | | |
| Panic | | X | | | X |
| Shock | | X | | | |
| Shortness of breath/Hyperventilation/Changes in breathing | X | X | X | X | |
| Sweating | X | X | X | X | X |
| Trembling/Shaking | | X | X | X | X |
| Visual disturbances (eg. blurring) | X | | | | |
| Worry | | X | | | X |

1.4 Factors

While many studies (as seen above) have looked into the prevalence of MPA among musicians, a number of articles have also been written regarding factors that can affect or predict MPA. Two main factors consistently cited as being associated with performance anxiety are perfectionism and self-efficacy.

1.4.1 Perfectionism

Hollender (1978) gave one of the first definitions of perfectionism that states it is “the practice of demanding of oneself or others a higher quality of performance than is required by the situation” (as cited in Shafran & Mansell, 2001, p. 880). In his book, *The Anxiety and Phobia Workbook*, Bourne (1995) defines perfectionism as having two aspects. The first is “a tendency to have expectations about yourself, others and life that are unrealistically high” (p. 226). The second aspect is “an overconcern with small flaws and mistakes in yourself and your accomplishments. In focusing on what’s wrong, you tend to discount and ignore what’s right” (p. 226). Claudio Arrua demonstrates this concept well when he commented that “one error wiped out his whole performance” (as cited in Kenny, 2011, p. 74)

Sinden (1999) provided yet another definition of perfectionism that simply states it is “the presence of personal high standards and critical evaluation of self” (p. 29). In order to provide a description of the term that is accurate and comprehensive, this study will use a combination of Sinden’s (1999) and Bourne’s (1995) definitions, stating that perfectionism is the presence of overly high personal standards and critical evaluation of self that relates to an overconcern with small flaws and mistakes with a tendency to focus on what’s wrong and discount what’s right.

Hewitt and Flett (1991) describe three different dimensions of perfectionism: self-oriented, other-oriented and socially prescribed perfectionism. The different subsets of perfectionism are related to “the object whom the perfectionistic behaviour is directed or to whom the perfectionistic behaviour

is attributed” (p. 457). Self-oriented perfectionism involves perfectionistic tendencies that are directed towards the self. These can include things like setting unrealistic personal standards, severe self-evaluations, and a tendency for all or nothing thinking. In contrast, other-oriented perfectionism involves the expectations that one has for others. Similar behaviours and cognitions are displayed as self-oriented perfectionism, but now they are projected onto others. This results in a difference in presentation of perfectionism in individuals. Self-oriented perfectionists leads to self-punishment, where other-oriented perfectionism leads to blame, lack of trust and hostility, which can damage interpersonal relationships. Socially prescribed perfectionism involves “the perceived need to attain standards and expectations prescribed by significant others” (p. 457). People with socially prescribed perfectionism perceive that others have unrealistic expectations and strict evaluations, leaving feelings of frustration, failure and an inability to please. These three dimensions combine to form a model of perfectionism.

In addition to the three dimensions described above, Frost, Marten, Lahart, & Rosenblate (1990) also define a number of perfectionistic tendencies that are often present in people. Concern over mistakes during performance is the first tendency. Perfectionistic people tend to view even minor flaws as failures, leaving them feeling as though their standards are never met. Doubt over performance quality is the second perfectionistic tendency. This inclination leads to vague feeling that a task has not been successfully completed. The next two tendencies are connected with the evaluations and expectations of others, specifically parents. Perfectionists commonly feel as if their parent’s love and approval is based on the success of their task performance, causing them to continuously strive for higher expectations. It is common for perfectionists to “feel their parents have set standards they cannot meet, and failure to meet them means a potential loss of parental love and acceptance” (p. 451). Over-emphasis on organization and precision is the last perfectionistic tendency.

Antony, Purdon, Huta and Swinson (1998) tested 175 patients with panic disorder, obsessive compulsive disorder, social phobia, or specific phobia using two self-measures of perfectionism. Participants with panic disorder, obsessive compulsive disorder and social phobias conveyed higher levels of socially prescribed perfectionism than patients from the control group. These results suggest that people with anxiety disorders believe that others have higher expectations for them, resulting in stress, frustration and feelings of failure. Also in this study, participants with social phobia scored higher than non-anxious people for concern over mistakes, doubt about action, and parental criticism scales. Patients with OCD displayed higher doubt about action and concern over mistakes than non-anxious people, while panic disorder patients had high scores for doubt about action. While the types of tendencies varied between disorders, all anxious people showed some form of perfectionism. Flett, Hewitt, and Dyck (1989) also created a study to examine the relationship between perfectionism and anxiety. One hundred and sixty-two undergraduate students filled out a series of questionnaires on anxiety, perfectionism, and neuroticism. A positive relationship between self-oriented perfectionism and trait anxiety was found among the participants, as well as significant relationship between perfectionism and neuroticism. Other-oriented and socially prescribed perfectionism were not addressed on the perfectionism scale used in this study. Additionally, the interactions between life stress and perfectionism were examined. Students with high levels of perfectionism and life stress also scored higher on anxiety tests, indicating that this relationship can be used as a predictor of anxiety.

More specifically to music, a study with 138 university students from the United States found a significant relationship between performance anxiety and perfectionism (Sinden, 1999). High doubts over action, high concern over mistakes, high parental criticism, and high personal standards are all aspects of perfectionism that helped predict music performance anxiety in this study, although to different extents. Doubts over action, high concern over mistakes, and low personal standards were positive predictors of performance anxiety as factors on their own, but parental criticism was not

predictive of anxiety when analyzed as a separate variable. Musicians with the specific perfectionistic tendencies described above are more likely to experience high levels of anxiety, but interestingly, overall perfectionism did not help predict anxiety. This indicates that certain factors associated with perfectionism may be more important in predicting performance anxiety than general levels of perfectionism. Kenny, Davis and Oates (2004) is yet another study finding an association between perfectionism and MPA. Thirty-two musicians completed questionnaires based on performance anxiety and perfectionism. A correlation between high levels of perfectionism and high levels of anxiety was evident during an analysis of the results, but elevated levels of perfectionism could not be used as a predictor for levels of music performance anxiety. People with higher scores on the perfectionism questionnaire generally had fewer recreational activities in their lives. Eighty-seven professional musicians completed the Multidimensional Perfectionism Scale, as well as other tests concerning performance and anxiety in Mor, Day and Flett's (1995) study. After analyzing the results of each test, a correlation between perfectionism and performance anxiety was found. Musicians with high levels of self-oriented and socially prescribed perfectionism were associated with high levels of debilitating anxiety. Students experiencing high levels of perfectionism also experienced lower levels of personal control, and the combination of both factors produced high levels of performance anxiety. This data relates to theories on self-efficacy stating that individuals with high personal standards and low self-efficacy or feelings of control will experience higher levels of anxiety. The relationship between self-efficacy and performance anxiety will be explored later in the review.

The previous studies indicate that a correlation between high levels of perfectionism and high levels of anxiety exists. This correlation shows that perfectionism could be an important factor with regards to music performance anxiety. However, the studies mentioned above only use adult participants, meaning very little information about the correlation between music performance anxiety and perfectionism in children and teenagers is known. For this reason, this study will explore this

relationship between perfectionism and performance anxiety in children (ages 8-12) and teenagers (ages 13-17).

1.4.2 Self-Efficacy

A review of the literature on self-efficacy and its relation to music performance anxiety revealed a number of authors that have reflected on this subject. Hendricks (2009), Kenny (2011), McPherson and McCormick (2006), and Sinden (1999) cite similar definitions of self-efficacy in their literature from the works of Albert Bandura. For the purpose of this study, the most straightforward definition for self-efficacy found in Bandura's book (1982) "The self and mechanisms of agency" will be used. It states that self-efficacy reflects the degree in which people believe in their abilities to perform behaviours necessary for the successful completion of a task.

With regards to the relation between self-efficacy and anxiety, Bandura (1977) proposes that a person's belief in their abilities influences their level of anxiety surrounding a particular task. Self-efficacy also affects levels of motivation related to task performance: "The stronger the self-perceived self-efficacy, the more likely persons are to select challenging tasks, the longer they persist at them, and the more likely they are to perform them successfully" (Bandura, 1982, p. 397). Musicians with higher levels of self-efficacy are more likely to persevere with practice and give successful performances, which helps lead to lower levels of music performance anxiety.

Cooper and Robinson (1991) tested 291 undergraduate students in math-related degrees in order to assess the relationship between mathematics self-efficacy and anxiety. Students rated statements in their ability to complete math-related tasks, as well as completing a mathematics anxiety questionnaire. The results of this study showed a negative correlation between self-efficacy and anxiety. As well, students with higher self-efficacy scores achieved higher marks on math ability exams.

The results of Sinden's (1999) study reflect the ideas in Bandura's writings. After filling out questionnaires for MPA and self-efficacy, the results from 138 college orchestral students found lower

levels of self-efficacy associated with higher levels of performance anxiety. Results also showed that musicians with lower levels of self-efficacy are less likely to persist with music and also show a decrease in motivation to perform. Low self-efficacy along with poor self-esteem had the highest influence on performance anxiety in this study. Craske and Craig (1984) examined 40 university piano students to test a self-efficacy theory. Based on screening questionnaires, the subjects were split into two groups based on everyday levels of anxiety. Both the “relatively anxiety” and the “relatively nonanxious” groups performed in a solo setting and in front of an audience. During each performance, the subjects were attached to electrodes, which measured heart rate and other physiological changes, and students completed self-report measures before and after each session. As well, each performance was videotaped. Evaluators rated each video for performance quality and observable signs of nervousness. The analysis of the various measurements taken produced a number of results. Students grouped under the “relatively anxious” category had higher levels of performance anxiety than their non-anxious peers. Pianists had increased levels of anxiety during performances where audiences were present, although students in the “relatively anxious” group had the highest performance anxiety scores. All subjects also had a decrease in self-efficacy levels when performing in front of an audience, establishing a correlation between high levels of anxiety and low levels of self-efficacy.

While these studies look at self-efficacy and MPA in adult musicians, there are also some studies that examine children and their beliefs about their personal performance ability. In a study done with 157 high school students, Hendricks (2009) examines different things influencing a young musician’s level of self-efficacy. Students who emphasized positive experiences (and limited the influence of negative ones) reported higher levels of self-efficacy. Experiencing mastery of a particular task proved to be the largest factor that affected self-efficacy both negatively and positively, and encouragement/feedback from others also affected the student’s self-efficacy levels. These items affect

the belief that a student has in their ability to perform a piece well, which in turn affects the level of anxiety they feel before performance.

McPherson and McCormick (2006) conducted another large study on young musicians that consisted of 686 students preparing for performance examinations. Students were asked to complete self-reflective questionnaires the night before their examinations. The findings of this study established a correlation between high levels of self-efficacy and successful performance results. In line with studies mentioned above, self-efficacy has a strong influence on performance anxiety, and can be used as a predictor of performance qualities. This information carries interesting implications for music teachers, suggesting that by identifying students' self-beliefs before a performance, teachers can help students gain greater confidence in their abilities, affecting performance quality and levels of anxiety.

As with perfectionism, the above studies indicate that self-efficacy is an important personality factor to consider when discussing music performance anxiety. Because of this possible correlation, this study will explore the relationship between self-efficacy and performance anxiety in children and in teenagers.

1.4.3 Gender

A third factor, which has not yet been mentioned, being examined in literature is the role of gender in music performance anxiety. For adults, females generally experience higher levels of performance anxiety than males. The results of Sinden's (1999) study confirm this idea, with women scoring higher on music performance anxiety questionnaires than men. Wesner, Noyes and Davis (1990) found that women reported being more distressed during performance than men. Women felt that anxiety had a greater effect on their careers, and were more likely to avoid performances than men. Performance interruptions and impairments during performance due to anxiety was also a greater challenge for women. Fishbein, Middlestadt, Ottati, Strauss and Ellis (1988) found that 19% of women

mentioned stage fright as a severe problem as compared to 14% of men. However, despite the fact that females experienced more severe anxiety, they were also more likely to seek treatment for it than males. Forty-four percent of women with a self-described severe stage fright were willing to try prescription medication, among other treatments. As well, females were more likely to perceive the audience as a threatening entity rather than a supportive one, contributing to the presence of anxiety. Abel and Larkin (1990) found differences in the ways that males and females expressed their anxiety symptoms. With regards to physiological symptoms, males experienced elevated levels of blood pressure prior to jury performance that were significantly higher than females. An increase in confidence between baseline measurements and jury measurements was experienced by women, while males did not display a similar surge in confidence. This however, could be accounted for by a lack of preparedness by males, which would explain the increased blood pressure levels. Females in this study still expressed higher levels of overall performance anxiety.

While the research on the effect of gender in adults with MPA seems to agree that women are more likely to be affected, studies on the effect of gender on performance anxiety in children has shown conflicting results (although the majority of recent studies point towards girls showing higher levels of MPA.) Adolescent girls between 14 and 19 years old scored significantly higher on the Music Performance Anxiety Inventory for Adolescents than boys of the same age group in a study done by Osbourne, Kenny, and Holsomback (2005). High school students filled out performance anxiety questionnaires and had their heart rate's monitored when they were performing alone, performing for one other person, and performing for a larger group of people. While the first two performance conditions saw relatively similar results from the questionnaires between genders, female participants' levels of anxiety were significantly higher during the third performance condition. Heart rate measurements were also significantly higher in females during all three performance conditions. As

increased heart rate is a sign of nervousness, this indicates that females experienced a higher level of performance anxiety in this study (Leblanc, Jin, Obert, & Siivola, 1997).

In contrast, Ryan (2004) found that while girls experienced more anticipatory anxiety, the boys' heart rates exceeded the girls during performance. The group of boys also displayed more anxious behaviours before and during the performances. While Ryan's study uses children instead of teenagers, this discrepancy in results for a correlation between gender and performance anxiety between both age groups highlights the need for more research in this area. Another study done by Ryan (2005) produced similar results with regards to gender differences. When measuring differences in perceived anxiety among grades 3-7, no distinguishable difference could be found between boys and girls. However, grade five boys tested for higher levels of anxiety on both regular school days and performance days, which contrasts with findings from other studies. Grade 6 girls reported a significant increase in anxiety levels, while boys did not report a similar increase until grade 7. The earlier increase in perceived anxiety for grade 6 girls indicates that girls may experience heightened anxiety sooner than boys. The varying levels in anxiety and contrasting results suggest that more research on gender differences and music performance anxiety is needed.

1.5 Research Questions

Music Performance Anxiety is a common problem among adult musicians and can range from mild to severe (Cox & Kennardy, 1993; Fishbein, Middlestadt, Ottati, Strauss, & Ellis, 1988; Kesselring, 2006; van Kemenade, van Son, & Heesch, 1995; Wesner, Noyes, & Davis, 1990; Wilson & Roland, 2002). The way in which each individual experiences performance anxiety is different, but a number of common signs and symptoms have been found through our review of literature (Brandfonbrener & Lederman, 2002; Hallam, Cross, & Thaut, 2009; Kesselring, 2006; Osbourne & Kenny, 2005; Wilson & Roland, 2002). While there have been some studies done with children and teenagers (Boucher, 2008;

Brugues, 2011; Lorenz, 2002; Ryan, 1998; Ryan, 2004; Ryan, 2005), not as much is known about performance anxiety in these two age groups. There is even less information on how children and teenagers perceive their symptoms of music performance anxiety in comparison to one another. The purpose of this study is to examine Music Performance Anxiety in children (ages 8 to 12) and teenagers (ages 13-17). This study will look at how children and teenagers perceive their own personal signs of nervousness when thinking about performance and will compare the different levels of anxiety felt between both age groups.

Research has also shown that certain personality factors can affect levels of performance anxiety in musicians. A number of studies have shown a correlation between high levels of perfectionism and high levels of music performance anxiety, and between high levels of self-efficacy and low levels of music performance anxiety. Another factor that has been examined in congruence with performance anxiety is gender, and while most studies generally agree that females demonstrate higher levels of performance anxiety, not all of the results have been conclusive. Although these factors have been shown to affect performance anxiety in adults, not many studies have been done using children and teenagers. This study aims to contribute more data in this area by investigating perfectionism, self-efficacy, gender and their relation to performance anxiety in children and teenagers.

The research questions for this study are:

1. How do children (ages 8-12) and teenagers (ages 13-17) perceive the signs of nervousness that are felt with regards to music performance as measured by an adaptation of the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005)?
2. Is there a correlation between perfectionism, self-efficacy and/or gender and symptoms of anxiety in children and teenagers?

- a. Is there a correlation between high levels of music performance anxiety in children and teenagers and high levels of perfectionism as measured by the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991)?
- b. Is there a correlation between high levels of music performance anxiety in children and teenagers and low levels of self-efficacy as measured by the Self-Efficacy for Musical Learning and Musical Performing – Children’s Version (Richie & Williamon, 2011b)?
- c. Is there a relationship between high levels of music performance anxiety and gender?

Based on the review of literature, we expect to find the following hypotheses:

1. Children and teenagers will both perceive signs and symptoms of high levels of music performance anxiety, with teenagers experiencing higher levels of anxiety than children.
2. There will be a positive correlation between high levels of music performance anxiety and high levels of perfectionism.
3. There will be a positive correlation between high levels of music performance anxiety and low levels of self-efficacy.
4. Females will display higher levels of music performance anxiety than males.

As well, this study aims to extend its research by examining a number of demographic characteristics that are often not investigated when looking at music students. An exploratory analysis will be conducted to look at various variables that might possibly impact music performance anxiety. A parental demographic survey will collect data from the participants on variables such as the ethnicity of parents, types of performances participated in, practice habits, and participation in other musical activities. These characteristics are not often studied in relation to music performance anxiety, meaning

this section of the experiment will be exploratory only, as there is not enough literature to create a hypothesis.

Chapter 2: Methodology

The design of this study examined the way in which children and teenagers perceive the severity of their signs and symptoms of anxiety in regards to performance and investigated the relationships between levels of music performance anxiety and perfectionism, self-efficacy, and gender in both children and teenagers. As this project explored the relationships between different factors, a cross-sectional study design will be used. According to Agarwal and Sharma (2011), in cross-sectional studies “variables of interest in a sample of subjects are assayed once and the relationships between them are determined” (p. 50). Cross-sectional studies do not measure changes over time and are best suited for gathering information on a population at a single point in time or in establishing a relationship between two variables (Kumar, 2005).

Four different administered questionnaires were used to carry out this study design. Commonly used for this type of experiment, standardized quantitative surveys are used to “estimate relationships between variables” (Greenfield, 1996, p. 115). As the relationship between music performance anxiety and perfectionism, self-efficacy or gender was investigated in this study, questionnaires provided the easiest method of analysis. Each questionnaire used a Likert scale. Likert scales are most effective in questionnaires where each statement has an equal importance and measures the intensity of a subject’s attitude towards a certain issue (Kumar, 2005). This type of scale was useful because it allows for the measurement of each participant’s level of music performance anxiety, perfectionism and self-efficacy. For example, a student is able to indicate on the scale not only if they remember feeling a specific symptom of music performance anxiety, but also how severely they recall feeling it.

Studies that have done experiments on this topic using similar experimental designs include Barbeau (2011); Boucher (2008); Boucher & Ryan (2011); Cox & Kennardy (1993); Fishbein, Middlestadt, Ottati, & Hendricks (2009); LeBlanc, Jin, Obert, & Siivola (1997); Osbourne & Kenny (2005); Osbourne,

Kenny, & Holsomback (2005); Strauss & Ellis (1988); van Kemenade, van Son, & van Heesch (1995); Wesner, Noyes, & Davis (1990). This study follows a similar design to the ones mentioned above, but used different age groups for the participants. While most experiments on music performance anxiety have been conducted with adult musicians, this study focuses on children (ages 8-12) and teenagers (ages 13-17).

2.1 Participants

This study looks at two different groups of subjects which were divided by age. The first group, children, consisted of students between the ages of 8 and 12 years old, with the youngest being eight years and two months old and the oldest being twelve years and ten months old. The mean age of this participant group is eleven years and zero months old. While there have been a few studies done for young children that are under the age of five (Boucher, 2008), it is uncommon to find a study that has been conducted with children aged between 8 and 12. Ryan (1998) conducted a study using 12 year old children, but even that study excludes the rest of this age group. Having a group of subjects between the ages of 8 and 12 years old will provide information on an often overlooked age group.

Teenagers between the ages of 13 and 17 years old formed the second group, with the youngest of this group being thirteen years old and the oldest being seventeen years and one month old. The average age for this participant group is fifteen years and two months old. Two participants completing the study were eighteen years old, while one participant did not report their age, and was therefore not included in either age group. This age group has been tested for music performance anxiety more frequently than the previously mentioned group. After a review of literature, Brugues (2011) concluded that teenagers between the ages of 14 and 19 felt the effects of MPA, while Leblanc, Jin, Obert, and Siivola (1997) and Lorenz (2002) tested this idea using high school students as subjects. Although more studies have been completed with teenagers than with children, the information known about music

performance anxiety experienced by teenagers is lacking when compared to literature about adult performance anxiety. Based on the documents available, more information on teenagers and music performance anxiety is needed.

From the sixty-five students participating in this study, thirty-one children fell between the ages of eight and twelve, while twenty-nine students fell between the ages of thirteen and eighteen. As mentioned above, two students were outside of the age parameters and another did not report their age, excluding these participants from being included in the two age groups. Of the data collected, females completed forty-three of the questionnaires, while males filled out the remaining twenty. All participants in this study were currently taking piano lessons from either a music school or private piano teacher, and have a minimum of one year of consecutive piano lessons. All students participating in the study possessed at least two public performance experiences prior to completing the study, except for four students who had one prior public performance experience, and one student who had no prior public performance experiences. As these students fell outside of the parameters of the study, their results were not included during the analysis. Music schools and private studios were contacted through email, and once a school director or piano teacher expressed interest, selected subjects and parents of subjects received letters of invitation and completed consent forms. (See Appendix 1) All subjects live in the Ottawa or the Niagara region and speak English fluently.

2.2 Measurements

To determine how children and teenagers perceive their symptoms of anxiety, a questionnaire was used that allowed the students to communicate what kinds of symptoms they remember feeling during performance, as well as the severity of them. In order to examine the relationships between levels of performance anxiety, perfectionism, self-efficacy and gender, two other questionnaires were needed to assess the levels of perfectionism and self-efficacy in each participant. Once the individual

level of each factor was established, the relationship between them could be examined. Three different questionnaires were administered during this study. The first self-report questionnaire is the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005), which is designed for children and teenagers to describe their feelings of anxiety before or during performance. An addition was made to this questionnaire to account for common signs and symptoms found through the review of literature that were not included in the MPAI-A. The Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) and the Self-Efficacy for Music Learning and Musical Performing – Children’s Version (Richie & Williamon, 2011b) test measured the levels of each specific factor in the participants.

In addition to the three questionnaires completed by the participants, a fourth questionnaire was filled out by parents and/or students in order to gain demographic information such as age, ethnic background, performance experience, practice habits, etc. The questionnaire was created for this study to collect more specific information from the participants on their different types of performance experiences, and was based on existing demographic questionnaires being used in the Piano Pedagogy Research Laboratory at the University of Ottawa. (See Appendix 6)

2.2.1 Music Performance Anxiety Inventory for Adolescents (MPAI-A)

The Music Performance Anxiety Inventory for Adolescents (MPAI-A) was created by Osbourne and Kenny in 2005 and is used as a self-report measure of MPA in children and adolescents. During the creation of this test, questions were drawn from existing questionnaires for adults with Music Performance Anxiety, and 15 questions representing the cognitive, behavioural, psychological and physiological effects of MPA were eventually chosen. Participants use a seven-point Likert scale to answer each of the 15 questions. This questionnaire asks students about different symptoms of anxiety they may experience during performance, and also rates the severity of each symptom felt. For example, question number one states: “Before I perform, I get butterflies in my stomach,” and the

student answers on a scale from 0 to 6, depending on how often they feel that symptom. (See Appendix 2 for the full questionnaire). The questions were grouped into two categories based on type of symptoms: emotional and physical. These two groups of questions were used to create an emotional symptoms subscale and a physical symptoms subscale.

Osbourne, Kenny, and Holsomback (2005) tested the validity of the Music Performance Anxiety Inventory for Adolescents. The results of this study found Cronbach's internal consistency to be .91, which indicates a strong reliability within the test. This article also presented significant positive relationships between measures of social phobia and trait anxiety, showing construct validity within this measurement tool.

There have been a number of studies that have used this test during their research. After the development of the test by Osbourne and Kenny (2005) which tested the MPAI-A on 381 elite musicians between the ages of 12 and 19, Osbourne, Kenny, and Holsomback (2005) did another study that validated the test, as mentioned above. This study tested 84 band members between the ages of 11 and 13 with the MPAI-A. Both studies provided positive results, indicating the test is appropriate for both children and teenagers. In yet another study by Osbourne & Kenny (2008), participants were asked to describe their worst performance experience. This information, combined with the results from the MPAI-A completed by each participant, found that students who reported a negative performance experience had higher levels of music performance anxiety than students who did not have a negative performance experience. Lastly, Kennedy and Edmonds (2012) used the MPAI-A in a case study on a 12 year old male piano player. The MPAI-A was used to verify that the student had a very high level of music performance anxiety, and after a number of treatments, the student was retested with the MPAI-A. Results of the second testing showed that while the student still maintained a level of performance anxiety, it had decreased significantly with treatment.

Additional questions were also added to this questionnaire. Based on the list of symptoms found from the review of literature and presented in Table 1, signs that were present in two or more studies were added to the questionnaire. These questions use the same Likert scale as the original MPAI-A and measure the severity to which the participant remembers feeling each individual symptom. The list of symptoms was compiled from studies done by Brandfonbrener and Lederman (2002), Hallam, Cross, and Thaut (2009), Kesselring (2006), Osbourne and Kenny (2005), and Wilson & Roland (2002). The only sign which will not be included in the survey is “changes in facial expression or body language.” While it does appear in both the Brandfonbrener & Lederman (2002) and Kesselring (2006) study, this symptom would be difficult for a child to perceive on their own, and was therefore left off of the questionnaire (See Appendix 3 for a list of additional questions).

2.2.2 Multidimensional Perfectionism Scale (MPS)

Created by Hewitt and Flett (1991), the Multidimensional Perfectionism Scale measures the three dimensions of perfectionism – self-oriented, other-oriented, and socially prescribed. They created 122 potential items from case descriptions and theoretical discussions and then 4 of their students used the descriptions to generate questions that could be rated on a 7-point Likert scale, where one represents “Disagree” and 7 represents “Agree”. After testing these items with psychology students, Hewitt and Flett included 45 items in the final version of the questionnaire. These items cover the three different dimensions of perfectionism, with 15 questions each pertaining to self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism. All participants completing this test answer each question using a 7 point Likert scale. The MPS measures the different dimensions of perfectionism and assesses the level of perfectionism for each sub scale. “It makes me uneasy to see an error in my work” is an example of a question that measures self-oriented perfectionism, while “The people who matter to me should never let me down” is an example of a question pertaining to other-

oriented perfectionism. An example from the last sub scale, socially prescribed perfectionism, is: “My family expects me to be perfect.” These questions measure not only if the participants harbor these types of thoughts, but also the severity to which they feel them, as determined by a Likert scale (Hewitt & Flett, 1991). (See Appendix 4 for full questionnaire)

Hewitt and Flett established the reliability of this test in 1991 and internal consistency was established for each sub scale. Self-oriented perfectionism scored .86, other-oriented perfectionism scored .82, and socially prescribed perfectionism scored .87. Using a test-retest construct, strong evidence for stability in each subscale was acquired. For the retest conditions, self-oriented perfectionism scored .88, other-oriented perfectionism scored .85, and socially prescribed perfectionism scored .75. While self-oriented perfectionism obtained the highest scores of the three dimensions, each subscale of the questionnaire achieved good results (Hewitt & Flett, 1991).

Hewitt and Flett (1991) also found other significant correlations for the separate subscales. The self-oriented perfectionism sub scale correlated strongly with several self-related subjects, indicating that this scale measures a self-related topic. Other-oriented perfectionism correlated with a tendency to blame others, as well as two other-directed patterns. Socially prescribed perfectionism related significantly with fear of negative evaluation and need for approval from others. The correlations found for these subscales indicate that the questions of the test are measuring the proper personality traits.

The Multidimensional Perfectionism Scale was first used by Hewitt and Flett (1991) in five different experiments to measure the validity of the test. University students participated in these experiments, filling out the MPS as well as other questionnaires to determine different correlations. As mentioned above, these correlations help show the validity of the test. A number of other studies have also used the Multidimensional Perfectionism Scale to measure perfectionism. A search using the PyscNET database found 23 articles referring to the MPS. They can be grouped into subjects of: eating

disorders and perfectionism (Bardon-Cone, Weishuhn, & Boyd, 2009; Boones, Soenens, & Luyten, 2014; Brannan & Petrie, 2008; Sherry & Hall, 2009), perfectionism and university students (Finn & Guay, 2014; Mackinnon, Sherry, Pratt, & Smith, 2014), perfectionism and stress and/or coping mechanisms (Aldea & Rice, 2006; Dunkley, Ma, Lee, Preacher, & Zuroff, 2014), anxiety and/or depression and perfectionism (Graham, Sherry, Stewart, Sherry, McGrath, Fossum, & Allen, 2010; Hewitt & Flett, 1991; Hewitt, Flett, Ediger, Norton, & Flynn, 1998; McGrath, Daniel, Sherry, Stewart, Mushquash, Allen, Nealis, & Sherry, 2012; Nepon, Flett, Hewitt, & Molnar, 2011; Rasmussen, O'Connor, & Brodie, 2008; Stoeber, Schneider, Hussain & Matthews, 2014), perfectionism and suicide (Flamenbaum & Holden, 2007) embarrassment and perfectionism (Thompson, 2014), sports and perfectionism (Gaudreau & Vernon-Fillon, 2012; Jowett, Hill, Hall, & Curran, 2013), perfectionism and productivity (Sherry, Hewitt, Sherry, Flett, & Graham, 2010) family relationships and perfectionism (Hewitt, Flett, & Mikail, 1995) and perfectionism in general (Franche, Gaudreau, & Miranda, 2012; Rice & Ashby, 2007). Although the MPS was originally created for use with adults, studies such as Boones, Soenes, and Luyten (2014) and Jowett, Hill, Hall, and Curran (2013) have administered the questionnaire to adolescents, indicating that this test is suitable for teenagers and children. However, none of the studies mentioned above have used the Multidimensional Perfectionism Scale to study the relationship between perfectionism and music performance anxiety, demonstrating a need for this study.

2.2.3 Self-Efficacy for Musical Learning and Musical Performing– Children’s Version

The Self-Efficacy for Music Learning and Musical Performing – Children’s Version questionnaire was created by Ritchie and Williamon in 2011. An adaptation of the Self-Efficacy for Music Learning and Musical Performing Questionnaire, this scale is used with primary children to evaluate their beliefs on their ability to learn and perform music. For this scale, participants are asked to imagine themselves in a past performance situation and answer the questions accordingly. There are 20 items in total on the

questionnaire, with 11 pertaining to music learning and 9 pertaining to music performing, and each question is answered using a seven point Likert scale, where 1 represents “Not at All” and 7 represents “Completely sure” (Ritchie & Williamon, 2011). This test helps determine how children perceive their ability to learn music. “I can learn all the things I want for this concert” is an example question from this test, and by using a Likert scale, it measures how strongly the subjects feel about each statement. (See Appendix 5 for the full questionnaire).

While this test development record does not specifically state if it is suitable for use with teenagers, upon comparing the test with the adult version of the questionnaire, it is apparent that both scales contain the same questions. While the language has been somewhat altered, the wording of the Self-Efficacy for Music Learning and Musical Performing- Children’s Version test is not overly childish and was used for both teenagers and children in this study.

The Self-Efficacy for Music Learning and Musical Performing – Children’s Version also scored well during reliability and validity testing. An alpha score of .82 was calculated for internal consistency, and upon retest there was no significant difference in this coefficient. A single underlying factor was confirmed using exploratory factor analysis, proving validity within this measurement tool (Ritchie & Williamon, 2011).

The Self-Efficacy for Music Learning and Musical Performing – Children’s Version was adapted from the Self-Efficacy for Music Learning and Musical Performing Questionnaire developed by Richie & Williamon (2011b). This questionnaire was tested for validity using a group of 250 conservatory and university students (Richie & Williamon, 2011a). Another experiment done with university undergraduate students using the Self-Efficacy for Music Learning and Musical Performing Questionnaire found that self-efficacy in music learning ability was the only predicting factor of performance quality (Richie & Williamon, 2012). In 2011, Richie and Williamon adapted the Self-Efficacy

for Music Learning and Musical Performance Questionnaire for children and tested it with 404 primary school children. The results of this experiment measured test validity for the children's version of this questionnaires and found positive results (Richie & Williamon, 2011b).

2.3 Procedure

A recruitment letter was mailed or emailed to private studio music teachers and music schools in the Ottawa and Niagara regions. Music teachers expressing interest in the study then received a package containing consent forms for parents and students, the three questionnaires used as data collection instruments for this study, and a demographic questionnaire. The researcher contacted each piano teacher personally, either through email, at the music studio, or at the teacher's private studio, to explain the process of administering the questionnaires to the students. The music teachers then distributed the three tests to their students at the music school or in the private home studio. The questionnaires were picked up from each school or studio by the researcher once they had been completed and returned to the teacher by the students. For the participants that contacted the researcher directly, their questionnaires were administered in person either in the University of Ottawa Piano Pedagogy Research Lab, or at the student's home. Each subject was given the three tests in the following order: Music Performance Anxiety Inventory of Adolescents, Multidimensional Perfectionism Scale, and Self-Efficacy for Music Learning and Musical Performance – Children's Version. For younger students in the children's group, questions were read aloud and assistance was given from the researcher or piano teacher as needed to help the participant understand and complete each test. This included giving explanations for items that confused the student and helping young students correctly fill out the Likert scales. For the teenage group, participants were allowed to complete each test on their own, but the researcher or piano teacher was present to answer any questions regarding the comprehension of each test. The three questionnaires took approximately 20 minutes to complete.

While the participants completed their three questionnaires, their parent completed the demographic questionnaire separately. In the case of older students who were able to understand the questionnaire on their own and when a parent was not able to be present, some participants in the teenage group completed the demographic questionnaire on their own. The researcher met with the parent after administering the student tests or was available by email to clarify any questions the parent had.

Once the scales were complete and 65 tests were collected from active piano students, the data from each questionnaire was brought back to the Piano Pedagogy Research Laboratory at the University of Ottawa and entered into the computer using a program called Statistical Package for Social Sciences (SPSS). SPSS is a suite of computer programs that is capable of covering a wide range of analysis (Greenfield, 1995). For the three pre-existing questionnaire, the data was coded according to test instructions and entered into the computer, while the demographic information was entered using a coding sheet designed by the researcher. Data analysis was then run using SPSS to calculate the statistics used in the results section. Data tables were produced using Microsoft Excel 2013 to allow the bulk of the analyzed data to be displayed in an organized manner that is easy to understand (Kumar, 2005). Both tables presenting findings from the individual tests as well as tables showing the correlation analysis for music performance anxiety and each of the three factors (perfectionism, self-efficacy and gender) were created.

Chapter 3: Results

This chapter is divided into five sections that present the results of each variable examined in this study. The first section describes the statistical analyses that tested hypothesis one, which was that teenagers would experience higher levels of performance anxiety than children. The following two sections will examine the results of the correlation analyses run to determine if there is a relationship between music performance anxiety and perfectionism, and music performance anxiety and self-efficacy. The fourth section examines the results of the last hypothesis, which compares the levels of music performance anxiety between males and females. The last part of this chapter will examine the results of the statistical analysis run on the relationships between levels of music performance anxiety and the remaining variables that were gathered using the parental demographic survey. All analyses were run using the Statistical Package for Social Sciences (SPSS) computer program.

3.1 Hypothesis One: Levels of Performance Anxiety in Children and Teenagers

As stated in the research questions (section 1.5), the hypothesis for the first question is that children and teenagers will both perceive signs and symptoms of high levels of music performance anxiety, with teenagers experiencing higher levels of anxiety than children. An adaptation of the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005) was used to determine the symptoms and signs of performance anxiety that students perceive about themselves from performance. Originally containing fifteen questions relating to physiological, psychological, behavioural and cognitive symptoms of anxiety, seven additional questions were added based on a survey of symptoms done in the review of literature (see Table 1). Students rated these twenty-two questions using a seven-point Likert scale, with zero representing “not at all”, and six representing “all of the time.” In addition to these twenty-two questions, two open-ended questions were added to the end of the questionnaire. These questions address the causes of anxiety, and the methods the students have

for coping with stress. The items were separated into two separate groups based on item content. The first subscale contains questions describing perceived physical symptoms of anxiety, while the second subscale measures perceived emotional symptoms of anxiety. Scores from both subscales, as well as the overall score from the MPAI-A were analyzed with regards to age. The ages of the participants were collected using the parent demographic questionnaire.

As shown in Table 2, an examination of scores of the MPAI-A show that children and teenagers experience varying levels of anxiety before or during performances, where 0 represents no perceived symptoms of anxiety, and 6 represents extremely high levels of anxiety. The scores for this study ranged from 0.32 to 5.23, with the mean being 2.44, indicating that students experience some degree of anxiety prior to or during a performance, with most people scoring below, but not too far from the midpoint of the scale. Scores for the emotional subscale ranged from 0.64 to 5.36, with the mean being 2.96, and scores for the physical subscale ranged from 0.00 to 5.09, with the mean score being 1.94. This indicates that students experience some degree of emotional and physical anxiety before or during performance. However, students appear to be scoring worse on the emotional symptoms, with most scores at the midpoint of the scale, while most participants are scoring below the midpoint for physical symptoms. Sixty-four participants gave their ages, which range from 8.2 years old to 18.5 years old, with the average being 13.14. (Table 2) A bivariate correlation analysis was run to test for a relationship between level of performance anxiety and age. When relating age to the overall MPAI-A score, the Pearson correlation value was 0.18. This indicates that there was no relationship found between age and levels of music performance anxiety, which does not support hypothesis one. When related to age, the Pearson correlation value for the emotional symptoms subscale is 0.09, and when examining the relationship of age to the physical symptoms subscale, the Pearson correlation value is 0.22. (Table 3) While the correlation value of the emotional scores is non-significant, the correlation found for the physical scores is marginally significant. This suggests that while emotional scores are somewhat

elevated (i.e. the mean is at the midpoint), the symptoms do not change as a child ages. However, while the physical scores are generally below the midpoint, the symptoms become more severe as the child grows older, partially supporting hypothesis one.

To more specifically answer the first research question, the participants were then separated into two groups based on age. The first group consists of children between the ages of eight and twelve, and the second group consists of teenagers between the ages of thirteen and seventeen. Thirty-one children filled out the MPAI-A, with overall scores ranging from 0.76 to 4.77 and a mean overall score of 2.30. Children's scores for the emotional symptoms subscale ranged from 0.91 to 4.55 with an average score of 2.89, while scores for the physical symptoms of anxiety ranged from 0.09 to 5.00, with an average score of 1.75. Twenty-nine teenagers completed the Music Performance Anxiety Inventory for Adolescents. Overall scores for performance anxiety ranged from 0.32 to 5.23, with a mean score of 2.56. For the emotional symptoms of anxiety, teenager' scores ranged from 0.64 to 5.36 and the scores for the physical symptoms subscale ranged from 0.00 to 5.09. The mean teenage scores for the emotional symptoms and the physical symptoms subscales are 3.03 and 2.08 respectively. (Table 2)

To examine whether teenagers reported higher levels of anxiety than children, an independent samples t-test was run using SPSS. When testing for significant differences, the p value for overall levels of performance anxiety is 0.37, while the p value for the emotional symptoms of anxiety is 0.63 and the p value for the physical symptoms of anxiety is 0.30. As the p values calculated for the overall scores of music performance anxiety, emotional symptoms of anxiety and physical symptoms of anxiety are all greater than 0.10, no significant difference between performance anxiety levels of children and teenagers was found. The hypothesis that teenagers would experience higher levels of music performance anxiety than children was marginally supported in the case of physical anxiety. (Table 3)

3.2 Hypothesis Two: Relationship between Perfectionism and Music

As stated in the research questions, the hypothesis for the second question is that there will be a positive correlation between high levels of music performance anxiety and high levels of perfectionism. The Multidimensional Perfectionism Scale (MPS) (Hewitt & Flett, 1991) was used to determine the levels of perfectionism found in the students. The overall mean scores of perfectionism found from the participants' answers on the MPS, as well as the mean scores for each subscale were analyzed with scores for level of performance anxiety. Overall mean scores from the MPAI-A, as well as scores from the emotional and physical subscales mentioned in section 3.1, were used in this part of the analysis. After reverse-coding the necessary questions for the MPS, and calculating the mean scores for the overall questionnaire as well as the subscales, an examination of the scores showed that children and teenagers experience varying degrees of perfectionism. (Refer to Table 2)

Bivariate correlation analyses were run to test the relationships between levels of perfectionism and levels of music performance anxiety. A number of analyses were performed in order to accommodate the different subscales present in both questionnaires. (Table 3) Significant positive correlations were found between overall levels of perfectionism and overall levels of performance anxiety. Strong positive correlations were also found between overall levels of perfectionism and emotional and physical symptoms of anxiety, showing that overall levels of perfectionism related to all aspects of music performance anxiety. These results support the hypothesis that higher levels of perfectionism are associated with higher levels of music performance anxiety in children and teenagers. In addition, strong positive correlations were found between levels of self-oriented perfectionism and all three music performance anxiety scores, as well as between levels of socially prescribed perfectionism and all three music performance anxiety scores. This indicates that higher levels of self-oriented perfectionism and/or higher levels of socially-prescribed perfectionism relate to higher levels of music

performance anxiety in children and teenagers. Finally, only a moderate correlation was found between scores for physical symptoms of anxiety and other-oriented perfectionism, while weak positive correlations were present for levels of other-oriented perfectionism and overall levels of music performance anxiety, and levels of other-oriented perfectionism and emotional symptoms of music performance anxiety. These results indicate that other-oriented perfectionism is only related to the physical symptoms of music performance anxiety in children and teenagers.

3.3 Hypothesis Three: Levels of Self-Efficacy Relating to Levels of Music Performance Anxiety

As stated in the research questions found in the review of literature, hypothesis three states that there will be a positive correlation between high levels of music performance anxiety and low levels of self-efficacy. Levels of self-efficacy in participants were measured using the Self-Efficacy for Music Learning and Musical Performing – Children’s Version (Richie & Williamon, 2011). An examination of the mean scores from the Self-Efficacy for Music Learning and Performing – Children’s Version show that while the degrees of self-efficacy vary, all students possess some belief in their ability to learn and perform music. (Refer to Table 2)

To test the relationship between levels of self-efficacy in children and teenagers and levels of music performance anxiety, bivariate correlation analyses were run using SPSS. (Table 3) Significant negative correlations were found between overall levels of self-efficacy and overall levels of music performance anxiety, emotional symptoms of anxiety and physical symptoms of anxiety. As well, significant negative correlations were found between levels of self-efficacy for music learning and the overall levels of performance anxiety, emotional symptoms and physical symptoms, and similar results were found between levels of self-efficacy for music performing and the three levels of music performance anxiety. The findings indicate that overall-self-efficacy, as well as self-efficacy for both music learning and music performing relates to music performance anxiety. These results support the

hypothesis that lower levels of self-efficacy in music learning and performing is linked to higher levels of music performance anxiety in children and teenagers.

3.4 Hypothesis Four: Gender Relating to Levels of Music Performance Anxiety

As declared in the review of literature, hypothesis four states that females will display higher levels of music performance anxiety than males. An adapted version of the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005) was used to collect data from participants on levels of music performance anxiety, as explained in section 3.1. Gender information was collected from the parent demographic questionnaires, and was also recorded on the consent forms for parents and guardians. Gender information was gathered from sixty-three participants, with forty-three participants being female, and twenty participants being male. The ranges and means for levels of music performance anxiety used in this analysis are the same as those from section 3.1. (Table 2)

To examine the relationship between gender and levels of music performance anxiety, an independent samples t-test was run using SPSS. (Table 3) As the p value calculated for the overall scores of music performance anxiety is greater than 0.10, no significant difference between scores for this scale were found between males and females, indicating no relationship between gender and levels of music performance anxiety. These results do not support the hypothesis that females will display higher levels of music performance anxiety than males. As well, the p values calculated for the emotional and physical symptoms of anxiety are greater than 0.10, which also indicates no significant difference in the scores between males and females. These values indicate no relationship between levels of emotional or physical performance anxiety and gender, and do not support the hypothesis that females will display higher levels of music performance anxiety than males.

Table 2: Descriptive Statistics for Research Variables

| | Minimum | Maximum | Mean | N | Std. Dev. |
|------------------------------------|---------|---------|-------|----|-----------|
| All Participants | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.44 | 63 | 1.09 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.96 | 63 | 1.13 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.94 | 63 | 1.25 |
| Age | 8.20 | 18.50 | 13.14 | 64 | 2.68 |
| Children | | | | | |
| Overall MPAI-A Score | 0.76 | 4.77 | 2.30 | 31 | 0.99 |
| Emotional Symptoms Subscale | 0.91 | 4.55 | 2.89 | 31 | 1.06 |
| Physical Symptoms Subscale | 0.09 | 5.00 | 1.75 | 31 | 1.08 |
| Teenagers | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.56 | 29 | 1.19 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 3.03 | 29 | 1.22 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 2.08 | 29 | 1.40 |
| Perfectionism | | | | | |
| Overall MPS Scores | 1.93 | 5.53 | 3.74 | 63 | 0.68 |
| Self-Oriented Perfectionism | 2.07 | 7.00 | 4.39 | 63 | 1.10 |
| Other-Oriented Perfectionism | 1.57 | 5.20 | 3.47 | 63 | 0.74 |
| Socially-Prescribed Perfectionism | 1.73 | 6.27 | 3.36 | 63 | 1.00 |
| Self-Efficacy | | | | | |
| Overall Self-Efficacy | 3.25 | 6.75 | 5.29 | 63 | 0.72 |
| Self-Efficacy for Music Learning | 3.45 | 7.00 | 5.63 | 63 | 0.77 |
| Self-Efficacy for Music Performing | 3.00 | 6.67 | 4.86 | 60 | 0.77 |
| Gender | | | | | |
| Females | | | | | |
| Overall MPAI-A Score | 0.76 | 5.23 | 2.55 | 43 | 1.05 |
| Emotional Symptoms Subscale | 0.91 | 5.36 | 3.10 | 43 | 1.10 |
| Physical Symptoms Subscale | 0.09 | 5.09 | 2.01 | 43 | 1.21 |
| Males | | | | | |
| Overall MPAI-A Score | 0.32 | 4.77 | 2.23 | 20 | 1.18 |
| Emotional Symptoms Subscale | 0.64 | 4.55 | 2.67 | 20 | 1.18 |
| Physical Symptoms Subscale | 0.00 | 5.00 | 1.78 | 20 | 1.36 |

Table 3: Correlations for Major Research Variables

| | Correlations | | | | | | | | | | t-tests | |
|----------------------------|--------------|------|------|------|------|------|-------|-------|-------|------|---------|-------|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1. Overall MPAI-A | .91* | .93* | .51* | .41* | .19 | .45* | -.54* | -.46* | -.57* | .18 | -.89 | 1.08 |
| 2. Emotional MPAI-A | -- | .70* | .45* | .42* | .08 | .39* | -.54* | -.45* | -.60* | .09 | -.48 | 1.40 |
| 3. Physical MPAI-A | | -- | .48* | .33* | .26* | .43* | -.45* | -.41* | -.46* | .22† | -1.05 | 0.67 |
| 4. Overall MPS | | | -- | .79* | .65* | .69* | -.24† | -.17 | -.27* | .25* | -1.65 | -.39 |
| 5. Self-Oriented MPS | | | | -- | .35* | .24† | -.01 | .07 | -.08 | .21† | -1.07 | .78 |
| 6. Other-Oriented MPS | | | | | -- | .21† | -.04 | .01 | -.08 | -.11 | .84 | -.79 |
| 7. Socially-Prescribed MPS | | | | | | -- | -.45* | -.43* | -.40* | .36* | -2.90* | -1.10 |
| 8. Overall Self-efficacy | | | | | | | -- | .95* | .93* | -.10 | .90 | -1.11 |
| 9. SEML | | | | | | | | -- | .77* | -.08 | .94 | -.73 |
| 10. SEMP | | | | | | | | | -- | -.09 | .67 | -1.44 |
| 11. Age | | | | | | | | | | -- | -- | .37 |
| 12. Age Groups | | | | | | | | | | | -- | .19 |
| 13. Gender | | | | | | | | | | | | -- |

Note. † $p < .10$; * $p < .05$.

3.5 Demographic Variables Relating to Levels of Music Performance Anxiety

This last section will explore the relationships between levels of music performance anxiety in children and teenagers with other demographic variables that were collected from participants. The parental demographic questionnaire was created for the purpose of this study and based on existing demographic questionnaires being used in the Piano Pedagogy Research Laboratory at the University of Ottawa. The goal of this questionnaire was to gain more specific demographic information from participants about their age, ethnic background, performance experience, etc. The data collected from this questionnaire was analyzed with the information collected from the MPAI-A (see section 3.1) to test for any further relationships.

When asked about the ethnicity of the father, thirty participants responded as having Caucasian fathers, while twenty participants have Asian fathers. Similarly, thirty participants reported having Caucasian mothers while twenty-two students have Asian mothers. (See Table 4) Two independent

samples t-tests revealed a significant difference in overall levels of performance anxiety and physical symptoms of performance anxiety between students with Asian parents and students with Caucasian parents. An examination of the mean scores reveals that students with Asian mothers and fathers experience higher levels of performance anxiety and physical symptoms of anxiety than students with Caucasian parents. When looking at the ethnicity of participant's mothers, the p values calculated with the emotional subscale scores shows a similar trend. In contrast, no significant difference was found between emotional anxiety scores when analyzing the ethnicity of participant's fathers. The results suggest that there is also a relationship between emotional symptoms of anxiety and the ethnicity of a participant's mother, but not with the ethnicity of the father. (Table 5)

The number of total performances was grouped into two categories: participants with 0-4 performances, and participants with more than four performances. (See Table 4) The results of an independent samples t-test showed no significant difference in overall levels of anxiety and physical symptoms based on the number of performances. However, the results suggest a possible relationship between performance experience and emotional anxiety, with students participating in more than four performances experiencing lower levels of emotional performance anxiety. (Table 5)

When asked for more specific information about performances, twenty-four students participated in 0-4 teacher recitals, while twenty-seven students participated in more than four recitals. (Table 4) The results of an independent samples t-test shows a marginal difference in levels of emotional performance anxiety between students with four or less teacher recitals and students with more than four teacher recitals, where participants with more recital experience had lower levels of anxiety. No significant difference was found with overall levels of music performance anxiety or physical symptoms of anxiety. (Table 5) When asked about other types of performances, thirty-three students indicated that they have taken a piano exam, while twenty-seven students have not taken an exam. (Table 4) The

p values calculated suggest a difference in physical symptoms of performance anxiety scores between participants who have or have not taken a music exam. The results show a trend of higher levels of physical anxiety in students who have taken an exam in comparison with those who have not. No significant difference was found between participants who have taken an exam and overall music performance anxiety scores or levels of emotional performance anxiety. (Table 5)

Whether or not the child will continue playing as an adult is one of the remaining variables that indicated a relationship with levels of performance anxiety in students. Parents were asked to rate the likelihood of their child to continue their piano playing as an adult on a scale of 1 -5, with 1 being “Not Likely” and 5 being “Absolutely.” (Table 4) A bivariate correlation analysis tested the relationship between the parents’ answers, and the participants’ scores from the Music Performance Anxiety Inventory for Adolescents. (Table 5) While the results do not indicate a relationship between whether the participant will continue playing as an adult and emotional symptoms of anxiety, there was a moderate negative correlation for overall levels of performance anxiety and for physical symptoms of anxiety. This suggests that students who believe they will continue playing the piano in their later years have lower levels of physical performance anxiety and music performance anxiety in general. Another variable tested was how often the child had access to a quiet practice space. Parents were asked to rate their answer on a scale of 1-5, with 1 being “Never” and 5 being “Always”. (Table 4) After a bivariate correlation analysis was conducted to test for a relationship between access to quiet practice spaces and the levels of performance anxiety, the value for overall MPAI-A scores shows a moderate negative correlation with access to quiet practice space. As well, a moderate negative correlation for the emotional symptoms subscale was also present. This suggests that participants with consistent access to a quiet practice space have lower levels of overall performance anxiety and/or emotional performance anxiety. No relationship was found between physical symptoms of anxiety and the presence of a quiet practice space. (Table 5)

The last section of the parental demographic questionnaire refers to other musical experience the student might have participated in. Parents were asked to rate how often their child participated in collective music making (eg. duets, ensembles, accompanying, etc.) on a scale of 1-5, with 1 meaning “Never” and 5 meaning “Always”. (Table 4) Based on the correlation values obtained from a bivariate correlation analysis, no relationship exists between overall levels of music performance anxiety and/or physical symptoms of music performance anxiety with participation in collective music-making. However, a moderate negative correlation was found between emotional symptoms of anxiety and experience in collective music making, suggesting that students who have participated in duets, ensembles, etc. may have lower levels of emotional performance anxiety. Lastly, parents were asked if their children attend other concerts. Similar to the previous questions, the rating scale was from 1-5, with 1 representing “Never” and 5 representing “Always”. (Table 4) To test for a relationship between participants’ attendance of other concerts and MPAI-A scores, a bivariate correlation analysis was run. The results indicate a moderate negative correlation between overall symptoms of music performance anxiety and participant’s attendance of other concerts, as well as a tentative relationship between emotional symptoms of anxiety and attendance of other concerts. This information suggests that attending other concerts may result in lower levels of overall and/ or emotional performance anxiety in children and teenagers. No relationship was found between attendance of other concerts and physical symptoms of music performance anxiety. (Table 5) All other variables collected during the parental demographic survey that are not mentioned in this section either did not have enough participants respond to the question to produce a sufficient amount of data for analysis, or did not produce significant results when analyzed through SPSS.

Table 4: Descriptive Statistics for Demographic Variables

| | Minimum | Maximum | Mean | N | Std. Dev. |
|---------------------------------------|---------|---------|------|----|-----------|
| Ethnicity of Father | | | | | |
| Caucasian | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.15 | 30 | 1.04 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.73 | 30 | 1.16 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.57 | 30 | 1.09 |
| Asian | | | | | |
| Overall MPAI-A Score | 0.55 | 4.77 | 2.90 | 20 | 1.11 |
| Emotional Symptoms Subscale | 0.64 | 5.18 | 3.26 | 20 | 1.12 |
| Physical Symptoms Subscale | 0.45 | 5.00 | 2.55 | 20 | 1.32 |
| Ethnicity of Mother | | | | | |
| Caucasian | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.11 | 30 | 1.01 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.71 | 30 | 1.14 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.52 | 30 | 1.07 |
| Asian | | | | | |
| Overall MPAI-A Score | 0.55 | 4.77 | 2.90 | 22 | 1.07 |
| Emotional Symptoms Subscale | 0.64 | 5.18 | 3.29 | 22 | 1.09 |
| Physical Symptoms Subscale | 0.45 | 5.00 | 2.51 | 22 | 1.27 |
| Number of Overall Performances | | | | | |
| 0-4 | | | | | |
| Overall MPAI-A Score | 0.76 | 4.77 | 2.71 | 20 | 1.14 |
| Emotional Symptoms Subscale | 1.50 | 5.18 | 3.36 | 20 | 1.09 |
| Physical Symptoms Subscale | 0.09 | 4.82 | 2.10 | 20 | 1.35 |
| More than 4 | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.37 | 39 | 1.07 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.84 | 39 | 1.10 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.89 | 39 | 1.24 |
| Teacher Recitals | | | | | |
| 0-4 | | | | | |
| Overall MPAI-A Score | 0.76 | 4.77 | 2.67 | 24 | 0.87 |
| Emotional Symptoms Subscale | 1.50 | 5.18 | 3.32 | 24 | 0.91 |
| Physical Symptoms Subscale | 0.09 | 4.82 | 2.05 | 24 | 1.06 |
| More than 4 | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.31 | 27 | 1.23 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.74 | 27 | 1.25 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.89 | 27 | 1.39 |

| | | | | | |
|--------------------------------|------|------|------|----|------|
| Exam | | | | | |
| No | | | | | |
| Overall MPAI-A Score | 0.32 | 4.77 | 2.27 | 33 | 0.98 |
| Emotional Symptoms Subscale | 0.64 | 5.18 | 2.88 | 33 | 1.08 |
| Physical Symptoms Subscale | 0.00 | 4.82 | 1.67 | 33 | 1.05 |
| Yes | | | | | |
| Overall MPAI-A Score | 0.55 | 5.23 | 2.73 | 27 | 1.18 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 3.14 | 27 | 1.16 |
| Physical Symptoms Subscale | 0.45 | 5.09 | 2.31 | 27 | 1.42 |
| Continue playing as an adult | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.45 | 59 | 1.08 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.94 | 59 | 1.10 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.96 | 59 | 1.25 |
| Access to quiet practice space | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.49 | 59 | 1.08 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 3.00 | 59 | 1.12 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 2.00 | 59 | 1.24 |
| Collective music making | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.49 | 58 | 1.10 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.99 | 58 | 1.12 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 2.01 | 58 | 1.25 |
| Attendance of other concerts | | | | | |
| Overall MPAI-A Score | 0.32 | 5.23 | 2.47 | 60 | 1.09 |
| Emotional Symptoms Subscale | 0.64 | 5.36 | 2.98 | 60 | 1.12 |
| Physical Symptoms Subscale | 0.00 | 5.09 | 1.98 | 60 | 1.24 |

Table 5: Correlations for Demographic Variables

| | Correlations | | | | | | t-tests | | | | |
|------------------------------------|--------------|------|-------|-------|-------|-------|---------|--------|--------|--------|-------|
| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1. Overall MPAAI-A | .91* | .93* | -.22† | -.22† | -.19 | -.21† | -2.45* | -2.73* | -1.15 | -1.18 | 1.65 |
| 2. Emotional MPAAI-A | -- | .69* | -.14 | -.23† | -.25† | -.25† | -1.59 | -1.85† | -1.71† | -1.87† | .90 |
| 3. Physical MPAAI-A | | -- | -.26† | -.17 | -.11 | -.14 | -2.84* | -3.03* | -.58 | -.46 | 1.94† |
| 4. Continue playing as an Adult | | | -- | -.10 | .13 | .23† | -.61 | -.54 | 1.75† | 1.23 | .80 |
| 5. Access to quiet practice space | | | | -- | .26† | -.12 | .09 | -.44 | 1.71† | -.84 | 1.06 |
| 6. Collective Music Making | | | | | -- | .21† | -.13 | .05 | 1.56 | 1.71† | 2.33* |
| 7. Attendance of Other Concerts | | | | | | -- | -1.16 | -1.21 | 1.80† | 2.22* | 2.90* |
| 8. Ethnicity of Father | | | | | | | -- | -- | -- | -- | -- |
| 9. Ethnicity of Mother | | | | | | | | -- | -- | -- | -- |
| 10. Number of overall performances | | | | | | | | | -- | -- | -- |
| 11. Number of teacher recitals | | | | | | | | | | -- | -- |
| 12. Taken an Exam | | | | | | | | | | | -- |

Note. † $p < .10$; * $p < .05$.

Chapter 4: Discussion

The goal of this study was to examine the way children and teenagers perceive their symptoms of music performance anxiety in order to determine how they experience performance anxiety in comparison to one another. Factors such as perfectionism, self-efficacy and gender were also examined to determine if a relationship exists between these traits and performance anxiety. This section will summarize the results and interpret the findings of this study for each hypothesis stated in the review of literature (Section 1.5).

4.1 Hypothesis One: Perceived Levels of Anxiety in Children and Teenagers

The first research question for this study asks how children (ages 8 to 12) and teenagers (ages 13 to 17) perceive the signs of nervousness that are felt with regards to music performance anxiety, and it was hypothesized that both children and teenagers would perceive signs and symptoms of music performance anxiety, with teenagers experiencing higher levels of anxiety than children. The results of this study partially support hypothesis one. Although scores of overall music performance anxiety and emotional performance anxiety showed no significant difference based on age, the findings suggest a relationship between physical symptoms of anxiety and age, where physical symptoms may become more severe as a student ages. However, despite the fact that physical symptoms appear to increase as children get older, and the average overall scores from the MPAI-A show that both teenagers and children experience some levels of music performance anxiety, the results found no difference between the ways the two groups perceived their signs and symptoms. There are several possible explanations for this finding.

Until recently, the literature on music performance anxiety believed that children did not experience any signs or symptoms of performance anxiety before, during, or after a performance. Simon and Martens' (1979) study, completed with boys between the ages of nine and fourteen years

old, found that non-required non-sport activities produced the highest level of anxiety among students when compared to non-required sport activities, and required school activities. They also found that band solos produced the highest level of anxiety out of all of the activities, showing that children do experience performance anxiety during musical activities. However, while the results show that students experienced anxiety, the measures used in this study evaluated general anxiety only, and did not look specifically at music performance anxiety.

Ryan (1998; 2005) produced two studies that investigated music performance anxiety in children. The first used twelve-year old students as participants, and heart-rate measurements as well as self-report questionnaires showed that this age group does experience anxiety before and during a performance. The next study had a broader age group, using students between grades three and seven, and also found that their anxiety was higher on the day of a concert than on a normal school day. While the above studies indicate that children experience some levels of performance anxiety, they still do not examine the possibility of anxiety in the younger end of the age group. Boucher's (2008) study is the first to conflict with the idea that young children do not experience anxiety on stage. In this experiment, children as young as three and four years old showed a rise in cortisol levels and demonstrated stressful behaviours before a concert, which indicates that this age group can also experience music performance anxiety.

The results of the studies above indicate that children experience music performance anxiety just as any other age group does, but the lack of literature on the subject demonstrates that this topic has not been studied extensively. The absence of results could account for the belief that children either do not experience music performance anxiety, or experience performance anxiety less severely than other age groups. In comparison, the literature on teenagers and music performance anxiety is more substantial, although still small in contrast to studies done with adults. Shoup (1995) discovered that 55% of high school and junior high school students interviewed had negative experiences with

performance anxiety, while Leblanc, Jin, Obert, & Siivola (1997) found that high school students experienced high levels of anxiety when performing in front of an audience, as opposed to performing by themselves in a room. Both of these studies indicate that high school students perceive symptoms of music performance anxiety.

Lorenz (2002) conducted a study with female choral students, finding that three quarters of participants experience performance anxiety, with most participants finding the anxiety negatively interfered with their performance sometimes. This study also shows that high school students perceive signs and symptoms of anxiety as 19 out of the 20 symptoms presented were reported by at least one student. Felm and Schmidt (2006) reported that from seventy-four teenagers at a German music school, most experience high levels of performance anxiety, and at least a third of the participants felt negatively affected by it. Osbourne & Kenny (2008) also found that teenagers between the ages of eleven and eighteen also experience some levels of performance anxiety, while Brugues (2011) concluded a review of literature stating that young adolescents (ages 14-19) present with high MPA scores and show similar symptoms to adults. The lack of studies completed with children participants in comparison to experiments done with teenagers could account for the perception that children experience less performance anxiety than teenagers, and would explain why the results of this study only partially support hypothesis one. A larger sample size could help produce more significant results.

While the studies above test for the presence of music performance anxiety in a certain age group, Britsch (2005) conducts the only experiment that examines music performance anxiety as a continuum affected by age. Seventy-five percent of a youth orchestra reported feeling some nervousness before a performance, with the level of nervousness increasing as they got older. However, the author hypothesized that since older students in an orchestra usually get more solos than the younger students, this might account for the increased levels of anxiety. More studies comparing

the levels of anxiety between children and teenagers are needed in order to find more conclusive results.

4.2 Hypothesis Two: Relationships between Perfectionism and Music Performance Anxiety

The second research question for this study is divided into three parts, and the first section asks if there is a correlation between high levels of music performance anxiety in children and teenagers and high levels of perfectionism. It was hypothesized that a positive correlation between high levels of music performance anxiety and high levels of perfectionism would be found. Strong positive correlations were found between levels of overall perfectionism and levels of overall music performance anxiety, as well as both emotional and physical symptom, supporting the original hypothesis. As well, strong positive correlations were found between self-oriented perfectionism and music performance anxiety, and socially-prescribed perfectionism and music performance anxiety. No strong relationships were found between other-oriented perfectionism and music performance anxiety. These results are supported by the literature.

For the purpose of this study, perfectionism was defined as the presence of high personal standards and critical evaluation of self that relates to an overconcern with small flaws and mistakes with a tendency to focus on what's wrong and discount what is right (Bourne, 1995; Sinden, 1999). For more specific results on perfectionism, this study also examined the three different dimensions of perfectionism that describe where the perfectionistic behaviours are being projected. Self-oriented perfectionism directs these tendencies inwards, other-oriented perfectionism involves the expectations one has for others, and socially prescribed perfectionism involves the perceived expectations others have for oneself (Hewitt & Flett, 1991).

Antony, Purdon, Huta, and Swinson (1998) completed an experiment which found that participants with panic disorder, obsessive compulsive disorder and social phobias all reported higher

levels of socially prescribed perfectionism than subjects from the control group. This indicates that believing others have very high or unrealistic expectations of oneself is linked to high levels of anxiety. When examining the relationship between self-oriented perfectionism and anxiety, Flett, Hewitt, and Dyck (1989) found a positive relationship between the two variables, indicating that having high or unrealistic expectations of oneself can also cause high levels of anxiety.

In studies focusing specifically on music, similar results were presented. Sinden (1999) studied 138 university music students and the results showed a significant positive correlation between performance anxiety and perfectionism, where higher levels of anxiety were present in subjects who also had high levels of perfectionism. This study did not look at the three dimensions of perfectionism, instead examining different tendencies such as high doubts over action, high concern over mistakes, and high parental criticism using the Multidimensional Perfectionism Scale developed by Frost and colleagues (1990). The results found that these three tendencies, plus low personal standards, can be used as positive predictors of music performance anxiety. While the study did not look specifically at the dimensions, it is easy to see which area of perfectionism each tendency would fall under. Doubt over action describes a personal insecurity that could be caused by self-oriented perfectionism, while high parental criticism describes the expectations of others, which can be seen in socially prescribed perfectionism. High concern over mistakes could be an indicator of either or both self-oriented and socially prescribed perfectionism, depending on the motivation behind the student's concern.

Kenny, Davis, and Oates (2004) also completed a study examining the relationship between music performance anxiety and perfectionism. As with previous studies, a positive correlation between high levels of anxiety and high levels of perfectionism was presented. Mor, Day, and Flett (1995) also found a positive correlation between perfectionism and performance anxiety. This study also examined the three dimensions of perfectionism, and found a relationship between self-oriented perfectionism and socially prescribed perfectionism with high levels of music performance anxiety. No relationship

between other-oriented perfectionism and performance anxiety was reported, indicating that while the other two dimensions of perfectionism have an impact on performance anxiety, other-oriented perfectionism does not affect MPA as significantly.

The results of the present study agree with the existing literature. Considering that a strong link between high levels of perfectionism and high levels of music performance anxiety has been established, it is not surprising that the strong positive correlation found in this study between these two variables supports the second hypothesis. As well, the positive correlations observed between both self-oriented perfectionism and socially prescribed perfectionism and levels of music performance anxiety are also supported by the literature. Other-oriented perfectionism is not discussed often, which indicates that this dimension of perfectionism does not have as significant effect on a musician's level of anxiety. This supports the weak relationships found between other-oriented perfectionism and music performance anxiety in this study.

In addition to the analyses run between scores from the Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) and the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005), the responses to the open ended questions added to the MPAI-A also help to support hypothesis two. When asked "What is the main cause of your stress or anxiety?" most participants responses indicated some sort of perfectionistic tendency. The fear of making a mistake was the most common answer when students described what caused them the most nervousness. Some answers, such as "I am afraid that maybe I cannot play as well as I practice or make mistakes" and "Being scared of making a mistake and doing a bad job performing" indicates an inward fear of making mistakes, which supports the idea that self-oriented perfectionism causes higher levels of anxiety. Other responses, such as "Thinking that my audience will not like my performance" and "Knowing there is someone watching every mistake I do or might do" state more explicitly feelings of anxiety about their perception of the audience's expectations. The majority of participants responded with answers like this, which supports

the literature that indicates socially prescribed perfectionism is linked to higher levels of anxiety. No answers from the participants expressed anxiety over their expectations of others, which supports the results on other-oriented perfectionism discussed above.

A strong relationship between perfectionism and music performance anxiety is not surprising. As mentioned in the literature reviewed above, a person with high levels of perfectionism has unrealistically high standards and an over concern with small flaws and mistakes (Bourne, 1995; Sinden, 1999). Anything that is perceived as a threat to a student's ability to achieve their elevated expectations could cause the student to feel fear or anxiety. If nothing less than a perfect performance is acceptable to a student, this will automatically lead to an increase in anxiety, as this is an impossible goal to obtain. As well, anything threatening a student's perceived standards would trigger the autonomic nervous system to prepare the body for danger. This leads to an increase in physiological symptoms such as increased heart rate, blood pressure and shaking, and could explain the relationship between high levels of self-oriented perfectionism and high levels of music performance anxiety. The presence of an audience during performance situations could also help explain the relationship between high levels of socially prescribed perfectionism and high levels of performance anxiety. Believing that others have high expectations of them could increase the pressure a student feels to produce a performance with no mistakes. Again, since a perfect performance is not a realistic goal, the fear associated with not being able to achieve other's perceived standards could lead to an increase in anxiety, as well as activating a rush of epinephrine that would increase physiological symptoms. This could also help explain why other-oriented perfectionism does not show a strong link with performance anxiety. Since the act of performing solo in public is a personal activity that does not often depend on the outside actions of others, musicians' do not need to worry about their performances being affected by other people. Since others are not involved in the quality of a student's performance, there is no reason for a child to have expectations of outside individuals, unrealistic or otherwise. Without the presence of expectations of

others, this diminishes any perceived threat a student may feel when performing, which also reduces any anxiety caused by other-oriented perfectionism. It is also possible that a student's performance anxiety could also worsen their perfectionism. In the presence of high levels of anxiety, a musician could become overly focused on preventing mistakes in an attempt to lessen their nervousness. This increased concern with flaws or errors in their performance would also lead to an increase in their overall perfectionism, as well as self-oriented perfectionism and socially prescribed perfectionism.

4.3 Hypothesis Three: Relationships between Self-Efficacy and Music Performance Anxiety

The third research question for this study asks if there is a correlation between high levels of music performance anxiety in children and teenagers and low levels of self-efficacy, and it was hypothesized that there would be a positive correlation between high levels of music performance anxiety and low levels of self-efficacy. Significant negative correlations were found between levels of music performance anxiety and levels of self-efficacy for both music learning and music performing, showing that lower levels of self-efficacy will result in higher levels of music performance anxiety in children and teenagers. These results support the hypothesis, and are also supported by the existing literature.

For the purpose of this study, self-efficacy was defined as the degree to which people believe in their abilities to perform the behaviours necessary for the successful completion of a task (Bandura, 1982). This relates to anxiety because it is believed that musicians with higher self-efficacy are more likely to persevere through difficult practice tasks and give successful performances, which will in turn lead to lower levels of performance anxiety (Bandura, 1977), which was reflected in the results of this study. Cooper and Robinson (1991) tested undergraduate students in math-related degrees and found results that supported these definitions. The results of the study showed a negative correlation

between self-efficacy and anxiety, meaning that the more students believed in their ability to do well on a test, the less anxiety they had.

Sinden (1999) created a similar study with musicians that also resulted in findings that reflected Bandura's writings. After filling out questionnaires, orchestral students reported that lower levels of self-efficacy were associated with higher levels of music performance anxiety. Students with low self-efficacy were also less likely to continue in music, and showed a reduction in performance. The students who showed the highest levels of music performance anxiety were the students who were the least confident in their ability to perform. Craske and Craig (1984) completed a study with similar results using university piano students as subjects. After a variety of tests, it was found that all subjects had a decrease in self-efficacy levels and an increase in anxiety levels when performing in front of an audience, meaning that the presence of other people decreased their confidence in their ability to perform and made them more nervous.

Studies done with children and teenagers on the relationship between self-efficacy and music performance anxiety produced similar results. Hendricks (2009) examines different factors that influence self-efficacy in young students, and found that positive experiences, mastery of a particular task, and encouragement from others help raise a student's level of self-efficacy. This in turn helps decrease levels of music performance anxiety, and leads to more successful performances. McPherson and McCormick (2006) also conducted a study using young musicians, and established a strong correlation between high levels of self-efficacy and successful performance results, leading to lower levels of music performance anxiety.

The findings of the present study agree with the existing literature presented above and support the hypothesis for this research question. The findings from this study showed strong negative correlations between self-efficacy for music learning and performing, and music performance anxiety,

meaning that the more confidence a student has in their ability to learn and/or perform a piece of music, the less anxious they will feel during their performance.

In addition to the analyses run between scores from the Self-Efficacy for Musical Learning and Musical Performing – Children’s Version (Richie & Williamon, 2011b) and the Music Performance Anxiety Inventory for Adolescents (Osbourne & Kenny, 2005), the responses to the open ended questions added to the MPAI-A also partially support hypothesis three. When asked “What have you found most helpful for coping with your stress/anxiety?” some students’ answers indicated their strategies were based in raising their self-efficacy. Answers such as “It helps to practice a lot and to tell myself that I have been practicing a lot and know it well”, and “If I practice well enough and can play my piece well at the time, I’ll know I’ve done the best I could” indicate that feeling secure and confident with their pieces helps relieve some of the music performance anxiety they feel. However, more students responded to this question by saying distraction is the most common technique they use to help with performance anxiety. This could have interesting implications for teachers in that by helping students feel more confident about the pieces they will be performing, they will be able to lower their music performance anxiety, as opposed to trying to ignore it. Examining Fredrickson’s (2001) broaden-and-build for positive emotions can help give some insight as to why increased self-efficacy in a performance situation can help relieve performance anxiety. The theory states that “certain discrete positive emotions...all share the ability to broaden people’s momentary thought-action repertoires and build their enduring personal resources, ranging from physical and intellectual resources to social and psychological resources.” (Frederickson, 2001, p. 219) A positive state of mind allows a person better access to the skills they possess, as well as an increased ability to focus on the task at hand and an expanded attention span. In contrast, a negative state of mind increases a person’s awareness of potential threats, decreasing their attention span to focus on inward signs of personal distress (Frederickson, 1998; 2001). This relates to self-efficacy and performance anxiety in that an increased

level of confidence in a student's performance allows them the ability to access all of their skills and focus on the performance at hand, rather than their internal fears and worries. Meanwhile, a low level of confidence in their ability to perform means students are more likely to focus on their internal fears and potential threats to their self-worth, which would lead to an increase in music performance anxiety. Research done by Simoens (2012) and Endo, Juhlberg, Bradbury and Wing (2014) also help support this idea. Feeling confident in one's ability to play successfully helps student's view performance opportunities in a positive manner as opposed to a threatening one. This in turn may help musicians to harness the adrenaline rush that occurs at performance time, and use the physiological effects to benefit their performance. While high levels of perfectionism seems to leave students more vulnerable to music performance anxiety, it appears that increased levels of self-efficacy may be one of the best defenses against performance anxiety.

4.4 Hypothesis Four: Relationship between Gender and Music Performance Anxiety

The fourth research question for this study ask if there is a correlation between high levels of music performance anxiety and gender, and it was hypothesized that females will display higher levels of music performance anxiety than males. The results of this study do not support hypothesis four. An analysis of the scores from the MPAl-A found no difference between the way males and females perceive their overall signs and symptoms of anxiety, as well as their physical and emotional symptoms of anxiety. In contrast to most of the existing literature, the results showed that females and males experience music performance anxiety at similar levels.

It has been well documented in the existing literature that adult females experience music performance anxiety more severely than males. Abel and Larkin (1990), Fishbein, Middlestadt, Ottati, Strauss, and Ellis (1988), Sinden (1999), and Wesner, Noyes, and Davis (1990) all conducted studies finding that women experienced higher levels of music performance anxiety than men. Research done

with younger musicians on music performance anxiety also find that females often have higher levels of music performance anxiety than men, although the results of these studies are not always as definitive. Osbourne, Kenny, and Holsomback (2005) conducted a study with teenage participants that produced results consistent with findings from adult studies. Adolescent girls scored higher on the MPAAI-A than boys of the same age. Leblanc, Jin, Obert, and Siivola (1997) found that female high school students' had significantly higher heart rates than males when performing in front of an audience. Since increased heart rate is a symptom of anxiety, the findings indicate that adolescent females experience higher levels of music performance anxiety than males.

However, Ryan (2004) found that while girls experienced more anticipatory anxiety, boys' heart rates were higher during performance. Since elevated heart rate is a symptom of performance anxiety, this indicates that boys experienced higher levels of music performance anxiety during performance than females. In this study, males also exhibited more anxious behaviours before and after the performance than females. In a similar study, Ryan (2005) found no significant difference between anxiety levels among boys and girls between grades 3-7, although boys tested higher on both regular and performance days for anxiety. However, girls in grade six (approximately twelve-years old), experienced a significant increase of anxiety, while boys did not experience this increase until grade seven (approximately thirteen-years-old).

In general, the results of this study do not agree with the existing literature. Research done by Nolen-Hoeksema can help explain why females were expected to have higher levels of performance anxiety than males. When looking at the differences between male and female emotional regulation strategies, Nolen-Hoeksema (2012) found that females have a higher tendency to ruminate when distressed. Focusing on negative feelings and symptoms of distress is likely to cause anxiety levels of increase. This relates to Frederickson's (1998; 2001) in that a female's tendency to ruminate would lead to a negative state of mind, making females more susceptible to music performance anxiety. In

addition, research shows that women experience both positive and negative emotions more intensely than males do (Diener, Sandvik, & Larson, 1985). When having a negative feeling towards a performance situation, a female's tendency to have a stronger reaction than males would also help explain why females produce higher levels of music performance anxiety. While in adult studies, females consistently experience higher levels of music performance anxiety than males, some of the results in studies with children indicate that levels of music performance anxiety may not distinguish between genders until later in life. Ryan's (2005) study helps support this theory by showing the difference between when males and females experience a marked increase in performance anxiety, which could help explain why the findings of this study do not support hypothesis four. However, more studies with larger sample sizes are needed to further investigate this theory.

4.5 Exploratory Analysis: Other Demographic Variables relating to Music Performance Anxiety

The last part of this section will discuss the results of the exploratory analysis done with the variables collected from the parental demographic questionnaire. All of the variables collected from this questionnaire (see Appendix 6) were analyzed against the scores collected from the MPAI-A, however, only characteristics displaying significant or marginal trends were reported in the results section.

The first category examined the relationship between music performance anxiety and the ethnicity of the father and mother. The results showed a significant difference between levels of anxiety for participants with Asian mothers and fathers, and participants with Caucasian mothers and fathers. This indicates that students with Asian parental figures experience higher levels of music performance anxiety than students with Caucasian parental figures. There are several possible explanations for these findings. Okazaki (1997) found that in general, Asian-American college students experience higher levels of social anxiety than Caucasian-American students. Similar results were found when young children were tested for social anxiety. Huang, Cheng, Clazada, and Brotman (2012) found that Asian American

children were at a higher risk to suffer from social anxiety than their peers. In addition, this study made a connection between the ethnicity of parents and their children's levels of anxiety. Children with Asian parents who did not identify strongly with American culture were more likely to have increased levels of anxiety. These studies suggest that children a relationship between the ethnicity of the parents and the levels of social anxiety a child experiences. The presence of higher levels of general anxiety in students with Asian parents could help explain why these students also reported higher levels of music performance anxiety. Studies presenting a link between perfectionism and ethnicity could also provide another explanation for the findings of this study. Castro and Rice (2003) found that Asian-American students scored significantly higher on the concern over mistakes, perceived criticism from parents and self-doubt subscales of perfectionism than Caucasian students. In Sinden's (1999) study, these three perfectionistic tendencies were associated with higher levels of music performance anxiety in university students. The prevalence of perfectionistic tendencies among students with Asian parents could also be another possible explanation for higher levels of music performance anxiety, as a strong relationship between these two factors exists.

When analyzing different types of performances with regards to music performance anxiety, no significant difference was found between the number or types of performance and overall MPA. However, the findings suggest that students who have participated in more than four performance have lower levels of emotional performance anxiety than students who have participated in four or less performances. This might indicate that the more a student is exposed to a performance atmosphere, the easier it is for them to cope with the emotional symptoms of anxiety. When asked about specific types of performances, the results suggest that students who had participated in more than four teacher recitals had lower levels of anxiety on the emotional subscale than students who participated in four or less. This indicates that prolonged exposure to teacher recitals will help students cope with the emotional symptoms of performance anxiety. Continued exposure to performance situations may help

decrease anxiety in students because it provides the children with past experiences to draw from. Having the knowledge that they have successfully completed performances in the past could help increase their confidence in their ability to perform in future situations. Thinking about past achievements could help raise self-efficacy, which would help explain why students with more performance experience have lower levels of performance anxiety. Interestingly, participation in a piano exam resulted in the opposite trend. Physical symptoms of anxiety were marginally higher in students who had taken a piano exam than students who had not, but no significant difference in overall or emotional symptoms of anxiety was discovered. One possible explanation for the increase in performance anxiety for students who have taken an exam is the difference in the type of audience present. While the audiences of teacher recitals are often larger, and contain friends and/or family members, exams consist of one or two strangers whose purpose is to evaluate the student. The unfamiliarity of the examiners and the potential threat of an evaluation may explain why performance anxiety levels are marginally increased in students who have taken exams.

When examining practice habits, those students that believed they would continue playing the piano as an adult showed moderate negative correlation with overall levels of music performance anxiety and physical symptoms of anxiety, showing that students who believed they would continue playing had less anxiety than those who felt they would stop soon. This could possibly be linked to self-efficacy and the participant's belief in their ability to keep playing, but more studies and a larger sample size is needed for more conclusive results. A moderate negative correlation was also found between a student's access to a quiet practice space and music performance anxiety. Students who were able to prepare in a quiet space had marginally lower levels of anxiety than students who could not. Again, this could be linked to self-efficacy in that having a calm space to practice allows them to feel better prepared to perform, but more data would be needed to explore this concept.

Lastly, the demographic questionnaire examined other musical experiences students might have participated in. For students who participated in collective music making, such as duets or accompanying, there was a moderate negative correlation between participants with experience with these activities and emotional symptoms of anxiety. This suggests that exposing a student to collective music making activities might help lower emotional symptoms of anxiety. Likewise, attendance of other music concerts also showed a moderate negative correlation with emotional performance anxiety, as well as a possible relationship with overall levels of anxiety. Students who often attended other concerts with their parents showed a marginally less level of general and emotional performance anxiety than students who did not attend other concerts. For both of these variables, one possible suggestion for the decrease in music performance anxiety is that exposure to performance situations may allow a student to feel more comfortable in these settings. Whether experiencing the performance as an audience member or as a participant, being in a performance atmosphere could allow students to gain a familiarity with these environments, which may help decrease their own levels of music performance anxiety.

The relationships and trends found during the exploratory analysis of this study indicate that there are a number of variables that might have an effect on symptoms of music performance anxiety. The results imply that the more exposure a student has to performance opportunities either for themselves or from watching others, as well as having practice conditions that permits them to feel confident in their preparation, allows for students to feel less nervousness with regards to performance anxiety. However, more studies with larger sample sizes are needed to fully explore the impact of these variables on music performance anxiety in children and teenagers.

4.6 Conclusion

Music Performance Anxiety is a reality that musicians of all ages have to deal with. While most of the existing literature focuses on the way adults experience performance anxiety, this study examined the way in which children and teenagers experience nervousness. In addition, this study tested factors such as perfectionism, self-efficacy and gender to determine if a relationship existed with anxiety. Results indicate that both children and teenagers encounter anxiety during performance, and tentatively show that levels of performance anxiety increase with age. Strong relationships with anxiety were found between both perfectionism and self-efficacy, indicating that high levels of perfectionism and low levels of self-efficacy are linked with high levels of music performance anxiety. Males and females presented with similar levels of anxiety, indicating gender is not a significant factor affecting music performance anxiety. In addition, an exploratory analysis investigated a number of demographic variables that could possibly be linked to performance anxiety. Results suggest that certain variables surrounding ethnicity, performance exposure, and practice habits are all factors that affect music performance anxiety.

One limitation of this study would be the number of participants available. Due to time constraints and resources available, only a small sample of students was obtained. As this study looked at a number of different factors (age, gender, etc.), a larger sample size would allow for more participants in each category, and would help produce more significant results. Another limitation of this study involves the sampling procedure. Letters of invitation were sent out to a sample of music studios and piano teachers, and it is possible that individuals who agreed to participate in this study differ from those who declined to participate. As the sampling of participants was random, they only represent a fraction of the population and cannot be used to draw conclusions for the general population. Lastly, the administration of the questionnaires provides another limitation for the study.

Most participants completed the questionnaires at the music studio or private studio where they receive lessons. While the music teachers were instructed on the administering of the tests, a consistent location and administrator would have allowed for more consistency throughout this study.

Further research with larger sample sizes is needed to provide more information on music performance anxiety in children and teenagers. Particularly for the variables age and gender, a larger data set could help draw more conclusive results as to how each demographic group is affected by performance anxiety. As well, further research is needed to examine the demographic variables used in the exploratory analysis. As this is one of the first studies to examine these demographic variables and their tentative relationships to anxiety, additional research is needed to produce more conclusive results. One such study could examine the relationship between anxiety and only one of the demographic variables presented in this study. This would allow for a more focused and thorough exploration of a specific trait. Lastly, the strong relationships established between perfectionism and self-efficacy with anxiety provides another area for future research. As the results of this study strongly suggest that perfectionism and self-efficacy can influence performance anxiety, examining ways in which teachers can address either of these factors and the subsequent effect on performance anxiety needs further research. One such study could involve applying an existing model from other research areas that addresses perfectionism or self-efficacy. By measuring the effect these models have on the levels of perfectionism and/or self-efficacy in music students, one can also test for any changes in the participant's levels of performance anxiety. Such research would allow for the practical application of the information presented in this paper, and would help begin to create a method which teachers can use to help children and teenagers manage music performance anxiety.

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Appendix 1



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Faculté des Arts | Faculty of Arts

Dear Music School Director,

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey
Faculty of Graduate Studies
University of Ottawa

Thesis Supervisor: Dr. Gilles Comeau
Professor
University of Ottawa
613-562-5800 ext. 2704
gcomeau@uottawa.ca

I am writing to you as a Master of Arts in Music student at the University of Ottawa that is presently enrolled in the piano pedagogy program under the supervision of Professor Gilles Comeau. I am currently working on my thesis project which is investigating music performance anxiety in children and teenagers and certain factors that may be associated with it (perfectionism, self-efficacy and gender). To explore this topic, I will be asking piano students to fill out a few questionnaires related to performance anxiety and the different factors. I am writing to ask if you would inform your students about this study, and give them the letter inviting them to participate in this research project. Here are the details.

Objective: The objective of this thesis is to determine if there is a correlation between music performance anxiety and perfectionism, self-efficacy or gender in children and teenagers.

Funding: All costs related to this project will be paid for by the University of Ottawa. There will be no cost to you or your school, or to the child's parents or teacher.

What the participants will be asked to do: This project will be carried out using a series of questionnaires and will be presented to the child or teenager by the researcher. The first questionnaire will be on the topic of music performance anxiety. The second questionnaire is on the topic of perfectionism and the third questionnaire is on the topic of self-efficacy. The three questionnaires will ask the child to rate how often they feel different symptoms associated with performance anxiety or rate how strongly they agree with certain statements (eg. I always have to look perfect). None of the questions in any of the surveys are intended to be embarrassing to the child, and there are no right or wrong answers to the questions. I am simply asking the child to express his/her feelings. Completing all questionnaires will take approximately 20 minutes.

The student's parent/guardian will be asked to complete a questionnaire as well (a general information form intended to collect data on demographic variables (age, gender, etc.) and musical background).

Who will carry out the questionnaires: The questionnaires will be carried out by me, the researcher of this thesis.

Where will the questionnaires be carried out: The questionnaires will be carried out in the location of the child's piano lessons (ie. Your music school). I will arrange with the parents and teacher a convenient date and time for the surveys to be filled out.

Voluntary participation, anonymity, and confidentiality: Your students should participate in this project only if he/she wants to. After indicating interest in this project, your students may decide not to answer every question or may stop filling out the questionnaires at any time. All information provided by the child will remain strictly anonymous and confidential. Only authorized members of this project will have access to the data provided. When the results are reported, only group averages will be presented. No information about individuals will ever be made public.

This project has been approved by the Research Ethics Board of the University of Ottawa. For any information regarding ethical issues in research, please contact the Office of Research Ethics and Integrity, University of Ottawa, Room 154, Tabaret Hall, 550 Cumberland Street, Ottawa K1N 6N5. (Telephone: 613-562-5387; Email: ethics@uottawa.ca)

My request to you: If you are willing, I ask you hand out one of our envelopes to each of your students between the ages of 8 -12 or 13-17 who have had at least on year of piano lessons and have had at least two public performance experience. As this study is being conducted in English, interested students must also be fluent in English. The envelope includes the invitation letter to parents or guardians. Interested students may contact me or Dr. Comeau.

I hope that you find this project interesting and I would like to thank you in advance for considering this request for participation.

Sincerely,

Erin Dempsey



Université d'Ottawa | University of Ottawa

École de musique | School of Music

Faculté des Arts | Faculty of Arts

Dear Piano Teacher,

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey
Faculty of Graduate Studies
University of Ottawa

Thesis Supervisor: Dr. Gilles Comeau
Professor
University of Ottawa
613-562-5800 ext. 2704
gcomeau@uottawa.ca

I am writing to you as a Master of Arts in Music student at the University of Ottawa that is presently enrolled in the piano pedagogy program under the supervision of Professor Gilles Comeau. I am currently working on my thesis project which is investigating music performance anxiety in children and teenagers and certain factors that may be associated with it (perfectionism, self-efficacy and gender). To explore this topic, I will be asking piano students to fill out a few questionnaires related to performance anxiety and the different factors. I am writing to ask if you would inform your students about this study, and give them the letter inviting them to participate in this research project. Here are the details.

Objective: The objective of this thesis is to determine if there is a correlation between music performance anxiety and perfectionism, self-efficacy or gender in children and teenagers.

Funding: All costs related to this project will be paid for by the University of Ottawa. There will be no cost to you or the child's parents.

What the participants will be asked to do: This project will be carried out using a series of questionnaires and will be presented to the child or teenager by the researcher. The first questionnaire will be on the topic of music performance anxiety. The second questionnaire is on the topic of perfectionism and the third questionnaire is on the topic of self-efficacy. The three questionnaires will ask the child to rate how often they feel different symptoms associated with performance anxiety or rate how strongly they agree with certain statements (eg. I always have to look perfect). None of the questions in any of the surveys are intended to be embarrassing to the child, and there are no right or wrong answers to the questions. I am simply asking the child to express his/her feelings. Completing all questionnaires will take approximately 20 minutes.

The student's parent/guardian will be asked to complete a questionnaire as well (a general information form intended to collect data on demographic variables (age, gender, etc.) and musical background).

Who will carry out the questionnaires: The questionnaires will be carried out by me, the researcher of this thesis.

Where will the questionnaires be carried out: The questionnaires will be carried out in the location of the child's piano lessons (ie. Your piano studio). I will arrange with the parents and teacher a convenient date and time for the surveys to be filled out.

Voluntary participation, anonymity, and confidentiality: Your student should participate in this project only if he/she wants to. After indicating interest in this project, your student may decide not to answer every question or may stop filling out the questionnaires at any time. All information provided by the child will remain strictly anonymous and confidential. Only authorized members of this project will have access to the data provided. When the results are reported, only group averages will be presented. No information about individuals will ever be made public.

This project has been approved by the Research Ethics Board of the University of Ottawa. For any information regarding ethical issues in research, please contact the Office of Research Ethics and Integrity, University of Ottawa, Room 154, Tabaret Hall, 550 Cumberland Street, Ottawa K1N 6N5. (Telephone: 613-562-5387; Email: ethics@uottawa.ca)

My request to you: If you are willing, I ask you hand out one of our envelopes to each of your students between the ages of 8 -12 or 13-17 who have had at least on year of piano lessons and have had at least two public performance experience. As this study is being conducted in English, interested students must also be fluent in English. The envelope includes the invitation letter to parents or guardians. Interested students may contact me or Dr. Comeau.

I hope that you find this project interesting and I would like to thank you in advance for considering this request for participation.

Sincerely,

Erin Dempsey



Université d'Ottawa | University of Ottawa

École de musique | School of Music

Faculté des Arts | Faculty of Arts

Dear Parent or Guardian,

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey
Faculty of Graduate Studies
University of Ottawa

Thesis Supervisor: Dr. Gilles Comeau
Professor
University of Ottawa
613-562-5800 ext. 2704
gcomeau@uottawa.ca

I am writing to you as a Master of Arts in Music student at the University of Ottawa that is presently enrolled in the piano pedagogy program under the supervision of Professor Gilles Comeau. I am currently working on my thesis project which is investigating music performance anxiety in children and teenagers and certain factors that may be associated with it (perfectionism, self-efficacy and gender). To explore this topic, I will be asking piano students to fill out a few questionnaires related to performance anxiety and the different factors. I am writing to ask if you would agree to let your children participate in this research project. Here are the details.

Objective: The objective of this thesis is to determine if there is a correlation between music performance anxiety and perfectionism, self-efficacy or gender in children and teenagers.

Funding: All costs related to this project will be paid for by the University of Ottawa. There will be no cost to you or your child's teacher.

What you and your child will be asked to do: This project will be carried out using a series of questionnaires and will be presented to your child or teenager by me, the researcher. The first questionnaire will be on the topic of music performance anxiety. The second questionnaire is on the topic of perfectionism and the third questionnaire is on the topic of self-efficacy. The three questionnaires will ask your child to rate how often they feel different symptoms associated with performance anxiety or rate how strongly they agree with certain statements (eg. I always have to look perfect). None of the questions in any of the surveys are intended to be embarrassing to your child, and there are no right or wrong answers to the questions. I am simply asking your child to express his/her feelings. Completing all questionnaires will take approximately 20 minutes.

During this time, you will be asked to fill out a small questionnaire. This is a general information form intended to collect data on demographic variables (age, gender, etc.) and musical background).

Who will carry out the questionnaires: The questionnaires will be carried out by me, the researcher of this thesis.

Where will the questionnaires be carried out: The questionnaires will be carried out in the location of your child's piano lessons (eg. at the music school). I will arrange with the parents a convenient date and time for the surveys to be filled out.

Voluntary participation, anonymity, and confidentiality: Your child should participate in this project only if he/she wants to. After indicating interest in this project, your child may decide not to answer every question or may stop filling out the questionnaires at any time. All information provided by the child will remain strictly anonymous and confidential. Only authorized members of this project will have access to the data provided. When the results are reported, only group averages will be presented. No information about individuals will ever be made public.

This project has been approved by the Research Ethics Board of the University of Ottawa. For any information regarding ethical issues in research, please contact the Office of Research Ethics and Integrity, University of Ottawa, Room 154, Tabaret Hall, 550 Cumberland Street, Ottawa K1N 6N5. (Telephone: 613-562-5387; Email: ethics@uottawa.ca)

Your consent and that of your child: If you are interested in this project, may I ask that you discuss it with your child? If both you and your child are interested, please either contact me directly by phone or by email. Participation will be on a first-come, first-served basis.

I hope that you find this project interesting and I would like to thank you in advance for considering this request for participation.

Sincerely,

Erin Dempsey



Université d'Ottawa | University of Ottawa

École de musique | School of Music

Faculté des Arts | Faculty of Arts

Consent Form for Parents or Guardians

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey

Thesis Supervisor: Gilles Comeau
613-562-5800 ext. 2704
gcomeau@uottawa.ca

I, _____, confirm that I have read and understood the information presented in the introductory letter about that project and that I have discussed it with my child to make sure he/she is interested in participating.

I agree to let my child participate in this research project

| | | |
|--|--|----------------|
| To be completed by parent or guardian | | |
| Child's name: | Male <input type="radio"/> Female <input type="radio"/> | Date of birth: |
| Parent or guardian's name: | | |
| Piano teacher's name: | | |
| Parent or guardian signature: | | Date: |
| Child's signature: | | Date: |
| Contact information for scheduling purposes: | | |
| Email address: | | Telephone: |
| To be completed by researcher | | |
| Name: | | |
| Signature: | | Date: |

Participants may contact the researcher or supervisor with any questions.

You may keep this copy



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Consent Form for Parents or Guardians

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey

Thesis Supervisor: Gilles Comeau
613-562-5800 ext. 2704
gcomeau@uottawa.ca

I, _____, confirm that I have read and understood the information presented in the introductory letter about that project and that I have discussed it with my child to make sure he/she is interested in participating.

I agree to let my child participate in this research project

| | | |
|--|--|----------------|
| To be completed by parent or guardian | | |
| Child's name: | Male <input type="radio"/> Female <input type="radio"/> | Date of birth: |
| Parent or guardian's name: | | |
| Piano teacher's name: | | |
| Parent or guardian signature: | Date: | |
| Child's signature: | Date: | |
| Contact information for scheduling purposes: | | |
| Email address: | Telephone: | |
| To be completed by researcher | | |
| Name: | | |
| Signature: | Date: | |

Participants may contact the researcher or supervisor with any questions.

Please return this copy



Université d'Ottawa | University of Ottawa

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Faculté des Arts | Faculty of Arts

Consent Form for Piano Students (Children)

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey

Thesis Supervisor: Gilles Comeau
613-562-5800 ext. 2704
gcomeau@uottawa.ca

My name is Erin Dempsey, and I am from the University of Ottawa. I would like to find out some of the different feelings you might have during piano performances. When we meet in person, I will read you a series of simple sentences like this one: *Before I perform, I get butterflies in my stomach* or *When I perform in front of an audience, my heart beats very fast*. Then I will ask you to describe how often you think you feel these things. You can answer me by saying “Not at all”, “Half the time” or “All of the time”, or somewhere in between. I will also ask you to answer two more surveys that will have sentences like: *I feel bad about myself when I make mistakes in front of other people* or *I am sure that I can learn the music for a concert*. You can answer these questions the same way you answered the first ones.

There is no right or wrong way to answer these questions. It is really up to you to decide. What I am interested in is what you think. This will stay between you and me. You can contact me or my supervisor with any questions.

It is entirely up to you to decide whether to participate in my project or not. You do not have to help me if you do not want to.

Do you agree to participate in this project? YES _____ NO _____

Child's Signature: _____

You may keep this copy



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Consent Form for Piano Students (Children)

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey

Thesis Supervisor: Gilles Comeau
613-562-5800 ext. 2704
gcomeau@uottawa.ca

My name is Erin Dempsey, and I am from the University of Ottawa. I would like to find out some of the different feelings you might have during piano performances. When we meet in person, I will read you a series of simple sentences like this one: *Before I perform, I get butterflies in my stomach* or *When I perform in front of an audience, my heart beats very fast*. Then I will ask you to describe how often you think you feel these things. You can answer me by saying “Not at all”, “Half the time” or “All of the time”, or somewhere in between. I will also ask you to answer two more surveys that will have sentences like: *I feel bad about myself when I make mistakes in front of other people* or *I am sure that I can learn the music for a concert*. You can answer these questions the same way you answered the first ones.

There is no right or wrong way to answer these questions. It is really up to you to decide. What I am interested in is what you think. This will stay between you and me. You can contact me or my supervisor with any questions.

It is entirely up to you to decide whether to participate in my project or not. You do not have to help me if you do not want to.

Do you agree to participate in this project? YES _____ NO _____

Child's Signature: _____

Please return this copy



Université d'Ottawa | University of Ottawa

École de musique | School of Music

Faculté des Arts | Faculty of Arts

Consent Form for Piano Students (Teenagers)

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey

Thesis Supervisor: Gilles Comeau
613-562-5800 ext. 2704
gcomeau@uottawa.ca

Invitation to Participate: I am invited to participate in the above-mentioned research study conducted by Erin Dempsey and Gilles Comeau.

Purpose of the Study: The purpose of this thesis is to determine if there is a correlation between music performance anxiety and perfectionism, self-efficacy or gender in children and teenagers.

Participation: My participation in this study will consist of completing a series of questionnaires on the topics of music performance anxiety, self-efficacy and perfectionism. The questionnaires will ask me rate how often I feel different symptoms associated with performance anxiety or rate how strongly I agree with certain statements (eg. I always have to look perfect). I will be asked to complete these questionnaires during one session that will take place at the location of my piano lessons. This session will take me approximately 20 minutes to complete.

Voluntary participation, anonymity, and confidentiality: I do not have to participate in this project if I do not want to. After indicating interest in this project, I may decide not to answer every question or may stop filling out the questionnaires at any time. All information that I provide will remain strictly anonymous and confidential. Only authorized members of this project will have access to the data I have provided. When the results are reported, only group averages will be presented. My individual information will never be made public.

This project has been approved by the Research Ethics Board of the University of Ottawa. For any information regarding ethical issues in research, please contact the Office of Research Ethics and Integrity, University of Ottawa, Room 154, Tabaret Hall, 550 Cumberland Street, Ottawa K1N 6N5. (Telephone: 613-562-5387; Email: ethics@uottawa.ca)

Acceptance: I, _____, agree to participate in the above research study conducted by Erin Dempsey under the supervision of Professor Gilles Comeau.

Participant's signature: _____

Date: _____

Researcher's signature: _____

Date: _____

You may keep this copy



Université d'Ottawa | University of Ottawa

École de musique | School of Music

Faculté des Arts | Faculty of Arts

Consent Form for Piano Students (Teenagers)

Title of Study: Music Performance Anxiety in Children and Teenagers: Effects of Perfectionism, Self-Efficacy and Gender

Researcher: Erin Dempsey
Faculty of Graduate Studies
University of Ottawa

Thesis Supervisor: Dr. Gilles Comeau
Professor
University of Ottawa
613-562-5800 ext. 2704
gcomeau@uottawa.ca

Invitation to Participate: I am invited to participate in the above-mentioned research study conducted by Erin Dempsey and Gilles Comeau.

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Acceptance: I, _____, agree to participate in the above research study conducted by Erin Dempsey under the supervision of Professor Gilles Comeau.

Participant's signature: _____

Date: _____

Researcher's signature: _____

Date: _____

You may keep this copy

Appendix 2

Music Performance Anxiety Inventory for Adolescents

MPAI-A

Please think about music in general and your major instrument and answer the questions by circling the number, which describes how you feel.

| | Not At all | | About half the time | | All of the time | |
|---|---------------|---|---------------------------|---|-----------------------|-----|
| 1. Before I perform, I get butterflies in my stomach. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 2. I often worry about my ability to perform. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 3. I would rather play on my own, than in front of other people. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 4. Before I perform, I tremble or shake. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 5. When I perform in front of an audience, I am afraid of making mistakes. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 6. When I perform in front of an audience, my heart beats very fast. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 7. When I perform in front of an audience, I find it hard to concentrate on my music. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 8. If I make a mistake during performance, I usually panic. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 9. When I perform in front of an audience I get sweaty hands. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 10. When I finish performing, I usually feel happy with my performance. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 11. I try to avoid playing on my own at a school concert. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 12. Just before I perform, I feel nervous. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 13. I worry that my parents or teacher might not like my performance. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 14. I would rather play in a group or ensemble, than on my own. | 0 | 1 | 2 | 3 | 4 | 5 6 |
| 15. My muscles feel tense when I perform. | 0 | 1 | 2 | 3 | 4 | 5 6 |

Appendix 3

Additional Questions for MPAI-A

1. Before I perform, my mouth feels dry. 0 1 2 3 4 5 6
2. I feel dizzy or light-headed before I perform. 0 1 2 3 4 5 6
3. My stomach is often upset before a performance. 0 1 2 3 4 5 6
4. It is easier to annoy me before a performance. 0 1 2 3 4 5 6
5. I have to go to the bathroom more often before a performance. 0 1 2 3 4 5 6
6. It is hard to feel my fingertips when I perform in front of an audience. 0 1 2 3 4 5 6
7. Before I perform, I feel like I have trouble breathing. 0 1 2 3 4 5 6
8. What is the main cause of your stress/anxiety?

9. What have you found most helpful for coping with your stress/anxiety?

Appendix 4

Multidimensional Perfectionism Scale – MPS

| | Disagree | Agree |
|--|----------|-------------|
| 1. When I am working on something, I cannot relax until it is perfect. | 1 | 2 3 4 5 6 7 |
| 2. I am not likely to criticize someone for giving up too easily. | 1 | 2 3 4 5 6 7 |
| 3. It is not important that people I am close to are successful. | 1 | 2 3 4 5 6 7 |
| 4. I seldom criticize my friends for accepting second best. | 1 | 2 3 4 5 6 7 |
| 5. I find it difficult to meet others' expectations of me. | 1 | 2 3 4 5 6 7 |
| 6. One of my goals is to be perfect in everything I do. | 1 | 2 3 4 5 6 7 |
| 7. Everything that others do must be of top-notch quality. | 1 | 2 3 4 5 6 7 |
| 8. I never aim for perfection on my work. | 1 | 2 3 4 5 6 7 |
| 9. Those around me readily accept that I can make mistakes too. | 1 | 2 3 4 5 6 7 |
| 10. It doesn't matter when someone close to me does not do their absolute best. | 1 | 2 3 4 5 6 7 |
| 11. The better I do, the better I am expected to do. | 1 | 2 3 4 5 6 7 |
| 12. I seldom feel the need to be perfect. | 1 | 2 3 4 5 6 7 |
| 13. Anything that I do that is less than excellent will be seen as poor work by those around me. | 1 | 2 3 4 5 6 7 |
| 14. I strive to be as perfect as I can be. | 1 | 2 3 4 5 6 7 |
| 15. It is very important that I am perfect in everything I attempt. | 1 | 2 3 4 5 6 7 |
| 16. I have high expectations for the people who are important to me. | 1 | 2 3 4 5 6 7 |
| 17. I strive to be the best at everything I do. | 1 | 2 3 4 5 6 7 |
| 18. The people around me expect me to succeed at everything I do. | 1 | 2 3 4 5 6 7 |
| 19. I do not have very high standards for those around me. | 1 | 2 3 4 5 6 7 |

20. I demand nothing less than perfection of myself. 1 2 3 4 5 6 7
21. Others will like me even if I don't excel at everything. 1 2 3 4 5 6 7
22. I can't be bothered with people who don't strive to better themselves. 1 2 3 4 5 6 7
23. It makes me uneasy to see error in my work. 1 2 3 4 5 6 7
24. I do not expect a lot from my friends. 1 2 3 4 5 6 7
25. Success means that I must work harder to please others. 1 2 3 4 5 6 7
26. If I ask someone to do something, I expect it to be done flawlessly. 1 2 3 4 5 6 7
27. I cannot stand to see people close to me make mistakes. 1 2 3 4 5 6 7
28. I am perfectionistic in setting my goals. 1 2 3 4 5 6 7
29. The people who matter to me should never let me down. 1 2 3 4 5 6 7
30. Others think I am okay, even when I do not succeed. 1 2 3 4 5 6 7
31. I feel that people are too demanding of me. 1 2 3 4 5 6 7
32. I must work to my full potential at all times. 1 2 3 4 5 6 7
33. Although they may not say it, other people get very upset with me when
I slip up. 1 2 3 4 5 6 7
34. I do not have to be the best at whatever I am doing. 1 2 3 4 5 6 7
35. My family expects me to be perfect. 1 2 3 4 5 6 7
36. I do not have very high goals for myself. 1 2 3 4 5 6 7
37. My parents rarely expect me to excel in all aspects of my life. 1 2 3 4 5 6 7
38. I respect people who are average. 1 2 3 4 5 6 7
39. People expect nothing less than perfection from me. 1 2 3 4 5 6 7
40. I set very high standards for myself. 1 2 3 4 5 6 7
41. People expect more from me than I am capable of giving. 1 2 3 4 5 6 7
42. I must always be successful at school or work. 1 2 3 4 5 6 7

43. It does not matter to me when a close friend does not try their hardest. 1 2 3 4 5 6 7
44. People around me think I am still competent even if I make a mistake. 1 2 3 4 5 6 7
45. I seldom expect others to excel at whatever they do. 1 2 3 4 5 6 7

Appendix 5

Self-Efficacy for Musical Learning – Children’s Version

Imagine that you are going to learn some music to play in a concert. Please indicate how much you are sure that you can do each statement below.

| | <i>Not at all sure</i> 0% | | | <i>Completely sure</i> 100% | | | |
|---|------------------------------|---|---|--------------------------------|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am sure that I can learn the music for this concert. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I am sure I can practice when I should to learn the music for this concert. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. If I cannot play the music for this concert at first, I will keep practicing until I can. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I can learn all the things I want for this concert. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I am likely to give up getting ready for this concert before it happens. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. When I have something boring or tricky to do with learning for the concert, I can stick to it until I finish it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. When I decide to do this concert, I go right to work on the music. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. When first playing the music for this performance, I soon give up if I can’t play it right away. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. The idea that I might make mistakes in this concert could just make me work harder to learn the music. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I am likely to give up on working towards this concert easily. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. If I get stuck when learning the music for this concert, I can work it out. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Self-Efficacy for Musical Performing - Children's Version

Now, please mark how much you agree or disagree with each of the following statements, specifically thinking about how you perform during this activity.

| | <i>Not at all sure</i> 0% | | | | <i>Completely sure</i> 100% | | |
|--|------------------------------|---|---|---|--------------------------------|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. I am confident that I can give a successful performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I have set important goals for this performance, and I can make those goals happen. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I am likely to avoid difficult or challenging things in the performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. If I think the performance worries me too much, I cannot even attempt to perform. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. If something unexpected happens during the performance, I can handle it well. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I can avoid this performance if the music looks or sounds too difficult for me. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I feel sure about my playing (or singing) for this performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I am likely to give up easily during the performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I am able to deal with problems that might come up during the performance. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix 6

**Survey of Performance/Musical Background
Parent or Guardian Questionnaire**

General Information

| | |
|---------------------------|--|
| Parent or Guardian's Name | |
| Child's Name | |
| Piano Teacher's Name | |
| Date | |

This form is to be filled out by the child's parent(s) or guardian(s)

NOTE

Rest assured that this information will remain strictly confidential. Only the members of the research team will have access to this information. Only group data (e.g. group averages) will be made public when the results of this study are presented in scientific conferences or similar contexts.

PLEASE CIRCLE OR ENTER YOUR RESPONSES TO THE QUESTIONS PRESENTED BELOW

SECTION 1: DEMOGRAPHIC INFORMATION

| QUESTIONS | YOUR RESPONSE |
|---|--|
| Gender of your child | <input type="radio"/> Female <input type="radio"/> Male |
| Age of your child | |
| Birth date of your child (month and year) | |
| Ethnic background of your child's mother (or adoptive mother if child is adopted) | <ul style="list-style-type: none"> • Caucasian • Asian (e.g. Chinese, Japanese, Korean, South-east Asian) • East Indian, Pakistani • African-American /Black • Hispanic • Middle-Eastern • Mixed White and Asian • Other |
| Ethnic background of your child's father (or adoptive father if child is adopted) | <ul style="list-style-type: none"> • Caucasian • Asian (e.g. Chinese, Japanese, Korean, South-east Asian) • East Indian, Pakistani • African-American /Black • Hispanic • Middle-Eastern • Mixed White and Asian • Other |
| Ethnic background of your child's piano teacher | <ul style="list-style-type: none"> • Caucasian • Asian (e.g. Chinese, Japanese, Korean, South-east Asian) • East Indian, Pakistani • African-American /Black • Hispanic • Middle-Eastern • Mixed White and Asian • Other |
| How would you rate your child's overall academic abilities in school? | <ul style="list-style-type: none"> • Higher than most students • Higher than average • About average • Lower than average • Lower than most students |

SECTION 2: CHILD'S MUSICAL HISTORY

| | |
|---|---|
| How old was your child when piano lessons began? (years and months) | |
| Name of the piano book(s) that your child used when piano lessons began? | |
| Name of the piano book(s) your child is currently using? | |
| What is the present level of your child? | Grade level _____ Suzuki book _____ Other _____ |
| Has your child participated in any public performances? | <ul style="list-style-type: none"> • Yes • No |
| How many performances has your child participated in? | <ul style="list-style-type: none"> • 0 • 1 • 2 • 3 • 4 • more than 4 |
| Has your child participated in a music school's/piano teacher's recital before? | <ul style="list-style-type: none"> • Yes • No |
| If yes, how many times? | <ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • more than 4 |
| Has your child participated in the Kiwanas music festival before? | <ul style="list-style-type: none"> • Yes • No |
| If yes, how many times? | <ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • more than 4 |
| Has your child participated in other types of performances? | <ul style="list-style-type: none"> • Yes • No |
| If yes, what other types of performances has your child participated in? | <ul style="list-style-type: none"> • School concerts/recitals • Church concerts • Other music festivals • Other _____ |
| Has your child taken any piano exam so far? | <ul style="list-style-type: none"> • Yes • No |
| If so, which type of exam has your child taken? | <ul style="list-style-type: none"> • Royal Conservatory of Music Piano Exam • Conservatory of Canada Piano exam • Other _____ |
| Can you provide the grade level of your child's last piano exam? | |

| | |
|---|---|
| Can you provide the date of your child's last piano exam? | |
| Can you provide the results of your child's last piano exam? (This can be given as a grade, percentage, or rating such as bronze, pass, etc.) | |
| Who attends your child's recitals/concerts? | <ul style="list-style-type: none"> • Parents • Siblings • Grandparents • Friends • Other _____ |
| In your opinion, do you think your child will continue to play piano as an adult? | <ul style="list-style-type: none"> • Absolutely • Most likely • Probably • Maybe • Not likely |
| How would you rate your child's piano playing abilities? | <ul style="list-style-type: none"> • Higher than most students • Higher than average • About average • Lower than average • Lower than most students |

SECTION 3: CHILD'S PIANO PRACTICES

| | |
|--|---|
| In your home, does your child have access to a quiet and conducive space for practicing? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| This year, on average, how many days a week does your child practice? | |
| This year, on average, how long is each practice session? | |

SECTION 4: OTHER MUSICAL EXPERIENCES

| | |
|---|---|
| Does your child attend summer music camps? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| Does your child attend master classes or workshops? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| Does your child participate in any kind of collective music-making, such as duets, accompanying other performers, small ensemble, etc.? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| Does your child participate in any kind of informal performances such as “family and friends,” playing in retirement homes, etc.? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| Do you (or your spouse) attend professional classical concerts with your child? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always |
| Do you (or your spouse) attend other concerts with your child? | <ul style="list-style-type: none"> • Never • Seldom • Sometimes • Often • Always • What kind? _____ |

THANK YOU FOR TAKING THE TIME TO FILL OUT THIS FORM