

# THE SCIENCE OF HEALING THROUGH MUSIC. ACTIVE VERSUS RECEPTIVE MUSIC THERAPY

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**Abstract:** There are centuries since the healing power of music is recognized and used, and decades since music therapy got a scientific approach. Music therapists are not foremost musicians, being outnumbered by psychologists or doctors with an emphasis in music, therefore music therapy got a new perspective. From the first steps of choosing the music up to the applied methods, music therapists use new developed instrumentation applied in a personal manner creating treatment and experimental conditions, use music in a scientific way. Although, we can differentiate between many types of music therapy, the aim of this paper is to focus solely on active and receptive music therapy and their role in healing. As active music therapy techniques engage the individual in singing, instrument playing and music composition, music listening involves no music engagement or active participation. Though, the effect of both could be equally powerful. From a neuroscience perspective, receptive /passive and active music activities differ in the parts of the brain they activate. For example, listening to music engages subcortical and cortical areas of the brain. Moreover, the individual's preference for a certain music type also affects the brain regions that are activated, making a difference when the music is self- selected or it is chosen by the therapist. A number of researchers note that although the receptive music therapy can reach the therapeutic effect faster, the active music therapy may have a higher effect. While the development in sciences continues and new methods of measuring and intervention are available, there is a significant lack of literature on direct comparisons between the efficacy of active and receptive music therapy techniques, hence we want to bring broad, affluent information regarding the subject.

**Keywords:** Art & Music, active music therapy, receptive music therapy, emotional response, music effect.

## 1. Introduction

Music therapy is a form of therapy that uses sound and music, often encouraging movement. Doctor Levitin said that in Sesotho language, as well as in many other languages, the verb 'to sing' also means 'to dance', credible since singing also involves moving the body [1].

Music is non-verbal, multidimensional, a universal language whose capacity to create emotion, to influence the affective and neurological state, to facilitate commu-

nication and relationship is proven by interdisciplinary researchers. Mimics, gestures, body language, the moments of silence complete the therapeutic image, entire interpretation of the music therapist being more accurate.

The first studies on music therapy that appeared in the United States (1940s), describe the effects that 'live' piano music has on listeners. Later on, experimental music was used in Sweden, and England, interpreters playing accompanied vocal music for the sick. Nearly two decades later, music therapy

elements appeared in Austria and Germany, where music was associated with dance and psychodrama. 'The rhythm enters the blood, stimulates movement and orders time, and with the widening of the temporal space, ecstasy, some hypnotic states are reached.' [2] The 1980s bring a new influence on music therapy by introducing the elementary sounds and rhythms of other cultures, and following the scientific (mainly neurologic) perspective on approaching music therapy.

As music therapy is seen as an interdisciplinary science, bringing together medicine, music and psychology, it is considered to study the effect of sound on human being in a therapeutic, psychoprophylactic process.

Music therapy makes use of verbal and nonverbal techniques by associating rhythms, instrumental supports, body and voice expressions, as well as psycho-music relaxation. These techniques aim to act on various personality disorders and to create both emotional and relational regulation in children, adult and elderly people.

## **2. Conversation on Musical Background versus Music Therapy**

No doubt, conversation is very useful in music therapy. It helps to explain the role music plays therapeutically, how the specialist find out the music taste of the individual involved in therapy and whether or not he can receive music as a therapeutic remedy. But making conversation on a musical background is not music therapy, just the first step of it. If there is difficulty in verbal expression, listening to music during conversation could establish a contact. The illness comes to an end, and a healthier state begins when the individual, considered patient by the therapist, gains an awareness of his own weaknesses. Only then a recovery perspective is possible. [3] Moreover, to not forget that no one can be cured without his wish and without a proper understanding of what the therapy implies.

On the other hand, music therapy has a 'resource-oriented focus, places a strong emphasis on individuals' strengths and resources and on recovery processes.' [4] It is a three-sided relationship between the

therapist, music and the individual (patient.) An important role is given to music and the way it acts on individuals or groups foreseen by music therapists.

According to Bruscia, music and therapy are both difficult to define, and when fused together into a single discipline, many complications arise. Music therapy looks 'at the unique problems of defining music within a therapeutic context, and defining therapy within a musical context.' It is defined 'to address the myriad issues raised, and to embrace the diversity of clinical practice.' [5] The current models of music therapy certainly change along with developments in technology, cultural influences and perspectives as resulting from new philosophical insights, as well as from influences from empirical research. [6]

## **3 Active versus Receptive Music Therapy**

Music therapy has two distinctive elements: a part of involvement - active music therapy and a passive, receptive part - receptive music therapy, both described below.

### **3.1. Active Music Therapy**

Active music therapy is a form of therapy that focuses both on the client's previous personal musical experience, on which the therapeutic scenario will be formed, but also on his new musical experiences due to the evaluation and treatment process in which he participates. An unpredictable artistic act is built on the creativity of a person who may have never experienced this before. From the music point of view, there are four distinct types of experience: improvisation, recreation or interpretation, composition and audition. Each of these types of musical experiences has unique features, specific applications and its own therapeutic potential. They induce some sensory-motor behavior; also, require different perceptive and cognitive skills and different interpersonal processes, so the emotions and feelings evoked are different.

Musical improvisation is not judged from the point of view of sound, but from the point of view of emotions transmitted, facilitating the appearance of emotional communication,

unblocking feelings, and taking into account movements, gestures, looks, the position of symmetry/asymmetry between the therapist and / patient.

Active music therapy can be practiced in both. group and individual, the music produced or interpreted during the session being different and difficult to describe, though carefully documented by the therapist. If the interpretation is not of interest for the music therapist, the recreation relaxation obtained through the creation act it does make a difference. The patients' behaviors characterize their personality, especially during group meetings. Using an instrument or human voice, a performance is produced, an act of courage, especially in improvisation, when shyness must be defeated and proof of perseverance and flexibility made.

With respect to composition, usually it is the music therapist who composes a musical fragment based on the patient's improvisation so that auditioning the musical fragment will get a positive effect.

Often, group sessions of active music therapy bring together from the start patients with desire to sing and share ideas, who consider music therapy an appreciated mean of communication and expression with great results. In a session of therapy patients go through all the group-specific roles: leader, speaker or singer, very expressive, reserved, and so on.

Basically there are four steps of expression that are followed at each session:

- Recognition of sounds according to each person's attributes (listening, self-motivating, and development.)
- Sound communication (partner work exchanging melodic and rhythmic passages to establishing a dialogue)
- Group communication (self-expression, without any pre-established restriction.)
- Patient's voluntary response to the music therapist's question about his feelings (in regard to the session's melody or melodic fragment.)

Moreover, active music therapy is also seen as a mean of relaxation, a psychological distraction by eliminating the aggressive tensions, playing at different instruments various tempos and tones.

### 3.2 Receptive Music Therapy

There are several types of interventions that music therapists use in the therapeutic process. Receptive music therapy sessions are mostly performed individually, although group sessions are also possible, being considered a musical continuity with the aim of removing the lack of communication and awareness of the traumatic affective difficulties and the orientation towards their evolution.

The receptive music therapy is conducted upon a psycho-musical balance that we'll talk about in the next chapter. Usually, in a therapy session the specialized music therapist uses music as a way of communication that allows the patient to relax and open up about self. It's about an emotional expression caused by listening to a certain piece of music or another. By referring it to the patient, the music therapist entrust himself that it is the proper music that allows the patient benefit.

Each therapist has its own way in conduction the sessions of music therapy. Is his choice regarding the number and type of music works/songs or of necessary sessions. For example, when two songs are combined, there is the advantage that they can facilitate the patient's verbalization from the very beginning, being successfully used for children and adolescents. Thus, the therapist's role is to calculate the use of one, two or three combinations of music/ songs, to use wholly works of music or fragments, depending on the patient's ability to listen. A one-piece receptive music therapy session is considered to be more psychotherapeutic due to the composer's message and the performance of the musician.

If practiced in a group, the performance of a receptive music therapy consists of a cycle that includes: discussion and individual meeting of therapist-patient, participation in about three sessions, new individual meeting: patients - therapist, participation in other sessions, and in the end of the cycle a meeting - intervention. At the last meeting, the therapist decides whether or not it is necessary to continue with a new cycle, and if this cycle needs a closed group, or an open one allowing for acceptance new patients.

The therapeutic tool in receptive music therapy is the disposition of patients, the place of meeting and the actual intervention. The difficulty of developing the program is that at each session the music therapist can meet or receive new patients being, as we said, an open cycle. So, the session must have an effect on four or five people in the group, but not on all since the other members are not being integrated, or not responding to the same music.

However, in receptive music therapy the depth of reception of the musical fragment is influenced by the disposition of the receiver. Sometimes it associates with the client's daily problems at the upper level of the unconscious, but, in depth, the sound experience gets wide-ranging. The most common question in music therapy is: what music to recommend and what is the optimal 'dosage'? The concluding answer of the specialists is that there is no universal music menu, there is no particular composer or music that can be therapeutic for everyone, the choice is made only according to the patient's clinical picture (the cultural environment, favorite and detested sounds, access to a particular style of music, etc.) - each individual being unique and having his own history and sound identity. By analyzing receptive music therapy from a methodological point of view, we can describe three forms of receptive music therapy: sound-rhythm elementary music, "live music" and CD music therapeutically indicated.

#### **4. Active versus Receptive Psycho-Musical Balance**

According to the specialists, in order to find the right treatment through music, there is need to find a balance of receptivity or of active music therapy, great help in conducting the healing process.

The balance of active music therapy is inspired by doctor Benenzon's work and demonstrates the behavioural interest in the musical instrument rather than the possible traumas of the patient. An active psychoanalytic balance is composed of two parts: (i) the individual is asked to do what he wants with simple, basic instruments of his

choice; (ii) the individual is required to follow few fragments of rhythm, tone, harmony and electro-acoustic in a melody with the help of the instruments existing in the room. The goal is to be acquainted with the patient's behaviour according to the discovery of the favourite instrument and how does his choice make an influence. [7]

Also, running the balance of receptivity is a must-do before starting the actual session of music therapy. Though, some individuals are more receptive than others each individual respond to listening to music in a way. Music is used to approaching people, as an expression, a non-verbal language, so that after listening to it, the individual is asked to explain what was internalized.

#### **5. The Relationship between Central Nervous System Structures and Music Therapy**

As people have the third ear that of the soul, helping them to perceive the subtle shades and profound human messages encoded in music, researchers found out that when brain damage occurs, musical functioning often remains intact and may be the last it wears out. So, we can firmly say that the emission and reception of sounds is the most basic function of a person.

When referring to music - sounds of different heights, durations and intensities, the information is connected to the human brain, where is understood and reproduced. The organ of reception (ear) is the most important structure communicating with the central nervous system.

It is of extreme importance to specify that the cerebral hemispheres participate differently in the musical phenomenon. It was found that the left brain hemisphere has as coverage the analysis of the musical information - the aptitude of the professional and trained musicians; and that the right brain hemisphere realizes the emotional experience of music. Therefore, people who do not know the laws of creation and musical play, when listening to music only use the right brain hemisphere. At the same time, the neuro-physiological considerations come to reveal the role of receptor of sensory, emotional and

intellectual music from a new perspective, that of biological psychiatry, where the research revealed the undisputed fact that the psycho-neuro-endocrinological activity is involved in the production of emotional resonance. This means that the body reacts to the stimulus (music) in response of which the biological values undergo changes, not large but noticeable (e.g. changes in blood pressure, heart rate, temperature, level of cortisol, etc.). These changes deal with limbic system connections with hypothalamus, a connection that regulates the fundamental biological rhythms of the body such as wake-sleep cycle, body temperature, adrenal cortical activity, and rhythmic activity of the respiratory and cardiac centers. [8]

Several neurotransmitters that are spoken about in music therapy are presented below:

- Dopamine - one of the major neurotransmitters in the nervous system, a substance that transfers information between brain neurons that stimulates the heart, regulates the flow of information to the brain, controls the movement, and allows people to know their feelings, to react emotionally.

- Melatonin - a hormone produced by the pineal gland in mammals, being involved in regulating the circadian rhythm, learning and memory.

- Serotonin - also acts as a neurotransmitter; interferes with sleep, in mental and emotional processes, motor functions, thermoregulation, regulation of blood pressure, and hormonal functions.

### **6 Ways to Investigate the Effects of Music Therapy**

The available methods of investigating the effects of music therapy are various portable cardiovascular and portable EEG (electroencephalogram) devices. We talk about Mindwave, BioRadio and other modern measuring instruments. With their help, can be tracked the heart rate and pulse rate together with the active or activated brain areas, the level of concentration or relaxation, so on, during active music therapy, but also the receptive music therapy. Brain imaging methods are becoming more difficult and provide insights into formerly hidden cerebral processes related to human performance and

pathologies. [9] On a long-term basis in music therapy there still are used agendas or journals, the pages of which the therapist consults periodically and in which they continuously make annotations.

### **Conclusion**

Either playing or listening to music the patient induces a certain attitude, a rejection or preference of the music genre, a behavior reflecting how he is reporting to that attitude with intense emotional participation or not. For example, the person who rejects a certain type of music and the person who listens to it can search for the same thing - the need for attention, but tries to get it in opposite ways. However, how brains synchronize and bodies entrain in music therapy processes is a persisting research that allows prediction of specific disease treatment response and effectiveness.

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