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The Effect of Participation in an Instrumental Music Program On Students With Serious Emotional Disturbance

by
William R. Brody

A THESIS
Submitted in partial fulfillment of the requirements of the Master of Arts Degree in the Special Education Department of Rowan University
May 7, 1997

Approved by:
Dr. S. Jay Kuper, Professor
ABSTRACT

William R. Brody

The Effects of Participation In An Instrumental Music Program
On Students With Serious Emotional Disturbance

1997

Dr. S. Jay Kuder
Master of Arts Degree In Special Education

This study was designed to evaluate the effects of an instrumental program on ten seriously emotionally disturbed students ranging in age from ten to eighteen. The study utilized a pretest/post-test with no control group. The pro-ed behavior rating profile second edition (BRP-2) was used as the testing instrument (parent, student and teacher BRP-2 were utilized). No statistically significant differences were found utilizing a T-test. The short duration of this study and the part time nature of the music department utilized for this study have contributed to the yielding of inconclusive results. Promising recommendations for follow-up study are included.
This study was designed to evaluate the effects of an instrumental program on seriously emotionally disturbed students. Any teaching method which enhances self-esteem, improves self-confidence and increases the student's motivation for successful and timely completion of academic requirements is of great value to students and teachers. Built-in designs require that the students successfully complete academic assignments in order to participate in the instrumental program. Appropriate social interactions were also required for students to participate in the program. These requirements make this program valuable to the students in many ways. The results were inconclusive, however, positive observations yielded promising recommendations for future study.
DEDICATION

To Moises T. and Raymond S. whose desire to have the opportunity to play a musical instrument gave them the ambition to help overcome their disabilities. Your success and determination gave me the idea for this study. My only hope is that the effects of this program are as long lasting on you as they have been on me.
CHAPTER I

BACKGROUND

Serious Emotional Disturbance, as defined in Pennsylvania rules and regulations later in this chapter, is a sort of catch all for students who are withdrawn, brain-injured, hyperactive, tend to act out irrationally, get into fights often, are depressed, have low self-esteem and generally have learning difficulties in at least one area. The students tend to have varied differences in some cases, but in all cases they have difficulty fitting into the school setting.

Music has been used as therapy with early intervention students (ages 3-5) as a teaching method to assist academic progress for many years. Music itself is merely organized sound. Music has its basis in mathematics and physics. The resulting organization of sounds achieves an art form called music. Studies have been performed on the results of music enhancing the growth of plants. Music has also been used as a method to soothe mental patients in hospitals.

I have had limited success motivating seriously emotionally disturbed students to complete academic work and exhibit positive social interactions in order to have the opportunity to study musical instruments. This limited success sparked the idea for this study. The need to find methods to reach the seriously emotionally disturbed population and assist those students in appropriate academic and social interaction cannot be overstated.
The correlation between the study of musical instruments and academic and social function is difficult to define. I can only liken musical performance to that of a game to play and the motivation one gets in doing that which they really want to do.

Many students with serious emotional disturbance have low self-esteem. The opportunity to individually master some small concept and play a song helps these students overcome their low self-esteem or low self-concept. Playing even the simplest song incorporates both the student’s cognitive skills and psychomotor abilities. I hesitate to let my students know that playing an instrument is a complex task for fear their low self-esteem will keep them from attempting to play. The performance itself is a boost to the student’s self-esteem. Each student must individually master the necessary skills needed to play even in a group setting. This achievement coupled with positive reinforcement by the teacher regarding the performance level (i.e. very good, excellent, etc.) should result in positive growth to the student’s level of self-esteem (self-concept).

The students seem to have two shared areas in their development, one being that the majority of students live in urban areas and the second being that in some way they have or are currently being deprived in their development. A large portion of the students come from households where they experienced verbal abuse, physical abuse, sexual abuse or all. The majority of the students are from single parent households with the custodial parent having limited educational background. Due to their mental challenges, the students have experienced little or no peer acceptance. They have therefore learned to express their frustration to their plight through negative behavior patterns or a total rejection of societies rules. The value of situations which provide positive reinforcement or opportunities which the students will not receive outside of the school setting, in no way can be overstated or undervalued.
RESEARCH QUESTION

Will students who are seriously emotionally disturbed enhance their academic work completion/performance and increase positive social/emotional adjustment after participation in a program of private and/or small group instruction in instrumental music?

HYPOTHESES

1. Seriously emotionally disturbed students will enhance their academic work completion and academic performance after participation in a program of private and/or small group instruction in instrumental music.

2. Seriously emotionally disturbed students will increase their positive social/emotional adjustment after participation in a program of private and/or small group instruction in instrumental music.

When I began the instrumental program, which instilled the idea for this study, the students were required to complete all academic work in order to be released from class to receive music lessons. A second requirement was that the students show definite positive social interactions at all times. A third requirement evolved with the request from classroom teachers that the students successfully complete their assignments. The third requirement became that students successfully complete their academic work before being allowed to leave class for instrumental lessons.

These prerequisite requirements were utilized during this study as a behavioral modification technique to determine if the opportunity and therefore the effects of the instrumental music program will encourage or motivate the students to enhance academic work completion/performance and increase positive social/emotional interactions.
DEFINITION OF TERMS

SERIOUS EMOTIONAL DISTURBANCE - (Pennsylvania Bulletin, 1990), A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree which condition adversely affects educational performance: an inability to learn which cannot be explained by intellectual, sensory or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers, inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop physical symptoms or fears associated with personal or school problems. The term does not include students who are socially maladjusted, unless it is determined that they are also seriously emotionally disturbed. A student may not be determined to have a serious emotional disturbance for disciplinary reasons alone. Determination of serious emotional disturbance shall include a full assessment and comprehensive report by a certified public school psychologist and may include the diagnosis of a licensed psychiatrist.

ACADEMIC WORK COMPLETION - The satisfactory completion of assigned class work and homework by the student as determined by the classroom teacher.

ACADEMIC PERFORMANCE - The satisfactory completion of assigned work within the parameters of the student’s ability and prior classroom performance as determined by the classroom teacher.

SOCIAL/EMOTIONAL ADJUSTMENT - The ability of the student to exist appropriately within the given environment as determined by the classroom teacher or researcher based upon societal guidelines.

INSTRUMENTAL MUSIC - The playing of a musical instrument. The following instruments were available for use: flute, clarinet, saxophone, trumpet, trombone (wind instruments), piano, electronic keyboard, guitar, drums and assorted percussion instruments. The actual playing of a musical instrument requires the coordination of the following abilities, reading the music, fine motor skills, gross motor skills, listening, ability to work in a group (small group instruction), control of breathing (wind instruments only) and simultaneous control of arms, hands, fingers.
and facial muscles (wind instruments only), simultaneous control of arms, hands and fingers (other instruments). The simultaneous coordination of the above skills is necessary for the satisfactory performance of any musical instrument. Satisfactory performance will be evaluated by the music teacher.

**PURPOSE OF THE RESEARCH**

The purpose of this research is to find methods which enable a teacher to motivate a seriously emotionally disturbed student to successfully complete academic work and have appropriate social/emotional interactions. Any teaching method which can accomplish this task is an invaluable tool in the education process for seriously emotionally disturbed students. Through a previous short-term program the idea for this study and an expanded program has grown. The positive changes observed in Moises T. and Raymond S. were exciting. Although, I do not believe this program will work for all students, I do believe a large percentage of students will respond favorably. I expect the results of this program to be a viable option to use as a motivational tool for seriously emotionally disturbed students.

The success of this project is difficult to pinpoint. The complexities and diversities of the human brain make it the subject for many, many studies. This study is not designed to provide insight into the effects on the brain, but to study the effects of the instrumental program on the students. I expect a positive response from the majority of the students.
CHAPTER II

LITERATURE REVIEW

Werner Probst (1985), performed a study entitled Instrumental Lessons with Handicapped Children and Youth. He began with the assumption that handicapped children, as well as other people, have inborn musicality at their disposal. He posed several questions in his study, one of which gives validity to the study at hand. That question is: Can a compensatory and therapeutic effect be attained by musical instrument activity? The evaluation was performed utilizing the following criteria; emotional behavior, social behavior, motor abilities and capabilities, perceptive capability and ability to learn to perform. Changes were noted only when a difference in behavior was observed and not when the behavior remained constant (this information was taken directly from the published study by Probst ((1985)) either the author failed to operationally define changes or the editor removed the definition from the published version). The noted changes are as follows: emotional behavior - 49 positive changes, 7 negative changes and 15 no changes; social behavior - 78 positive changes, 2 negative changes and 12 no changes; motor abilities and capabilities - 36 positive changes 6 negative changes and 23 no changes; perceptive capability - 24 positive changes, 2 negative changes and 29 no changes; ability to learn and to perform - 53 positive changes, 8 negative changes and 10 no changes.
Total positive changes were 240, total negative changes were 25 and total no changes were 89. The total positive changes were more than double the results of the negative and no changes.

Karl Glenn (1992), in his article on the benefits of music education, stated that in addition to instilling an appreciation for the arts, music education reaches cultural boundaries, reaches at-risk youth, and helps to prepare the future workers for success in the job force. His example for reaching at-risk youth is the Boys Choir in Harlem. This choir is located in a crack dealing neighborhood in New York City, an area where a large percentage of high school students do not graduate, 98% of the choir members go on to college. William O'Hughes (1992), in his article on general music in secondary schools, agrees with Karl Glenn when he states that music education not only can aid in the development of self-esteem, which seriously emotionally disturbed students need, but also encourage at-risk students to stay in school longer. Steven E. Schopp (1992), applauds the effectiveness of the "hands-on" approach used in teaching performance in music classes and sites the movement toward use of the "hands-on" approach in the traditional classroom.

Scott Schuler (1992), wrote an interesting article on reaching at-risk students through music education. In the article, Schuler quoted Hackett (1991), saying that many schools have integrated the arts throughout their curricula to improve student achievement and motivation. Schuler (1992), goes on to quote two studies by Daniel Steinel (1986, 1990), where Steinel states that students involved in music programs generally achieve higher scores on standardized tests and earn higher over-all grades than other students. This is true even when the music students are matched with others of similar ability and prior achievement (Kvet, 1985, as quoted by...
Schuler, 1992). No data was supplied to support these statements. Schuler (1992), concludes his paper by imploring school administrators to add the power of music to their repertoire of tools to reduce at-risk behavior.

Madsen and Madsen (1968) reported a single case study of an out-of-control juvenile delinquent who received guitar lessons for reducing hostility toward his mother and for completing his assigned household chores. Other techniques were used along with the guitar lessons including music listening. The subject responded positively by alleviating maladaptive behaviors. The follow-up on the subject was completed thirty months after the original treatment. It should be noted that the subject was further motivated through assistance in obtaining a job in a music store which included continued guitar lessons. This study was quoted by Jayne Standley (1996) in the opening paragraph of her study.

The scope of Standley’s (1996) study is far beyond this study, however, certain points do have validity here. Contingent music has positive effects in behavior modification, physical rehabilitation and academic subjects. (No definition was supplied for contingent music.)

Academic and social behavior that was not reinforced showed generalized benefits while no negative effects were reported on academic and social behavior.

Michel and Martin (1970) performed a study on music and self-esteem which was similar in many ways to this study. The similarities included the use of a behavior rating profile, pretest-post-test and use of musical instruments. The differences in the study included the use of candy as a reinforcer, only one type of musical instrument was used, a ukulele, students could earn the ukulele “for keeps”, a shorter time span was used, limited space was available and the use of a
control group. The results of their study however, were the same as I anticipate for this study - the behavior rating profile did not yield a statistical significance but the observations provided a positive result.

Morgan and Jenson (1988) and Paul and Epanchin (1991) all recognize direct instruction as the best teaching method as supported through research for teaching academic as well as social skills to emotionally disturbed and behaviorally disordered students. Direct instruction in musical instruments is the method used in this study. Reinforcement techniques for academic and social behaviors was also utilized.
CHAPTER III

RESEARCH SUBJECTS & SETTING

The research subjects are all classified as seriously emotionally disturbed. Most of the students have other problems which are classifiable but according to their records no secondary classifications appear. The subjects range in age from 10 to 18 years. Considering the universal serious emotional disturbance classification I do not believe that IQ scores or other standardized test data is relevant to this study. All the students have a problem fitting into the school setting in one way or another. The objective of this research project is to help the students assimilate into the school setting and ultimately into society. The researcher/music teacher has had three and a half months prior experience working with these students with the exception of three new students this school year.

The setting is a private school in an urban area. The majority of the students are minorities based on racial and cultural backgrounds. There were 77 students on roll at the time of the inception of this study. The number of students generally varies slightly during the school year but not by any large numbers. The majority of the students have been at this school for many years and will probably continue to attend this school until graduation. Hopefully, this study will assist them in returning to a regular school setting. Several of the students have expressed a desire to return to their neighborhood schools.
METHODOLOGY

The method utilized in this study is the pretest-post-test with no control group. The pro-ed behavior rating profile second edition (BRP-2) was the instrument used in the testing procedure. The BRP-2 (1990), features a student, parent and teacher rating profile for which inter-correlations have been developed. The student profile was normed on a sample of 2,682 students from 26 states. The parent profile was normed on a sample of 1,948 parents from 19 states and the teacher profile was normed on a sample of 1,452 classroom teachers in 26 states. The sample testing was performed during the years 1978, 1983, 1989-90. The states used for sample testing represent a viable cross section of the United States. Classified seriously emotionally disturbed students were excluded from the sample testing and normative procedures. The BRP-2 proports to be a highly standardized, norm-referenced measure of children's behavior at home, in school, and in interpersonal relationships confirmed through empirical studies of the batteries reliability and validity. However, the short duration of this study will probably not yield any statistical significance during the analysis of the pretest versus the post-test.

PROCEDURE

The students at the school were asked if they would like to participate in a program of instrumental music with the opportunity to select an instrument from a list of available musical instruments. The students were then given a parent permission form with the parent BRP-2 attached with the instructions that all forms must be completed in order for the child to participate in the program. When the parent permission forms were returned with the parent BRP-2, the students were then given the student BRP-2. The students have extremely varied
reading skills from the first grade level to an age appropriate level. Therefore, in order to alleviate
the possibility of an invalid test the students were all administered the BRP-2 orally. The teacher
read the questions and the students responded either true or false. The classroom teachers were
then given the teacher BRP-2 to fill out and return to the researcher/music teacher. The students
were then scheduled for either individual or small group lessons depending on the
choice of instruments. Lesson times were 30 minutes once a week with extra practice time earned
as a reward through working with the classroom teacher and music teacher.

Post-test procedure for students were the same as pretest. Parents were sent a letter with the
post-test requesting immediate return. Classroom teachers were given the post-test. The
researcher/music teacher gave the classes extra music time to allow the classroom teachers time
for immediate return of post-tests.
CHAPTER IV

THE DATA

All data was hand scored and double checked for accuracy. The number of students left active in the program with informed parental consent at post-test data collection was ten. There were only two students who had complete data from student, parent and teacher. There were five parent tests unable to score. Five parents did not respond and one student moved in January from his parents home to a group home during the mid-point of the study. One child refused a pre-test but took the post-test. One teacher refused to allow one student to take the pre-test. The student did take the post-test (Refer to Table 1).

Two students showed a positive increase in test scores on all areas of the student BRP-2. The three areas of the profile are home, school and peer. One of the students showing all three areas of positive increase moved away from his parents mid-way through the study. Two students showed a positive increase in the areas of home and peer (Refer to Table 1).

Scores for the teacher BRP-2 showed three students with a positive increase, three students with a decrease, three students with no change in scores and one teacher did not respond to requests. One teacher had five of the students. The three decreasing scores and only one increasing score were from this teacher (Refer to Table 1).
Three parent BRP-2's were incomplete and able to score. One score went up, one score went down and one score remained the same (Refer to Table 1).

No statistical significance was found in any of the data analysis. Data analysis was accomplished with the use of the Statview Program utilizing a T-test procedure to compare the results of pre and post testing (Refer to Table 2).
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<th>Name</th>
<th>Age</th>
<th># Of Lessons</th>
<th>Extra Practice</th>
<th>Student Pre-Test</th>
<th>Post Test</th>
<th>Teacher Pre-test</th>
<th>Post-test</th>
<th>Parent Pre-test</th>
<th>Post-test</th>
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*S.S. Standard Score  S: School Sub-test  P: Peer Sub-test  H: Home Sub-test  % Percentile Score*
Table 2

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<th>Difference of the Mean</th>
<th>Standard Deviation</th>
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<td>14</td>
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<td>Student School Sub-Test</td>
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<td>23</td>
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<tr>
<td>Student Peer Sub-Test</td>
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<td>18</td>
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<td>Teacher</td>
<td>-3</td>
<td>20</td>
</tr>
<tr>
<td>Parent</td>
<td>Insufficient Data</td>
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</table>

Difference of Mean is Based on Percentile Scores
CHAPTER V
THE DISCUSSION

The research question posed "Will students who are seriously emotionally disrobed enhance their academic work completion/performance and increase positive social/emotional adjustment after participation in a program of private and/or small group instruction in instrumental music" has given rise to two possible hypotheses which are that the students will increase their academic work completion/performance and increase positive social/emotional adjustment.

No statistical significance was reported in Chapter IV, anecdotal comments were limited and several intervening variables have caused this researcher to conclude that at this time no conclusion may be reached regarding the effects of instrumental music on seriously emotionally disturbed students. However, the researcher/music teacher has observed positive influences which result in the conclusion that this study should be refined, expanded and continued in order to answer the question.

Considering the number of unforeseen intervening variables the results of the study were as expected. The results of the BRP-2 behavior profile showed no statistical significance. This was in part due to the small sample size (ten students) at the completion of the study and also short duration (six months) of the study due to publication deadlines. Anecdotal comments were almost non-existent. This has been attributed to being “tested-out” by parents and teachers.
They have the feeling "it has all been said" and therefore have not responded to comment areas of the BRP-2. Lack of anecdotal comments were a surprise to this researcher. Lack of statistical significance was not a surprise.

Michel and Martin's 1970 study had found much the same results as this study. The behavior rating profile did not yield a statistical significance but observations were positive. Michel and Martin (1970) had a shorter overall time span for their study but had two lessons per week with candy reinforcers used throughout. They used a control group and the students could earn the ukulele "for keeps" as opposed to this study which did not use a control group, many different instruments were used and the students could not keep the instruments. The differences were minor considering the results were basically the same.

**Confounding Variables**

The following list is the identified confounding variables that were not controlled for in this study. These have caused considerable limitations.

1. Short time span.
2. Smaller sample size at the end of the study than anticipated.
3. Uncooperative staff.
4. Students absent or hospitalized.
5. Other behavior modification techniques in use.
6. Students unable to take instruments home.
7. Students having to choose between recess and music lessons (scheduling).
   a. Motivation questioned.
   b. Effects on students.

Although most of these variables are listed under recommendations for future study, a detailed explanation will be provided at this time. The publishing deadlines for this project
required the post-test data collection prior to the end of the subject/students school year. This shortened time span has confounded results, any future study should schedule post-test data collection close to the end of the subject/students school year. At the conclusion of the post-test data collection the students were beginning to prepare for a band concert. The students were exhibiting enthusiasm and positive social/emotional behavior for this activity. Unfortunately, the deadlines associated with this project did not allow for this information and data to be included in this study.

The small sample size at the post-test data collection point can be attributed to several factors. Four students who had dropped and several students who were unable to be part of the program could be included with the use of some of the recommendations to follow. The four students who dropped out want to return to the program to learn different musical instruments. Scheduling became a problem here. Adding two days to the schedule will alleviate this situation and alleviate the situation which required the students to choose between recess and music lessons. Several students were not scheduled for lessons because of their volatility which could cause a safety and liability issue. A full-time or even part-time teaching assistant would satisfy those concerns and allow all students to be included. Two students needed one to one instruction which again could not be addressed with the available schedule. The additional schedule blocks will solve this problem.

Uncooperative staff and the questioning of the motivation of the researcher/music teacher go hand-in-hand. Some of this could have been alleviated if the researcher/music teacher had presented the plan to the executive committee and had been available for questions as opposed to having presented to the school director who in turn passed the information on without the
committee having the ability to respond with questions. Stronger administrative support would have made a considerable difference here.

Subject absenteeism or being unavailable due to hospitalization or other factors results in subject mortality which cannot be controlled. Although this mortality is beyond the control of the researcher, a very low or non-existent mortality rate would help the conclusion of this program to be a motivation for the subject students.

The use of other behavioral modification techniques causes this study to yield inconclusive results. The recommendation to allow students to begin music lessons immediately and to reach the necessary level two (the level system was in use at this school) would help to determine if this study was effective at motivating the students and therefore yield a more conclusive result.

The student-subjects required more individual practice time to acquire more proficiency and self-esteem. More classroom opportunity as well as the opportunity to take instruments home to practice would alleviate the confounding effects found in this study. Financing and/or insurance would be necessary in order that the instruments owned by the school could be protected. Theft was a concern of the administration.

Finally, the confounding effect the researcher/music teacher has upon the students. This effect cannot be measured or controlled without the use of a larger staff. Alternating music teachers is not a sound educational practice in any program and should not be utilized in this study. Notations should mention the possibility of the effects. The researcher/music teacher also saw all students in this study in a general music classroom situation.

The effects of the aforementioned confounding variables is incalculable which regardless of the data would render this study inconclusive. However, the information gathered by this study to aide future research is invaluable.
Recommendations for Future Study

Direct instruction was the method utilized in this study. It is the best method to use with instrumental music students in any population and should be utilized in future studies with plenty of practice time allotted.

The following list are recommendations for future study. They are in order of importance.

1. Study time expanded to student school year.
2. Increase sample size.
3. Possibly use a different testing instrument.
4. Analyze pre-test data immediately.
   a. Insist on anecdotal remarks.
   b. Insure complete and scoreable data was received.
   c. Have teaching assistants fill out teacher BRP-2.
5. Researcher/music teacher develops anecdotal record of students.
6. Students must be allowed to take instruments home.
7. Initially meet with all parents.
   a. Home or school.
   b. Have parents do pre-test/anecdotal comments.
   c. Have musical instruments to demonstrate.
   d. Insure parents will and can allow students to practice at home.
8. Have full-time music teacher.
   a. Three days devoted to instrumental music.
      1. Two full days.
      2. One day split for practice time.
      3. Teach classroom music to support program two days split over three days.
9. Hire full-time music teaching assistant (Preferably a music person).
10. Students given music lessons immediately.
    a. Instead of waiting to be on level (behavior modification technique - level system).
    b. Students given one month to get on level 2.
11. **Computer and midi keyboard/sequencer.**
   
a. Computer can be used to record and analyze data.
   
b. Sequencer can be used for assisted student practice.
   
c. Students can write songs in multiple parts record and play back.
   
d. Students can use sequencer for background rhythms for original rap songs.

12. **Use control group.**
   
a. Not possible in this setting - opportunity must be available to all students.
   
b. Students who drop could be control group however, in this study four students who dropped wanted to get back in the program on different instruments.

13. **Three to five year study.**
   
These recommendations plus the recommendations for alleviating the confounding variables should make for a thorough and conclusive study.

**Final Conclusion**

The seriously emotionally disturbed population is an extremely varied and volatile group. These students can change completely in an instant. This makes for a very challenging group of student/subjects to work with. However, as with any teaching situation, one reward out numbers failures many times over. The long term effects of a program such as this on a child’s life are all but impossible to study or determine. However, the need for society to have happy, productive citizens is great. The implication of any program which can help satisfy the needs of society cannot be undervalued. This study has produced valuable insight and planning for a program for at risk children at a time when the need for such a program is at a record breaking high.

This study was a good example of a preliminary study to test the waters and develop a program to use for a more conclusive study. The results observed by the researcher/music teacher were promising in helping individual students. Expanded time and equipment as stated
under the recommendations will surely expand the number of students receiving a positive effect from the experience.

Although the findings in this study were inconclusive due to the nature and extent of the confounding variables discussed, the recommendations contained herein should more than compensate any future efforts with a more substantial result. This researcher hopes that this study and program will be duplicated many times over in order to determine the effects of instrumental music on seriously emotionally disturbed students.
BIBLIOGRAPHY


