

LIBERTY UNIVERSITY
SCHOOL OF MUSIC

**LEARNING TO PLAY A MUSICAL INSTRUMENT AFFECTS STUDENT
BEHAVIORAL HEALTH**

Submitted in partial fulfillment
of the requirements for the completion of the course,

MUSC 690-A01 LUO

Thesis

by

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April 11, 2020

Abstract

This thesis proposal, entitled “Learning to Play a Musical Instrument Affects Student Behavioral Health”, consists of a research paper detailing how learning to play a musical instrument has made a significant impact on the behavioral health of students, and the need for this study in today’s society. This study will provide readers with solid research and evidence for the results obtained from this musical education study in the hopes it can show that music therapy needs strengthening in these areas. Through research, clinical studies, assessments, test results, and surveys, this project will show if there are physiological benefits and psychological benefits from music education. Physiological benefits include: the control of hands, fingers, and breath control with wind instruments, as well as the mastery of the written language of musical scores and the ability to count out time values. Psychological benefits include attitude, self-esteem, confidence, and mood. This research will attempt to show how learning to play a musical instrument impacts the behavioral health and attitude of students (presumably the confidence and self-esteem one gains through mastering skills on an instrument). Since music can have an impact on a person’s mood and perspectives, this study hopes to show that learning to engage in music can even help with managing numerous behavioral health conditions, as other studies have already shown that not only does performing on a musical instrument utilize more areas of the brain than other activities, but also that students who play musical instruments do better with math and reading skills.

Key Words: Musical instrument, music education, behavioral health, research, physiological, psychological, attitude, health.

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CHAPTER ONE: INTRODUCTION

This study will provide readers with solid research and evidence for the positive results obtained from musical education. As an educator, I am sometimes asked the question, ‘Why do we need to study music?’ and it is important that the answer be honest, truthful, sound, and based in proven research. The research provided will show an ethical, truthful, and sound basis that will support this topic.

There has been much research conducted on this topic, but there is much yet to be done. New advances in physiology and psychology are found daily. Turabian writes in *A Manual for Writers of Research Papers, Theses, and Dissertations* that we should not “reject a question because you think someone must already have asked it. Until you know, pursue its answer as if you asked first. Even if someone has answered it, you might come up with a better answer or at least one with a new slant.”¹ It is important to continue to research, develop, and teach the new discoveries found on this topic to prove its relevance.

The intended outcomes of this project are to increase awareness of the impact music education has on an individual and a society’s overall well-being. The findings of this study will provide evidence for the need of institutionalized instruction in music. This research can change an approach one takes to evaluating the need for a music education program. The findings presented in this project can help suggest ideas for future study. This study will show the research conducted on students with behavioral problems and how they have been affected by learning to play a musical instrument. LeCompte and Schensul write that “ethical considerations, then, come into play during the design phase of the research process as the researcher seeks

¹ Kate L. Turabian, *A Manual for Writers of Research Papers, Theses, and Dissertations*, 8th ed., (Chicago: The University of Chicago Press, 2013) 18.

relevant approvals and consent from individuals and institutions.”² This research will help to support the roles of music therapy and individual instruction in everyday life, with data that can help formulate the impact of future studies. LeCompte writes that:

“[s]ocial scientists apply ethnography in a number of different ways that include presenting data to politicians and policy makers, working collaboratively with decision makers, contributing to the improvement of community interventions and measurements, and engagement in various advocacy efforts.”³

By conducting research and utilizing the findings to present our ideas to our leaders, we can use our studies to contribute to community decisions that further help to support the roles of music therapy and instruction.

The behavioral and psychological effects attributed to this study will be shown through a mixed methods research study on this topic. For anyone who has an interest in music education, it is imperative to understand these benefits in an ethical manner. The book of Samuel says “And whenever the harmful spirit from God was upon Saul, David took the lyre and played it with his hand. So, Saul was refreshed and was well, and the harmful spirit departed from him.”⁴

Statement of the Problem

In a study founded by the European Community’s Seventh Framework Program, K.A. Fanti writes, “Conduct problems (CP) and callous-unemotional (CU) traits can have a long-lasting negative impact into adulthood. Importantly, among youth with CP, those high on CU traits engage in a more severe, aggressive, and persistent pattern of antisocial behavior.”⁵

² Margaret D. LeCompte and Jean J. Schensul, *Designing & Conducting Ethnographic Research: An Introduction*, (Lanham: AltaMira Press, 2010) 312.

³ *Ibid.*, 282.

⁴ 1 Samuel 16:23 (ESV).

⁵ K.A. Fanti, *Journal of Abnormal Child Psychology* (2013) 41: 811. <https://doi.org/10.1007/s10802-013-9726-z>

Financial cuts in school budgets, different national and state requirements, and public opinion on education programs has shifted from developing the student to ensuring the students pass tests. Armstrong states in a study from 2014 that “[s]ocial problems have been found in approximately 14-17% of young children.”⁶

Need for the Study

There is a lack of awareness among the general public of the behavioral benefits and the development of values in students who learn to play a musical instrument. According to Michael L. Mark, “When music educators conceptualize their profession in its societal context, they become aware that teachers of music have always met the needs of society.”⁷ It is the purpose of education to prepare our students to become ethical, educated, and moral adults within our society. Education is the tool we use to strengthen the individual and society. We should seek to eliminate the problems that interfere with proper education.

Research Questions

The use of research questions helps to “narrow the purpose statement to predictions about what will be learned or questions to be answered in the study.”⁸ What differences, if any, exist between students who learn to play a musical instrument and those who do not? In what ways, if any, has learning to play an instrument impacted the behavioral health of the students? How do teachers, parents, and policy makers feel about this process?

⁶ Kathleen Hague Armstrong and Julia A. Ogg, *Evidence-Based Interventions for Children with Challenging Behavior*, (New York: Springer, 2014) 15.

⁷ Michael L. Mark and Charles I. Gary, *A History of American Music Education*, 3rd ed., (Lanham: Rowman & Littlefield Education, 2007) 458.

⁸ John W. Creswell and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed., (Los Angeles: Sage Publications Inc., 2018) 68.

Glossary of Terms

Behavioral health: an interdisciplinary subset of behavioral medicine that promotes a philosophy emphasizing individual responsibility in the maintenance of one's own health and in the prevention of illness and dysfunction by means of self-initiated activities (jogging, exercising, healthy eating, not smoking, etc.).

Trait: an enduring personality characteristic that describes or determines an individual's behavior across a range of situations.

Conduct Disorder: a persistent pattern of behavior that involves violating the basic rights of others and ignoring age-appropriate social standards.

Education: the process of teaching or acquiring knowledge, skills, and values.

Empathy: understanding a person from his or her frame of reference rather than one's own, or vicariously experiencing that person's feelings, perceptions, and thoughts. Empathy does not of itself entail motivation to be of assistance, although it may turn into sympathy or personal distress, which may result in action.

Ethics: the branch of philosophy that investigates both the content of moral judgments (i.e., what is right and what is wrong) and their nature (i.e., whether such judgments should be considered objective or subjective).

Physiology: the science of the functions of organisms, including the chemical and physical processes involved and the activities of the cells, tissues, and organs, as opposed to static anatomical or structural factors.

Psychology: the study of the mind and behavior.

Values Clarification: any process intended to promote an individual's awareness and understanding of his or her moral principles and ethical priorities and their relationships to behavior in daily life.

Limitations of the Study

There are a few limitations of the project. The quality of teaching must be considered as it can affect the studies and data collected. The quality of the program in which data is collected can influence the findings. Musicians and teachers may bring their own specific experiences and biases to the research process, which may not yield accurate results. The continuation of practice by the student can affect the life-long benefits attributed to learning to play an instrument. Research must be cross-examined, keeping these limitations in mind.

Assumptions

This project is significant because it concerns many ideas that are of critical importance to our education system. Learning to play a musical instrument yields many benefits in the areas of behavioral health. One can understand through the study of behavioral health contributions that musical education provides the importance of learning to play an instrument. This is an important field to study, as it is the job of all researchers and educators to better our students and thus society itself.

CHAPTER 2: LITERATURE REVIEW

Related Literature

An analysis of literature can begin with *African American Jazz and Rap: Social and Philosophical Examinations of Black Expressive Behavior*, in which Conyers writes "music is both psychologically and symbolically, rather than mathematically and structurally, conceived. It is symbolic because it is a potent, vital source of life, and psychological, because it

is intricately bound up with the psyche.”⁹ This suggests that music education can develop behavioral strengths in students. In an analysis of *Health Behavior and Health Education: Theory, Research, and Practice*, it can be shown how music instruction can build upon behavior. Glanz writes “Direct determinants of individuals’ behavioral intention are their attitude toward performing the behavior and their subjective norm associated with the behavior.”¹⁰ This is further shown to be beneficial, as Lohmeyer wrote: “By letting the benefits and pleasures of creative music participation be the reward, students are affirmed as artists. Defiant behavior is redirected through a desire to show off artistic individuality.”¹¹

It has been noted that praise and reinforcing skills when used will result in preferable behaviors occurring more frequently. This also helps to build self-esteem. Radocy writes in *Psychological Foundations of Musical Behavior* that “Music provides opportunities for achievement in noncompetitive situations. The self-esteem that results from musical accomplishment contributes greatly to an individual’s state of well-being.”¹²

In analysis of literature regarding learning and behavior, it is important to note the effects of problem-solving behaviors and critical thinking. Flour writes in *Music in Elementary Education* that “[t]he most obvious indication that learning has occurred is that learners have a new approach to problem-solving behavior, due to the application of new knowledge.”¹³

⁹ James L. Conyers, *African American Jazz and Rap: Social and Philosophical Examinations of Black Expressive Behavior*, (Jefferson: McFarland & Company, Inc., 2001) 36.

¹⁰ Karen Glanz and Barbara K. Rimer, *Health Behavior and Health Education: Theory, Research, and Practice*. 4th ed, “San Francisco: Jossey-Bass, 2008” 70.

¹¹ Aaron Z. Lohmeyer. “Managing and Correcting Defiant Behavior Through Music.” *General Music Today*, Vol. 31(1) (2017) 34-39. <https://journals-sagepub-com.ezproxy.liberty.edu/doi/pdf/10.1177/1048371317699936>, 38

¹² Rudolph E. Radocy and J. David Boyle, *Psychological Foundations of Musical Behavior*, 5th ed., (Springfield: Charles C. Thomas, 2012) 21.

¹³ John Flour and Valerie Trollinger, *Music in Elementary Education*, (New York: Routledge, 2016) 9.

The area of critical thinking related to behavior is explored by Nilson in *Teaching at its Best: A Research-Based Resource for College Instructors*, with “[t]his brings us to another common ground among the different perspectives: they all posit that critical thinking extends beyond the cognitive domain and encompasses dispositions, affective attitudes, character traits, and mental health issues.”¹⁴

It is important to note how learning to play an instrument affects the social behavior of a student. In an analysis of *Praxial Music Education: Reflections and Dialogues*, values are presented as a benefit of music education. Elliott writes that “musical works involve many layers of meanings; that musical understanding involves many closely related kinds of thinking and knowing; and that the significance of music in human life can be explained in terms of many important life values.”¹⁵ In music education for children, an analysis of *Psychological Foundations of Musical Behavior* shows how values are instilled in students by learning to perform on an instrument. Radocy writes that “[m]any songs for young children, including both traditional folk songs and certain songs specifically devised for preschool and early elementary children, serve to reinforce the values and ideals that parents, schools, and society wish to instill in young children.”¹⁶

Walker noted that music education can help to socialize people in a positive way. Walker writes that “the rise of mass education provision focused on music’s powers to civilize and

¹⁴ Linda B. Nilson, *Teaching at its Best: A Research-Based Resource for College Instructors*, 4th ed., (San Francisco: Jossey-Bass, 2016) 35.

¹⁵ David J. Elliott, *Praxial Music Education: Reflections and Dialogues*, (New York: Oxford University Press, 2005) 7.

¹⁶ Rudolph E. Radocy and J. David Boyle, *Psychological Foundations of Musical Behavior*, 5th ed., (Springfield: Charles C. Thomas, 2012) 14.

socialize an unruly populace as the industrial revolution grew in momentum and factory production became linked to national prosperity. Workers needed socializing in order to develop a sense of communal purpose and identity in their work.”¹⁷

It is also noted in *Steppingstones to Curriculum* how music and socialization helps students in a positive way. Brummelen writes that:

“the arts often affect our personal lives more directly than scientific formulas or economic theories. They enrich life through joy, delight, playfulness, and creativity. They can change and enhance the way we see and understand ourselves, others, our society, and the purpose and meaning of life.”¹⁸

The literature that exists also shows how learning to perform music benefits a student’s inclusion and expression with others in culturally relevant ways. Aldridge writes that:

“the benefit of performing music is that it is also both integrative and expressive, bringing modes of consciousness together through coherence and timing. We become entrained to others by attachment and through emotional expression. Performing music, like performing ourselves, is not only integrative for personal coherence, but also joins us to others. We are able to express ourselves with a style that is our own but is also informed by and relevant to our culture.”¹⁹

Related Studies

There are many relevant studies that this project will use for analysis. One study by Roland Hass explores the areas of therapeutic effects that include speech and communication, motor and movement, attention, memory and learning, and emotion in *Music that Works*. Tomaino discovered that:

¹⁷ Robert Walker, *Music Education: Cultural Values, Social Change and Innovation*, (Springfield: Charles C Thomas, 2007) 84.

¹⁸ Harro Van Brummelen, *Steppingstones to Curriculum: A Biblical Path*, 2nd ed., (Colorado Springs: Purposeful Design Publications, 2002) 213.

¹⁹ David Aldridge and Joerg Fachner, *Music Therapy and Addictions*, (Philadelphia: Jessica Kingsley Publishers, 2010) 16-17.

“the processing of rhythmic cues involves the prefrontal motor cortex, the cerebellum and other areas resulting in the stimulation of various neural networks. With the process of music, a non-invasive medium, involving such a variety of neural networks, it has the power to engage patients with disability who have difficulties in executive function, bypass their functional and psychological impairments, and effect therapeutic outcomes. Areas of therapeutic effects include speech and communication, motor and movement, attention, memory and learning, and emotion, and interpersonal relationships.”²⁰

Recent studies have shown that music training helps learning and memory, and that this helps develop neural plasticity. Klemm writes that:

“[m]usicians are commonly studied models for neural plasticity, which refers to the ability of learning experiences to change the brain chemically and physically. Musicians have more brain grey matter volume in areas that are important for playing an instrument and in the auditory cortex, which processes all kinds of sound. Of course, the effects of music training are most robust for processing of music. But benefit transfers to speech, language, emotion, and general auditory processing.”²¹

Another study shows that music training helps develop areas of the brain that help with retaining information. It is theorized that this is because by learning and playing music, students better learn to apply what they learn. Laura Sanders wrote in *Your Brain on Music: The Cognitive Benefits of Music Education on the Brain* that music helps students retain and apply what they learn because it is “focused on the needs and specific interests of the student with an emphasis on learning by doing.”²²

A study by Lynne Kenney also shows that music training helps to develop auditory processing, speech, language, and emotion. Kenney writes that “[t]he relationship between gross

²⁰ Haas, Roland and Vera Brandes, *Music that Works: Contributions of Biology, Neurophysiology, psychology, Sociology, Medicine and Musicology*, (Vienna: Springer, 2009) 212.

²¹ W. R. Klemm, *Music Training Helps Learning and Memory*, (New York, NY: Knopf Doubleday Publishing Group, 2002) 2.

²² Laura Sanders, *Your Brain on Music: The Cognitive Benefits of Music Education on the Brain*, (Arvada: Higher Purpose Publishing, 2017) 2.

motor skills, executive function, and academic achievement in children inspires clinicians to creatively incorporate art, music, movement, and play into their daily practice.”²³

Yet another study shows how positive behavior can be gained from music instruction, as “Current research supports the budding relationship between movement and cognition in fostering executive function skills, self-regulation, and prosocial behavior.”²⁴

Summary and Relevance to the Study

There has been much written about music instruction and some benefits to behavioral health of students. There have also been many studies done in this area. Much of the literature and studies are only focused on one aspect of mental health, behavior, or music. This project will collect data for an all-encompassing hypothesis on the positive benefits attributed to learning to play a musical instrument, and hopefully give a deeper understanding in this area. Through research, clinical studies, assessments, test results, and surveys, this project will show the physiological and psychological benefits from music education.

CHAPTER 3: METHODOLOGY

Descriptions of Research Tools

I will survey adult musicians in Facebook groups and online surveys on self-observed behavioral changes resulting from their experience in learning to play a musical instrument. I will survey parents and teachers of music students on observed behavioral changes and social activities resulting from the students’ studies in music. This survey will be available on Google Forms, and the link will be provided on the recruitment post (Appendix B). The screening survey and questionnaire will be added as Appendix C and D.

²³ Kenney, Lynne and Rebecca Comizio, *70 Play Activities for Better Thinking, Self-Regulation, Learning & Behavior*, (Eau Claire: PESI Publishing & Media, 2016) 2.

²⁴ *Ibid.*, 2.

Fieldwork Procedures

This study will utilize a convergent mixed methods design, in which I will combine quantitative and qualitative data, analyze them separately and compare results to see if the findings confirm each other. I will analyze the qualitative database by coding the data and placing the codes into themes. I will analyze the quantitative data as statistical results and then integrate the two databases. Special consideration will be used in addressing participant variables (variations in age and social background) in a quasi-experimental design comparing musicians and non-musicians from different social and educational backgrounds.

The system of assessment for this project will be through comparing the data available from research, clinical studies, assessments, test results, and surveys. The behavioral, physical, and psychological effects attributed to this study will be shown through a mixed methods research study on this topic. We read in *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* that:

“Creswell and Plano Clark identified several classification systems drawn from the fields of evaluation, nursing, public health, education policy and research, and social and behavioral research. In these classifications, authors used diverse terms for their types of designs, and a substantial amount of overlap of types existed in the typologies.”²⁵

There is no shortage of quantitative data on this topic. There is also no shortage of qualitative data, but there is confusion and questionable research in both areas. To take the best of both further strengthens the validity of the topic.

Participants in the Study

²⁵ John W. Creswell and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed., (Los Angeles: Sage Publications Inc., 2018) 68.

Participants will answer questionnaires to be used for evaluation. Objectives will be defined, and the questionnaires will include questions that clearly communicate what I want to know. I will communicate the value of the questionnaire with the purpose, the plan for the data, and how the results will help the participants to help encourage participation. By posting a recruitment post (Appendix B) on various social group webpages, people will be openly invited to participate. Creswell writes in *Research Design* that “[b]oth participatory and social justice frameworks have the effect of involving participants collaboratively in the research, bringing about change to address inequities, and helping underrepresented groups and populations.”²⁵

How the Data will be Collected

Data will be compiled from publications, journals, surveys, past research record and document review from existing records, interviews, focus groups, and observation. This will include an analysis of scientific studies, consisting of previous and ongoing research. I will collect data from other studies done on musical education and behavioral health programs in other countries for comparison. This will also include data compiled from studies in schools that do not have music programs in other countries.

Hypothesis

This research will show how learning to play a musical instrument impacts the behavioral health and attitude of students in a positive way. Since music can have an impact on a person’s mood and perspectives, this study will show how learning to engage in music can even help with managing numerous behavioral health conditions and that music therapy needs strengthening in these areas. This project will conclude with the analysis of research and data to show the behavioral contributions obtained by students who learn to play a musical instrument. It is these contributions that prove the necessity of such programs in our education system. Musicianship

will hopefully be shown to be a fundamental practice that impacts all students on an individual level, and thus all society. This research aims to continue further development into clinical studies that will provide ethical and moral findings that demonstrate the importance of music education.

CHAPTER 4: RESEARCH FINDINGS

Survey Analysis

A total of 67 people who are members of various social media musician and teacher groups took part in the survey offered by open invitation on these forums from February 16, 2020 to March 16, 2020. Everyone fit the inclusion criteria for the study and were included in the analysis. Everyone surveyed has taken an instructional music class and is 18 years old or older. 40.3% of those surveyed are parents and/or teachers of children who have taken an instructional music class.

Learning and Enjoyment

95.5% reported that they sing and/or play a musical instrument. 85.1% surveyed strongly agreed that they enjoyed learning to sing and/or play a musical instrument, with 14.9% choosing to agree. When asked if a child or student enjoyed learning to play a musical instrument, 25.4% strongly agreed, 14.9% agreed, and for 52.2% this question was not applicable.

Tables 1 and 2 shows the percentages of areas that were helpful for the surveyed with learning to play an instrument. The highest areas reported were personal enjoyment and satisfaction in making music (92.5%), using my instrument to make music together with others in ensembles (85.1%), and providing enjoyment to others with my music (82.1%).

Table 1 – Helpful Areas in Behavioral Health Attributed to Playing an Instrument

In which areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

67 responses

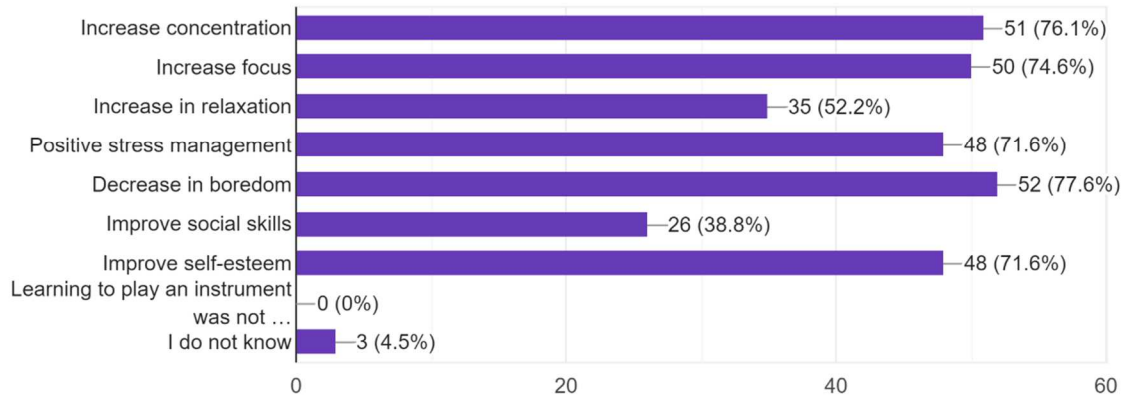


Table 2 – Additional Helpful Areas in Behavioral Health Attributed to Playing an Instrument

In which additional areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

67 responses

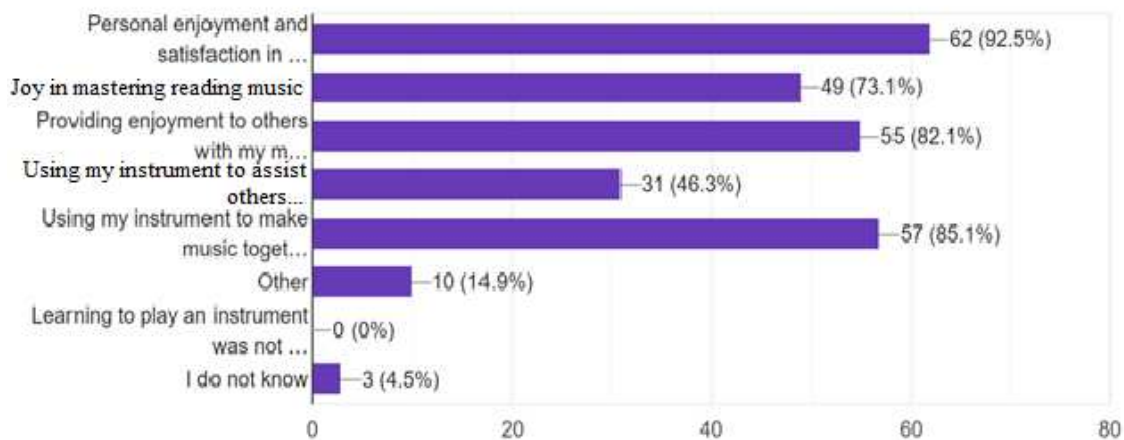
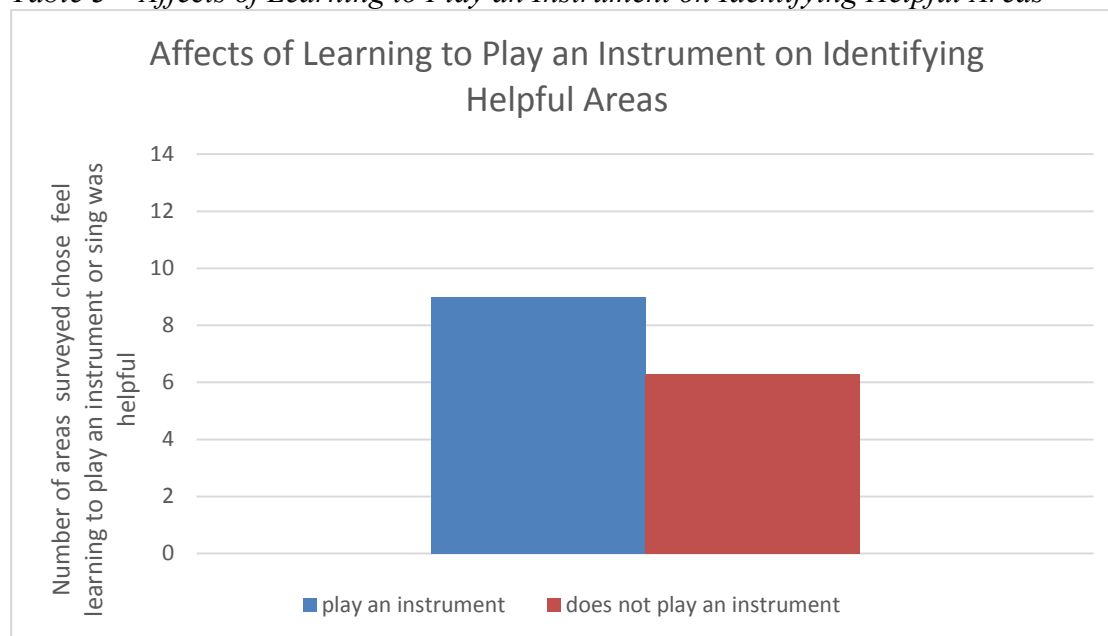


Table 3 compares the number of responses chosen by participants in areas that were helped by learning to play a musical instrument. Of the 64 reporting that they play an instrument, there was an average of 9 responses. Of the 3 who do not play an instrument, there is an average of 6 1/3 responses.

Table 3 – Affects of Learning to Play an Instrument on Identifying Helpful Areas



Learning and Coping

86.6% reported that music helped to cope with negative feelings. Of all surveyed, 85.1% reported that playing an instrument or singing makes them or their child/student feel better than just listening to music.

As seen in table 4, 89.6% surveyed reported that they or their child/student has used music to cope with negative feelings. On table 5, 86.6% reporting that music did help them cope with negative feelings. 85.1% reported that playing music helps more than listening to music as represented on table 6. As seen in table 7, 87.9% of those that reporting that music did help them cope with negative feelings reported that playing an instrument makes themselves or their children/students feel better than just listening to music.

Table 4 – Using Music to Cope with Negative Feelings

Have you or your child/student ever used music to cope with negative feelings?

67 responses

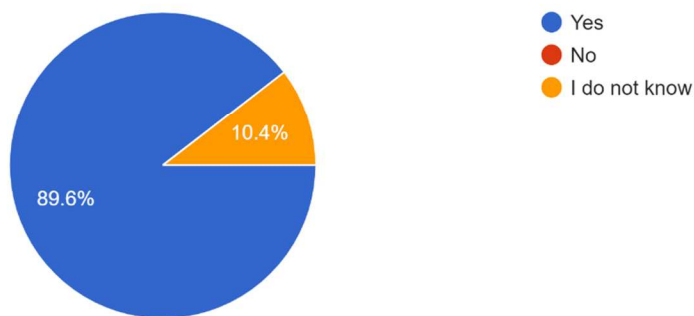


Table 5 - Evidence of Coping with Music

Did music help to cope with negative feelings?

67 responses

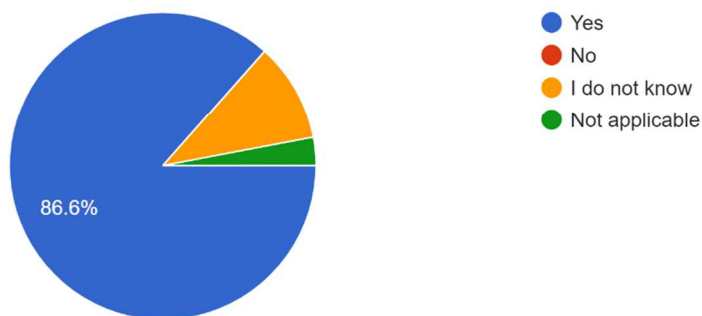


Table 6 – Behavioral Health Affects of Playing an Instrument Compared to Listening

Does playing an instrument or singing make you or your child/student feel better than just listening to music?

67 responses

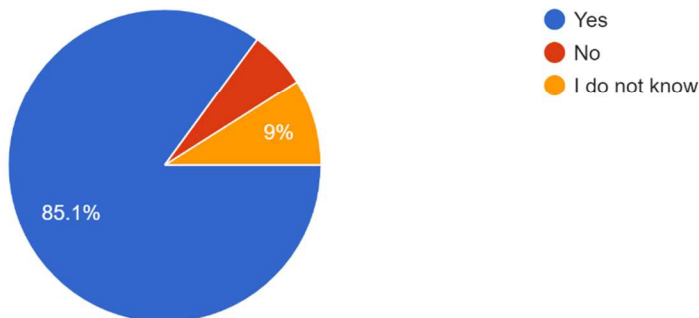


Table 7 – Effectiveness of Playing an Instrument to Cope with Negative Feelings

# of people who used music to cope with negative feelings (out of 67 surveyed)	# of people who reported that music helped to cope with negative feelings (out of 60)	# of people who reported that playing an instrument makes them feel better than listening to music (out of 58)
60	58	57
89.6	96.7	98.3

Time Correlation

67.2% of those surveyed spend 1-2 hours a day playing an instrument, with 20.9% spending three or more hours and 11.9% spending an hour or less a day as seen on table 8.

Table 8 – Survey of Daily Time Invested into Playing an Instrument

How many hours a day would you say you or your child/student spends playing a musical instrument?

67 responses

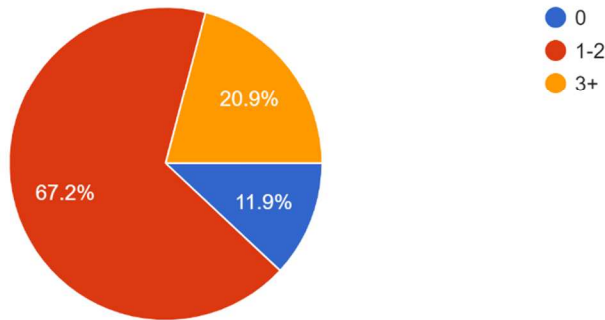
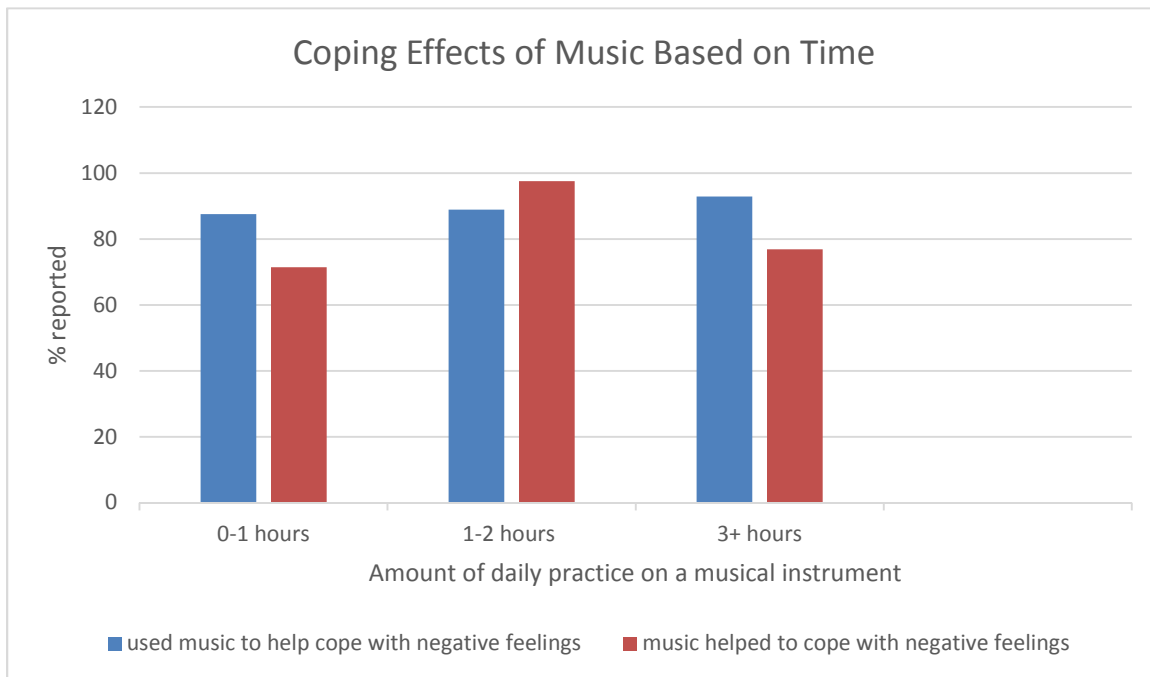


Table 9 shows the correlations between the number of hours spent playing a musical instrument daily and how it relates to using music to help cope with negative feelings and if it helped to cope with negative feelings for those who used music to do so.

Table 9 – Coping Effects of Music Based on Time



CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Summary of Study

This project sought to provide evidence of physiological benefits and psychological benefits from music education. Music can have an impact on a person's mood and this study sought to show that learning to engage in music can even help with managing numerous behavioral health conditions. While the results show that most people surveyed agree that there are behavioral health benefits from music education, there are some limitations that will be addressed in this chapter. Future studies and recommendations will also be addressed.

Summary of Purpose

Student behavior problems can have a long-lasting negative impact into adulthood. Many students who do not have a way to develop themselves can develop a persistent pattern of antisocial behavior. The purpose of this study is to make the general public aware of the behavioral benefits and the development of values in students who learn to play a musical instrument. It is the purpose of education to prepare our students to become moral adults within our society.

Summary of Procedure

This study utilized a convergent mixed methods design, combining quantitative and qualitative data, analyzing the data groups separately and comparing results to see if the findings confirm each other. The system of assessment for this project was done by comparing the data available from the survey (Appendix D). The behavioral and psychological effects attributed to this study have been shown to support my hypothesis.

Summary of Findings and Prior Research

The prior research addressed in chapter two of this study helped me to formulate the questions for the study. This study provides evidence that most people who learn to play a

musical instrument find the action to be helpful and enjoyable. Musicians and students notice more benefits in their own behavioral and social health than those who did not learn to play an instrument or ceased to continue their music education.

The findings show that people use music to cope with negative feelings and this practice usually works. Many people surveyed also answered that playing an instrument helped to cope with negative feelings better than listening to music. The findings also show that playing an instrument for 1-2 hours had the most success of using instrumental practice to help cope with negative feelings.

Limitations

The quality of the program in which data is collected may have influenced the findings. Musicians may bring their own specific experiences and biases while taking the survey, which may not have yielded the most accurate results. Many of the online groups I recruited from were musician and teaching groups. Recruitment in groups that do not have music as a focus may have yielded some other results. Another limitation was found during the survey in the additional comments section. A few people mentioned that there should be another option for question #4 for those who practice an instrument for less than an hour daily (30 minutes).

Recommendations for Future Study

One recommendation is to use more precise questions and responses for the survey. Future surveys may be geared towards a specific behavioral health trait or based on a specific instrument. Control groups can also be created to find if any differences between age, musical ability or education, and culture exist. Similar studies can be performed to gauge the success of future music education programs and their effects on behavioral health.

Based on this research, continued further development into clinical studies in greater detail is recommended. Similar studies can help provide ethical and moral findings that demonstrate the importance of music education in other areas.

Thesis Summary

Musicianship is a fundamental practice that impacts all students on an individual level. The results of this study should educate and inform the general public of the benefits students who learn to play a musical instrument can receive with 1-2 hours of daily practice. The contributions that are obtained with musical instrumental mastery prove the necessity of such programs in our education system.

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APPENDIX A TABLES

Table 1 – Helpful Areas in Behavioral Health Attributed to Playing an Instrument

In which areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

67 responses

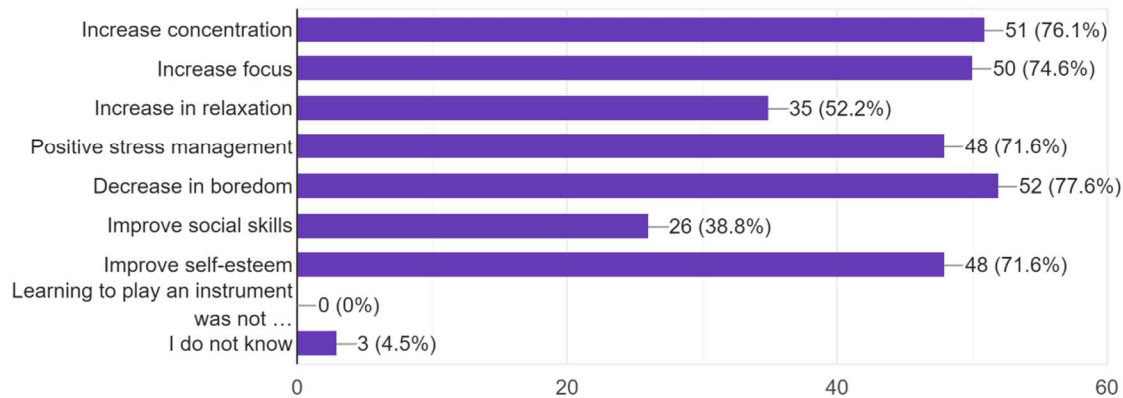


Table 2 – Additional Helpful Areas in Behavioral Health Attributed to Playing an Instrument

In which additional areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

67 responses

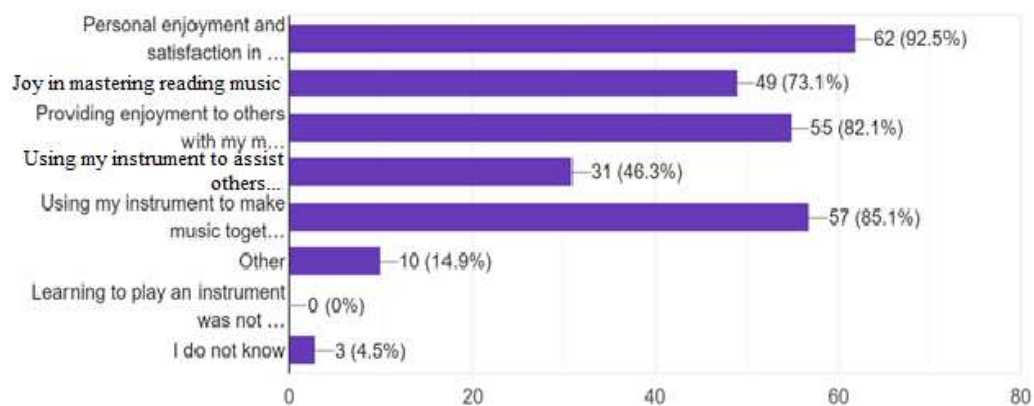


Table 3 – Effects of Learning to Play an Instrument on Identifying Helpful Areas

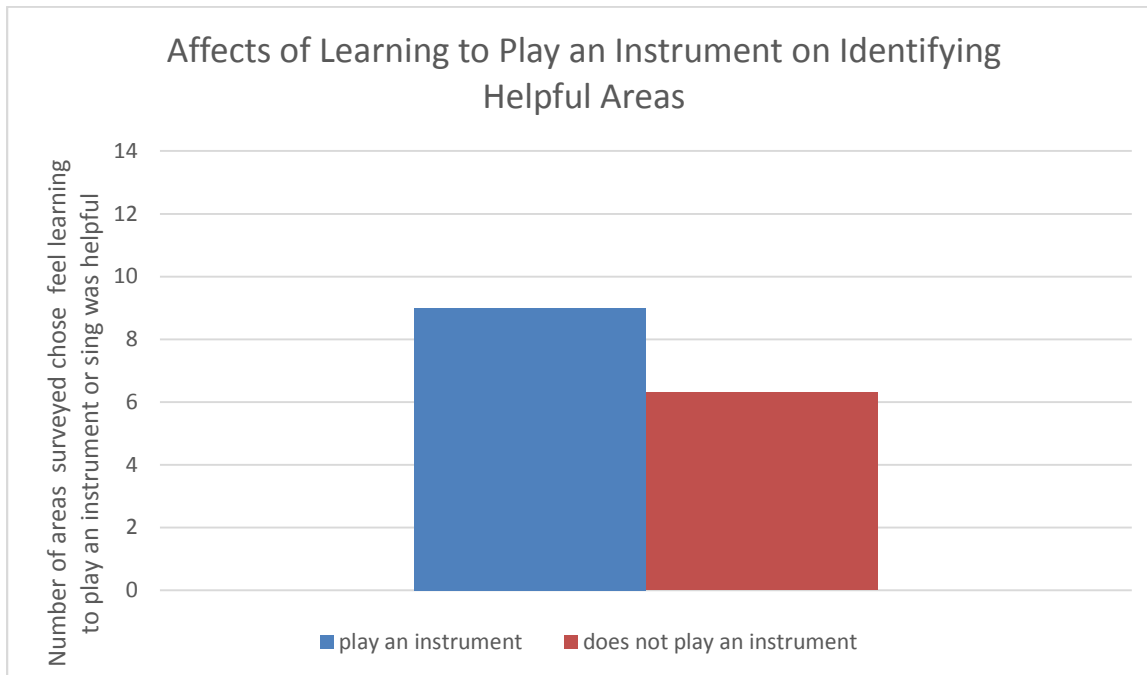


Table 4 – Using Music to Cope with Negative Feelings

Have you or your child/student ever used music to cope with negative feelings?

67 responses

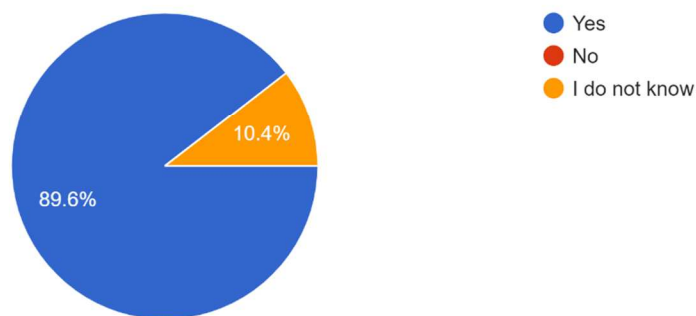


Table 5 - Evidence of Coping with Music

Did music help to cope with negative feelings?

67 responses

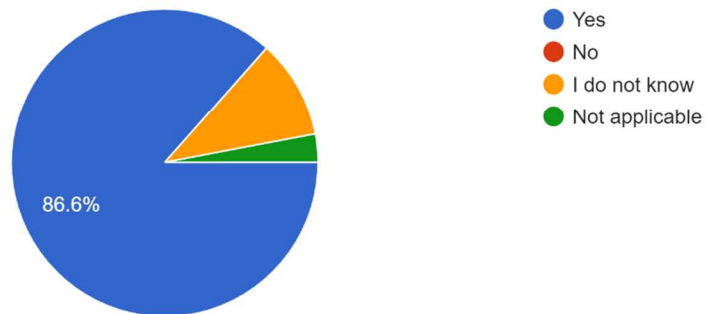


Table 6 – Behavioral Health Effects of Playing an Instrument Compared to Listening

Does playing an instrument or singing make you or your child/student feel better than just listening to music?

67 responses

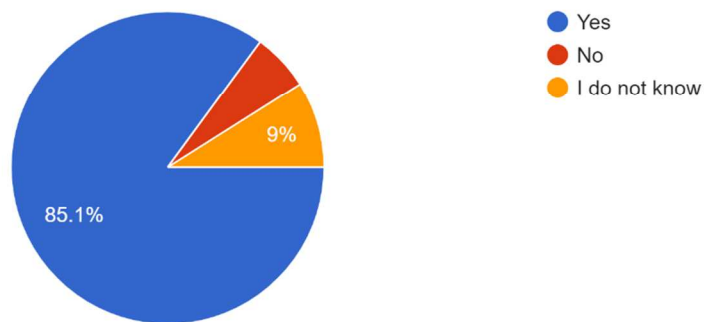


Table 7 – Effectiveness of Playing an Instrument to Cope with Negative Feelings

# of people who used music to cope with negative feelings (out of 67 surveyed)	# of people who reported that music helped to cope with negative feelings (out of 60)	# of people who reported that playing an instrument makes them feel better than listening to music (out of 58)
60	58	57
89.6	96.7	98.3

Table 8 – Survey of Daily Time Invested into Playing an Instrument

How many hours a day would you say you or your child/student spends playing a musical instrument?

67 responses

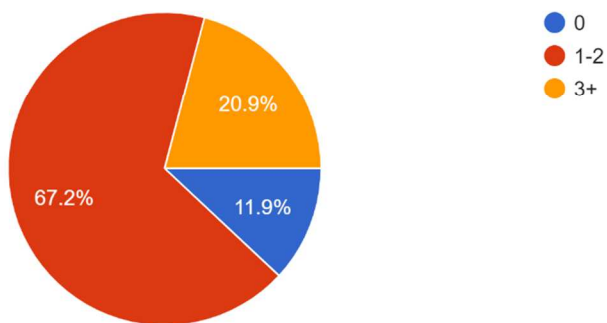
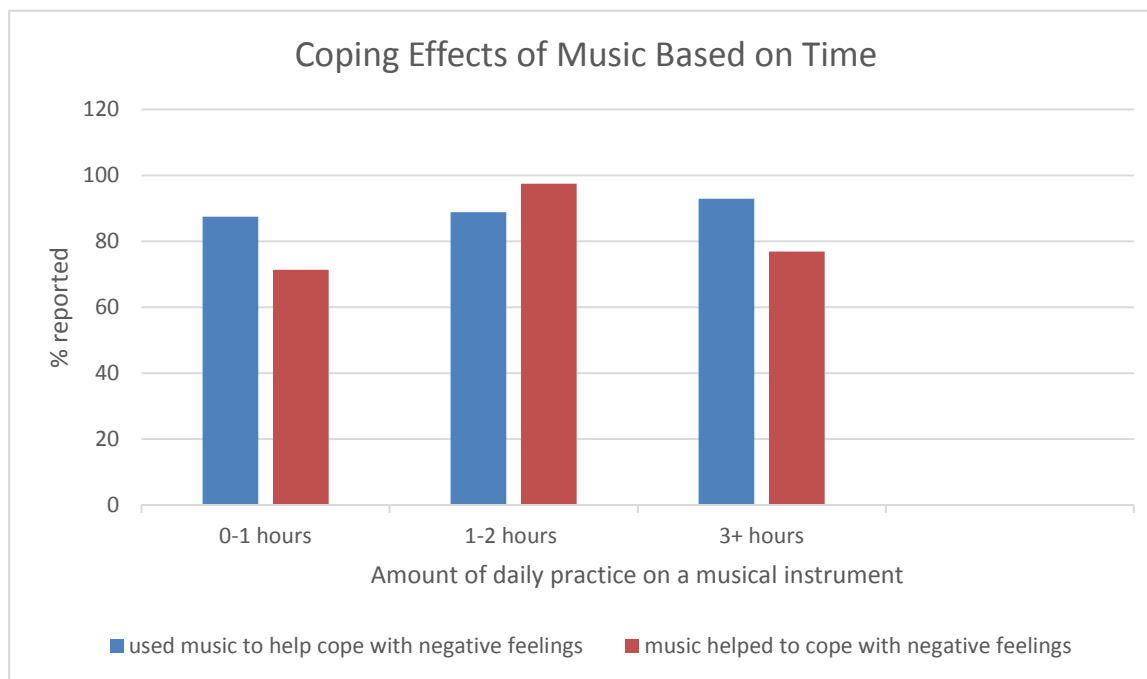


Table 9 – Coping Effects of Music Based on Time



APPENDIX B
RECRUITMENT POST

October 08, 2019

Dear Participant:

As a graduate student in the School of Music at Liberty University, I am conducting research as part of the requirements for a master's degree. The purpose of my research is to discover in what ways, if any, has learning to play an instrument impacted the behavioral health of students and I am writing to invite you to participate in my study.

If you are 18 or older, have taken an instructional music class, or you are a parent or teacher of a child who has taken an instructional music class, and you are willing to participate, you will be asked to complete a brief online survey. It should take approximately 15 minutes for you to complete the procedure listed. Your participation will be completely anonymous, and no personal, identifying information will be collected.

To participate, go to <https://survey.sogosurvey.com/r/XpmTaK> to complete the survey.

A consent document is provided as the first page you will see after you click on the survey link. The consent document contains additional information about my research. Please click on the survey link at the end of the consent information to indicate that you have read the consent information and would like to take part in the survey.

Sincerely,

Christopher Lafser

**APPENDIX C
SCREENING SURVEY**

1. Are you taking (or have you ever taken) an instructional music class?
Yes
No
2. Are you the parent or teacher of a child who is taking (or has taken) an instructional music class?
Yes
No
3. Are you 18 years of age or older?
Yes
No

(An answer of no for all questions will exclude the participant from the survey.)

**APPENDIX D
QUESTIONNAIRE**

1. Do you sing and/or play a musical instrument?

Yes

No

2. I enjoyed learning to sing and/or play a musical instrument.

Strongly agree

Agree

No opinion

Disagree

Strongly disagree

Not Applicable

3. My child/student enjoyed learning to play a musical instrument.

Strongly agree

Agree

No opinion

Disagree

Strongly disagree

Not Applicable

4. How many hours a day would you say you or your child/student spends playing a musical instrument?

0

1-2

3+

5. Have you or your child/student ever used music to cope with negative feelings?

Yes

No

I do not know

6. Did music help to cope with negative feelings?

Yes

No

I do not know

Not Applicable

7. Does playing an instrument or singing make you or your child/student feel better than just listening to music?

Yes

No

I do not know

8. In which areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

Increase concentration

Increase focus

Increase in relaxation

Positive stress management

Decrease in boredom

Improve social skills

Improve self-esteem

Learning to play an instrument was not helpful in any of these areas

I do not know

9. In which additional areas do you feel learning to play an instrument or sing was helpful for yourself or your child/student? (Check all that apply)

Personal enjoyment and satisfaction in making music

Joy in mastering the language of reading and performing music

Providing enjoyment to others with my music

Using my instrument to assist others in worship

Using my instrument to make music together with others in ensembles

Other

Learning to play an instrument was not helpful in any areas

I do not know

Additional comments:

APPENDIX E IRB APPROVAL

The Liberty University Institutional
Review Board has approved
this document for use from
2/7/2020 to --
Protocol # 4052.020720

CONSENT FORM

A Study on How Learning to Play a Musical Instrument Affects a Students' Behavioral Health
Christopher Lafser
Liberty University
School of Music

You are invited to be in a research study on the effects of learning to play a musical instrument on behavioral health. You were selected as a possible participant because you are 18 or older, have taken or are taking instructional music lessons, or are a parent or teacher of a student(s) taking instrument lessons. Please read this form and ask any questions you may have before agreeing to be in the study.

Christopher Lafser, a student in the School of Music at Liberty University, is conducting this study.

Background Information: The findings of this study may provide evidence for the need of institutionalized instruction in instrumental music and can help suggest ideas for future study. This research may show the value of learning to play a musical instrument with data that can help formulate the impact of future studies.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Complete an anonymous survey of multiple-choice questions. There is also an optional section at the end for any of your personal comments about instrumental music education. The total amount of time for the survey should be no more than 15 minutes.

Risks: The risks involved in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

Benefits: Participants should not expect to receive a direct benefit from taking part in this research. Your participation in this research may contribute to further development of clinical studies that may provide findings that demonstrate the importance of music education.

Compensation: Participants will not be compensated for taking part in this study.

Confidentiality: The records of this study will be kept private. All surveys will remain anonymous, and all data collected will be stored on an encrypted drive on a password-protected computer. The researcher and the researcher's faculty chair will be the only ones with access to the data. All data collected will be stored for a minimum of three years. After three years, all data will be deleted.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time, prior to submitting the survey, without affecting those relationships.

The Liberty University Institutional
Review Board has approved
this document for use from
2/7/2020 to --
Protocol # 4052.020720

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Christopher Lafser. You may ask any questions you have now. If you have questions later, you are encouraged to contact him at clafser@liberty.edu. You may also contact the researcher's faculty chair, Dr. Keith Currie, at kacurie2@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, you are encouraged to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.