

**A STUDY OF THE INFLUENCES OF MUSIC IN THERAPY**

**BY**

**LINDA ANNE WOOD**

A STUDY OF THE INFLUENCES OF  
MUSIC IN THERAPY

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A Research Paper  
Presented to  
the Graduate Council of  
Austin Peay State University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in Education

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by  
Linda Anne Wood  
December 1969

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To the Graduate Council:

I am submitting herewith a Research Paper written by Linda Anne Wood entitled "A Study of the Influence of Music in Therapy." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts in Education, with a major in music.

  
Thomas W. Cowan  
Major Professor

Accepted for the Council:

  
Wayne E. Stamps  
Dean of the Graduate School

## ACKNOWLEDGEMENTS

The author wishes to express sincere appreciation to Dr. Thomas W. Cowan, Chairman, Department of Music, Austin Peay State University, who aided and encouraged her throughout the course of her research; and to Dr. John D. Martin, Department of Psychology, for his continuous support.

Appreciation is extended to Mrs. Olive P. Gates, Co-ordinator-Volunteer Services, and to Mrs. Lois Beckham, Department of Education, Clover Bottom Hospital and School, for allowing the author to observe and participate in several music classes.

The author wishes to thank Miss Anne Parker, Recreation Section of the Veterans Administration Hospital, Nashville, and Miss Shirley Marie Watts, Librarian, George Peabody Music Library, for their assistance in locating research material.

The author sincerely wishes to thank her parents for helping her with their love and encouragement; and her friends who have encouraged her in this endeavor.

## CHAPTER I

### INTRODUCTION

Music has been an important factor in human behavior throughout the history of man. The ancient men of medicine believed that music cured illness by driving evil spirits from the body and by giving strength to the soul. It was believed that music possessed a definite healing force. Modern medicine has recognized the importance of music in alleviating certain types of mental and emotional illness. Within the last century much progress has been made concerning the application of music as a therapeutic agent.

Statement of the problem. It was the purpose of this study (1) to determine the uses of music in therapeutic situations and how it can bring about desirable changes in behavior and adaptation; (2) to determine the effects of music upon mental and emotional illness; and (3) to examine the effects of music in relation to body function.

## DEFINITIONS OF TERMS USED

Pneumograph. A pneumograph is an instrument used for recording specifically the movements of the thorax during respiration. However, in this research this instrument measured the rate of respiration from the diaphragm.

Psychotherapy. Psychotherapy is the utilization of words, their meanings, and the dynamics behind them for the purpose of bringing about a proper attitude towards life.

## CHAPTER II

### MUSIC THERAPY THROUGH THE YEARS

Music has exercised a type of therapeutic influence upon the lives of men since the beginning of time. Man has relied upon music for the instinctual, emotional, intellectual, cultural, and spiritual aspects of life.

Primitive man's first musical response was to rhythm. He made and used crude rhythm instruments to allay his fears and to frighten away wild animals. In guttural tones he later used the first melodic instrument, the human voice, to sing brief melodies to ease his tensions.

As civilizations developed throughout the world, music became widely used as a treatment for illness. Each culture developed its own style of music and determined the ways it was to be used.

The ancient Egyptians referred to music as the "physic of the soul." They had musical rituals which were thought to aid the fertility of women, the flourishing of produce, and to cure any illness.

It is recorded that the Hebrews utilized music in several cases of mental and physical illness. One of the most famous cases is that of King Saul. It was said that David played his harp for the King in order to relieve him of the evil spirits within his body. As David played, King Saul became cleansed and well.

The Greeks felt that music was necessary for the mind and body. It was discovered that soft music had a soothing effect upon the body. This was used to curb the violent outbursts of the mentally ill and to relax those with emotional problems. Lively, highly rhythmical music had the power to incite the body. Therefore, warriors were advised to listen to fiery music in preparation for battle.

Plato strongly believed that through music one could obtain a strong, healthy mind and body. He was careful to point out that one must be selective, however, in his musical choice to ensure a suitable moral tone for the listener.<sup>1</sup>

Around 1375, a strange plague raged through Germany. This was named the "Dancing Mania." People joined hands, shook, and screamed for hours, often days, until they collapsed exhausted. There was no medicine that was potent enough to

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<sup>1</sup>Eric H. Warmington, and Philip G. Rouse, Ed., "The Republic," Books II and III, Great Dialogues of Plato, (New York: The New American Library, 1956) pp. 174-202.

cure the infected. It was discovered that soft, slow music gradually calmed the dancers until they were normal again. Through music this disease was halted.

Several cases have been cited concerning severe states of depression. George II of England received comfort only from music when he lapsed into his melancholy states. Philip V of Spain was nearly insane from his depressive spells when a vocalist was summoned to be of assistance. After several days of experimenting with music, a change was noticed. Philip began to show definite signs of improvement. His interest was once again aroused. Through music Philip was restored his sanity.

During the eighteenth and nineteenth centuries, man developed increasing interest concerning the influence of music upon the human organism. Various studies were conducted to test the effects of music upon metabolism, muscular energy, respiration, and pulse. Clinical reports of observations made on groups of mental patients also appeared. Even though these experiments and observations were often incomplete, they provided a basis for further study.

Within more recent years, especially during the past fifty years, medicine has begun to evaluate and emphasize the importance

of music in treatment procedures. Advances in treatment techniques in psychiatry have aided in the development of the music therapy program.

The use of music in hospitals was stimulated by attempts to aid veterans of World War II. Volunteers provided music to help rid the hospitalized of much mental, therefore physical pain. Music was taken into mental institutions and was found to be especially valuable.

During the last twenty-five years, music therapy has passed through three specific stages. First, the music was considered to be of greatest importance. Little concern was given to the role of the volunteer or the therapist directing the treatment. Formal training of the therapists was almost non-existent. Second, specialized training in music therapy developed. However, the therapist tended to disregard music in favor of developing a suitable relationship with the patient. Third, a compromise between the two extremes has been accepted. The therapist establishes rapport with the patient through music and moves in the desired direction in both activity and relationship.

## CHAPTER III

### THE EFFECT OF MUSIC ON THE HUMAN ORGANISM

Music has been demonstrated to have pronounced effects on the human body. Some of the changes that occur within the body result from a chain reaction, in which modification of the activities in one organ automatically affects that of another.

Toward the end of the last century an Italian physiologist, Dr. M. L. Patrici, conducted a series of experiments to define the effects of music on blood circulation in the brain. A young boy, while assisting a woodcutter, was wounded in the head by his ax. He suffered a wound more than three inches long, severing the bone of the skull. Although he survived the accident, the bones of the skull never completely healed to cover the brain. Dr. Patrici received this young lad's permission to use him as a subject.

Through the use of an electrical apparatus, Dr. Patrici was able to measure any changes in blood volume and pulsation in the boy's brain. He was also capable of comparing the volume of pulse in the brain to that in the arm.

During his experiments, Dr. Patrici discovered that lively music created both an increase of blood in the brain and a more rapid pulse. Such an increase gives basis for using music to restore one from a melancholy mood. Soft, peaceful selections tended to slow down the circulation of blood in the brain and its pulse. Therefore, Dr. Patrici demonstrated the necessity of such music to calm and control overly-emotional people.

Later experiments confirmed Dr. Patrici's findings. Moods have biological foundations that depend upon the activity of the brain and blood. Therefore, music can be used to modify certain mental states.

Musical rhythm has an effect upon brain rhythm and brain function. The thalamus, which is the first portion of the brain to perceive music, is the seat for all sensations and emotions. By stimulating this part of the brain, the cortex is stirred. Since the cortex is responsible for the higher elements of mental functioning, such as thinking and reasoning, it is possible to change a patient's morbid mental attitude with light melodic tunes, providing the patient's attention has been aroused.

Once musical sound waves have entered the brain, the therapist, depending upon his relationship with the patient and the patient's level of attention, is capable of reaching the depth of the mental life in the mentally deranged person. Without the

patient's real knowledge a therapist can focus his full attention toward the music and allow him to become completely involved in it. After this has been accomplished, the patient usually can be removed from his unsatisfactory mental state.

Much heart trouble, including rapid rates, palpitations, and pains, results from emotional disorders. The heart can actually become damaged by emotional stress. Cardiovascular functions can be modified through music, but the results vary with the individual.

Different types of music tend to have either stimulating or sedative effects on the heart, its rate, and its pulse. Such music as Mendelssohn's Concerto in E Minor for Violin; Beethoven's Sonata No. 5 in F; Belioz's Requiem; Haydn's Sonata No. 43 in A flat; and Kodaly's Te Deum, have proved successful as relaxing agents. Muscular activity, including the muscles of the heart, has been relaxed. Often there has been a definite tendency to reduce the flow of blood through the heart. This has resulted in a more steady heart-rate and pulse-rate.

However, there is disagreement concerning the effects of music upon heart-rate. Douglas S. Ellis and Gilbert Brighthouse have conducted experiments to measure changes in respiration-rate and heart-rate in relation to various forms of music.

In their experiment thirty-six college students were subjected to a subdued jazz selection (Hall's Blue Interval), a soothing classical piece (Debussy's Prelude to the Afternoon of a Faun), and a more dynamic classical selection (Liszt's Hungarian Rhapsody No. 2). The heart-rate was measured by an electrocardiograph with electrodes attached to the subject's left wrist and right leg. Respiration rate was recorded by a pneumograph attached to the area of the subject's diaphragm. The recording procedure followed a before, during, and after music plan.

The results of this experiment revealed that all of the significant changes were in respiration-rate. None of the musical selections actually provoked important changes in heart-rate. The subjects varied in their biological reactions, indicating that the effects of music are highly complex and vary with the individual. This tends to limit the therapeutic use of music in relation to actual problems concerning heart-rate.<sup>1</sup>

It has been shown that music can produce definite changes in blood pressure elevations. A person suffering from high blood pressure tends to become more excited than a person with average blood pressure. His pressure will rise from thirty to one-hundred

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<sup>1</sup>Edward Podolsky, Music Therapy (New York: Philosophical Library, 1954), pp. 158-169.

millimeters of mercury during excitement, whereas the person with normal pressure shows a rise from ten to thirty millimeters.

Equally important is the fact that a man with emotional high blood pressure will, when mentally at ease, suffer a greater drop in pressure than a person possessing normal pressure.

Stimulating music, such as Hungarian Rhapsody No. 2, provokes a marked increase in blood pressure. Debussy's Prelude to the Afternoon of a Faun provides a soothing effect that causes the pressure to lower.

Therefore, by varying forms of music, one is capable of modifying blood pressure, often stabilizing it. This may result in a meaningful way of reducing serious physical disorders caused by high blood pressure.

According to Dr. A. Wascho, music properly prescribed can assist in lowering one's blood pressure as it releases tensions. He concludes that music has definite therapeutic uses in clinical medicine.<sup>2</sup>

Science has discovered that music is capable not only of causing physical and psychical changes, but also chemical action. A series of experiments conducted by Dr. Earl Flosdorf and

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<sup>2</sup>Ibid., p. 153.

Dr. Leslie Chambers have shown that "shrill sounds projected into a liquid media coagulated proteins, broke down ethyl acetate to produce acetic acid, cracked vegetable oils with the generation of acetylene gas, and even, to a slight extent changed starch into sugar. They demonstrated in a spectacular way that without raising the temperature, an egg can be soft-boiled in a few moments when subjected to very shrill music."<sup>3</sup>

Similar chemical reactions seem to be produced in the body, especially concerning the creation of excess energy displayed during the time of playing lively music. However, no specific way has yet been found to accurately measure such chemical changes in the human body.

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<sup>3</sup>Edward Podolsky, The Doctor Prescribes Music, (New York: Frederick A. Stokes Company, 1939), p. 21.

## CHAPTER IV

### MUSIC AND MENTAL HEALTH

Persons with mental deficiencies tend to respond more readily to music activities than to most other activities. They respond to basically the same features of music as a normal person. It is of importance to understand the potentials of music and why it is effective with the mentally deficient.

Music is used as a non-verbal language which has form, structure, and logic. Therefore, it is able to convey to the retardate a meaning related to many of his own experiences. The retarded child, unable to grasp abstract concepts, may learn a great deal from a live performance on an instrument he can see, hear, or touch. He can learn equally as much from participation with music that has a logical structure of beginning, middle, and end.

Each child responds to sound and to pitch in different ways. It is important to test the level of his auditory discrimination, since his response to the music depends upon his auditory perception and interpretation of sound.

Some retardates express severe discomfort when they are exposed to high pitches or intense sound. This is especially noticeable when these sounds are dissociated from a musical text.

The mentally retarded person needs feeling of security. The most effective process to achieve this feeling is through music that has a flowing and simple melody with a steady rhythm in the bass. Although many retarded persons respond to tone color, first musical reactions tend to be to rhythm.

This reaction is expressed in the retardates ability to relate music to his daily experiences, such as movement, marching, or running.

Communication between the retarded person and a musical instrument is immediate. In working with music therapy Juliette Alvin uses her cello often. Patients with whom she works consider her cello as something alive which has personality and moods just as they do. If they have trouble remembering her name, they refer to her affectionately as "Mrs. Cello."

Miss Alvin in relating one of her experiences with mentally retarded children told of a twelve year old severely retarded boy who was anti-social and refused any types of association. For several weeks he appeared to take no interest in the music program.

He would turn his back to the group and refuse to remove his cap. After the sessions, however, he repeated "music, music," and refused to leave the room. Later he appeared without his cap and Miss Alvin asked him to hold her mute. He sat down, held the mute, and handed it to her when she requested it. He immediately became cooperative and decided to be a member of the group. It was evident that he was aware of music and enjoyed it.<sup>1</sup>

Clive Robbins encourages the mentally retarded child to "make music" with him. As he improvises on the piano the patient beats on a drum, giving Mr. Robbins insight into the child's initial means of making music. The child responds both musically and personally. If he is unable to grasp and maintain the beat of the song, Mr. Robbins relates his improvisation to whatever the child is doing. Therefore, the child is given a feeling of achievement, acceptance, and security.

One of the most impressive ways Mr. Robbins reaches the emotional level of retarded children is by musical games. He often composes little songs about each of the children, including their names, and they are delighted. A game that really pleases the children is one based upon "Pif-Paf-Poltrie and Fair Katie."

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<sup>1</sup>Alvin, Juliette, "Music Therapy for the Mentally Retarded Child." Bulletin of National Association of Music Therapy, Vol. XII, No. 4, December 1963, pp. 7-12.

The idea is that of a simple story about a group of people busily working. Each member of the family has a different job to do. Pif-Paf-Poltrie is a Besom-Binder. When Mr. Robbins learned a besom was an old-fashioned birch twig broom, he and his patients made a besom and swept up the autumn leaves.

Mr. Paul Nordoff, an American composer and pianist, composed the music for the game. The children were especially responsive to his music. The musical game began with leaves scattered on the floor. Twigs were placed on top of the leaves. All took their places and the game began. Everyone sang asking Pif-Paf what he could do. In the song "You're a Besom Binder" all helped gather the twigs. Pif-Paf received help in binding the besom together and then swept up the leaves.<sup>2</sup>

The children enjoyed this game. They never tired of it. They felt successful with it and worked together well and eagerly.

A retarded patient may be severely depressed or schizophrenic. His defenses may include severe withdrawal or poor behavior. Frequently, music therapy is used as an intrusive means for treatment. Through activities in which the retardate can succeed, the therapist may be able to establish a relationship with the patient.

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<sup>2</sup>Paul Nordoff and Clive Robbins, Music Therapy for Handicapped Children, (New York: Rudolf Steiner Publications, Inc., 1965), p. 103.

Music that encourages motor behavior can be useful in separating the patient from his fantasy world. The patient can become closer to reality and progress to an acceptance of his feelings and behavior.

Dr. Ira M. Altshuler's work with mental patients at Eloise Hospital in Michigan has been an aid in bringing patients into reality in the form of feelings, perceptions, and imagery. He employed the "iso" principle. He used music identical to the mood of the patient. This facilitated response to the music. Depressed patients were aroused by andante tempos. The prolongation of attention was easily achieved by beginning with music that appeals to the lower brain levels. Therefore, more accomplishments could be made.

Dissonant sounds arouse greater reactions in the mentally retarded than do consonant ones. The retarded person tends to display more vigorous activity, more shouting, and more enthusiasm in the presence of fast, dissonant music. Consonant sounds seem to maintain a type of sedative effect.

Several years ago in Middletown, Connecticut, the Superintendent of the State Hospital organized an orchestra to provide music for his patients at mealtime. The orchestra provided peaceful, soothing music for the thirteen hundred patients. The results were very satisfactory. The patients were quiet, self-controlled, and relaxed during their meal. This was elaborated upon by many

institutions. Today a majority of the institutions for the mentally deficient use music during every meal and during rest hour. It has proved to be quite valuable.

Listening to music can be beneficial for many retarded patients. They can associate with the different instruments, the different moods, and the varying tempos. Through this association they are capable of freeing their minds of fantasy and of participating physically with the recording.

Active participation and performance offer the mentally deficient a chance for praise. Performances can also create in the retardate a feeling of pleasure. Music therapy sessions can be structured to include a wide variety of opportunities for the patient to assume personal and social responsibility. He learns how to work and closely associate with other people in a pleasant environment.

"Every singing child is a happy child. Every handicapped child, when he sings, loses that handicap. The world of music, with all the healing that lies within it, is open to all children."<sup>3</sup>  
The world of music provides happiness for mentally handicapped people of all ages.

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<sup>3</sup>Ibid., p. 103.

## CHAPTER V

### MUSIC WITH EMOTIONAL DISTURBANCES

The emotionally disturbed person needs assistance in finding a way to release his tensions. Without proper aid he may internalize his fears and anxieties in socially unacceptable manners. Music provides the opportunity for this person to redirect his impulses and to establish or re-establish interpersonal relationships.

The person crippled with anxiety fears the unknown. He is afraid of any change in his environment. The withdrawn child finds comfort in isolation. There he does not have to relate to other human beings. The hostile, aggressive person shields his own feelings of inadequance by verbally or physically assaulting the person provoking his anger. Each of these emotional disorders requires special attention. Each one has specific needs; and these needs vary from person to person, as well as from time to time within the individual.

Music has the property of stimulating different mental images and mental associations having various emotional bases. It can facilitate self-expression and give vent to disturbing emotional problems. Music, also, can relieve internal emotional tensions.

Therefore, music therapy can provide the emotionally disturbed person with a successful series of experiences that enable him to respond with greater ease to the world around him.

Group therapy has proved to be an asset in helping the disturbed person participate in musical activities. Record players, rhythm band instruments, drums, some band instruments, autoharps, guitars, piano, tape recorders, and song books are all used at various times. This allows freedom of choice and direction on part of the patients.

Patients are encouraged to use their imaginations while listening or performing to music. They are allowed to dance around the room--acting out the music they are hearing. They are given the opportunity to compose brief melodies and sing them in their music sessions.

While sharing music with others often provides a release for inner tensions for disturbed patients, it may create difficulties for the extremely isolated or inhibited person. In such cases the patient is not criticized nor is he forced to participate. The music therapist attempts to arouse his interest in music and reinforce his feelings of acceptance as one of the group. Often he receives individual music sessions in which the therapist encourages his communication through music.

Some individual sessions center around improvising music and making up a story to explain it. This is followed by a discussion of the music and what emotions are expressed through it. This allows the individual a time to express his feelings about certain emotions. Thus, the therapist is given an insight into the emotional problems of the subject. With this knowledge, he can become more specific in his choice of music to help alleviate fear, hostility, anger, hatred, and other emotions that threaten the individual.

Co-ordinative music therapy and psychotherapy sessions are often successful in relieving the patient of his inner feelings. Through these sessions the patient is able to establish a proper emotional relationship between himself, his work, and his environment.

Music therapy with the extremely autistic withdrawn child has shown pronounced effect on the child. Since this psychotic child has isolated himself, he may resent any form of intrusion into his privacy. Often he must be carried bodily to the music room. He may have a strong attachment for some inanimate object, such as a piece of string. He relates to this object and does not attempt to do so with human beings. Through music this type of child often learns that there are other interesting inanimate objects. Then he proceeds to realize that the person next to him is equally as interesting and important. Gradually he begins to break away from his isolated

little world and become musically involved with other patients expressing his feelings and emotions.

Hatred is one of the most dangerous of all the emotions. When a person is threatened by failure to find constant happiness, he often has ideas of using force to obtain his needs, even to the extent of destroying the person or things that stand in his way. Such prolonged hatred is harmful in many ways: organically, mentally, socially, and emotionally. It eventually destroys the human being.

Music is successfully being used to replace hatred with other, more useful emotions. Music is capable of reconditioning the individual and eliminating the urge to destroy. Musical selections that express a feeling of security and peace have the capacity to replace hatred with a sense of peaceful satisfaction. Some music used successfully are the following:

Wagner	Spring Song
Gounod	Love Duet from Faust
Strauss	Tales of the Vienna Woods
Franck	Fantasia in C

Jealousy is another emotion that is exceedingly harmful. It derives from fear, uncertainty, or rejection that eventually create feelings of guilt. These feelings occur with a loss of self-esteem and a generally greater amount of self-criticism. Jealousy is aroused by wounds to one's pride and self-love.

Listening to appropriate music often provides a mood of emotional calm and contentment. However, it is much more beneficial to participate in producing music. Singing is especially stimulating and is being used more and more successfully as a means of providing a feeling of acceptance. It helps the patient destroy his anti-social and ill feelings. Through actual participation in music, the patient is given the opportunity to restore his damaged pride and self-esteem. Once this restoration begins, it becomes easier for the individual to communicate with others and his jealous emotion becomes subdued.

Music therapists must be selective in the choice of music used with emotionally disturbed patients.

Instrumental music has proved to be the most effective since vocal music can often be misinterpreted or can cause one to remember an unpleasant experience and regress into his emotional unhappy state.

Music has been one of the most satisfying group and individual activities for persons with emotional disturbances. It provides both non-verbal and verbal ways of communicating with others. It also gives the individual an acceptable means of relieving his frustrations, tensions, and anxieties.

## CHAPTER VI

### SUMMARY

Music has always been an important aspect in the life of man. Musical elements have provided man through the years with a non-verbal means of communication with others that has aided him in his interpersonal relationships. Singing, dancing, and playing musical instruments has given man a way to release his tensions and overcome his fears. It has given him a reason to associate with other people.

Music now is being used as an aid to medicine for those with physical, emotional, and mental handicaps. It offers them an opportunity to learn about themselves and others. It provides the opportunity for expressing themselves freely and creatively.

Music therapy attempts to help the individual establish or re-establish personal relationships. It is music therapy's aim to aid him in finding a way of becoming a part of his society. Through music it is hoped the individual will realize his potential and importance.

Music is everywhere. Melodies are sung for babies in order to ease them into sleep. Restaurants provide music in order to make dining more enjoyable. Music appears in religious ceremonies and

on other occasions when a certain background for feelings or moods is needed. Music adds so much to our daily lives, it would be difficult to live without it.

For many unfortunate people music is now offering a chance to become useful members in our society. It is helping them gain confidence and strength.

The essential aim in any therapy is to help the individual achieve a reasonably adequate social adjustment. In a sense it is the ability to cope with everyday situations without opposing society's values that constitutes an acceptable social adjustment. It might be said, then, that the goal of music therapy is to rehabilitate, socialize, and re-educate an individual through participation in music. What can be done through music therapy for the betterment of the human race lies in the future.

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