

**INDIVIDUALIZED MUSIC THERAPY –
THEORETICAL and PRACTICAL ASPECTS in MEDICINE**

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ABSTRACT

Beyond the existence and the possibility of using some technologies applicable in medicine that have pushed the boundaries of knowledge and the possibilities of intervention further than we could have imagined relatively recently, its evolution consists mainly in perfecting the second dimension it owns, namely, the humanist one. Today we cannot talk about the medical act without including communication, the therapeutic relationship and why not, the creativity in its implementation. The intrinsic dimension of the medical act is one related to the art of healing and consequently, its complexity stems from its triple action - relational (with the patient), scientific (the need to have medical knowledge) and creative (conceptualizing the clinical case, choosing the right treatment by combining all existing possibilities and customizing it). The progress of knowledge was greatly favored by the emergence of interdisciplinarity which allowed the horizon of knowledge to grow and above all, the acceptance of the combination of fields once considered incompatible, to be possible. This register also includes the use of music as a means of therapy. What is surprising is not its effect in therapy, but the rediscovery and acceptance of its therapeutic potential by the medical world. The scientific certification of the healing effects of music is due both to the progress of the neurosciences and to the reconceptualization and paradigm changes in the sciences, an aspect that can be considered defining for the evolution of current thinking.

Keywords:

music therapy, medicine, neuroscience, knowledge, interdisciplinarity

INTRODUCTION

The idea of choosing the subject of this article came from a practical necessity doubled by the desire to point at a theoretical level a subject of interest in a current manner. [1]

The design of this work outlines two dimensions of the working hypothesis: does music represent a working tool in therapy or is music therapeutic per se? The second dimension refers to the practical aspect of the topic addressed: what is the concrete way of choosing musical pieces in music therapy? It must be mentioned that this article does not aim to give a verdict on the validity of the mentioned aspects, nor does it pretend to find their solution. Rather, it is an attempt to create a connection between two subjects of interest in an original approach.

For the rigor of the exposition, the therapeutic dimension and the one related to music will be addressed separately.

Hypothesis 1 – music as a therapeutic tool

To begin with, a mention is necessary, namely that any medical act also assumes an intrinsic psychotherapeutic intervention. This aspect is supported by arguments that can be found in recent studies on the psychology of the medical act. [2,3]

On the other hand, the common element between the actual medical act and the psychotherapeutic one is represented by communication, as a concrete way of relating with the patient, respectively the client. [4] This is the reason why in the following exposition the term "therapeutic" will have the role of interface between the medical act in the classical sense and the psychotherapeutic component, representing more precisely, its psychological (psychotherapeutic) dimension.

In the case of the present approach, music can be considered a means of non-verbal communication with an emotional charge higher than the verbal message. It remains to be determined when, how and to what extent we use music in the construction of the medical act.

Art can be defined as a "special skill in an activity". Consequently, obtaining remarkable therapeutic results through the use of any scientifically accepted medical means perfects the medical act bringing it to the level of an "artistic" act.[5] The origin of the argument at the theoretical level is represented by the definition of psychotherapy, considered a therapeutic intervention that involves "forms of communication and interaction to evaluate, diagnose and treat dysfunctional emotional reactions, ways of thinking and behavior patterns" [6]

The (psycho)therapeutic act aims to balance the client's emotional state in order to find a cognitive solution at the situation they are facing. In other words, the therapy balances the emotional status so as to convert a dysfunctional thinking and sometimes undesirable behavior into a functional and desirable one.

The subject of the mode of action of the therapeutic act is not a new one, but it is certainly one that has been debated for a long time. What is therapeutic in a psychotherapy session: the therapist, the technique, the therapeutic relationship, the

context or the meaning given by the client to the whole process? [7] In other words, how does the psychotherapeutic intervention manage to produce transformations, a series of changes so as to determine the installation of psychic balance and restore (self-)efficacy at the individual and social level, or in other words, the adaptive functioning of the individual?

This type of theoretical approach requires a classification of the three variables involved in the psychotherapeutic process, namely, the client/patient as an element of the intervention, the therapist as the author of the intervention and the therapeutic relationship as a promoter of change through therapeutic intervention. Rosenzweig's theory places under the sign of uncertainty the fact that "specific techniques have specific effects" and brings to the fore as contributing factors to the effectiveness of the psychotherapeutic process, a series of elements that he calls "common factors". As for the common factors, they are subtle, difficult to identify and classify, being represented by a series of variables equally attributable to the client, the therapist and the actual therapeutic relationship. It is certain that they contribute to the effectiveness of the therapy. [8] Corroborating Rosenzweig's theory with Jerome Frank's statements, it can be concluded that in fact, psychotherapy creates a context favorable to change by offering C/P, the possibility of finding personal meanings for the events, thoughts or emotions whose protagonists are also who brought them to the position of C/P. [9]

Consequently, the effectiveness of the therapeutic act consists in discovering a meaning, a significance, [10] the context in which the individual is positioned so that they find answers to questions that destructure their inner harmony and balance. Thus, a reconceptualization of the situation in which the individual finds himself / herself is produced and consequently it is possible to identify some solutions for the problems they are facing or to find some answers to the questions that worry them. The definition of psychotherapy brings to the fore the aspect of mainly verbal communication, through specific techniques. As the purpose of this article is not to clarify the mode of action of the effective psychotherapeutic intervention or the theoretical controversies related to this aspect, in conclusion, I will state that regardless of their existence, otherwise undoubtedly necessary for the progress of knowledge in the field, psychotherapy represents an efficient way of intervention, confirmed and updated through studies in an evidence-based approach. [11]

The main advantage of using EBP (Evidence Based Psychotherapy) is conferred by the possibility of using the best techniques that have proven their effectiveness, thus allowing the individualization of the treatment.[12]

The use of music as a working tool in the therapy of medical conditions is a reliable alternative. An increasing number of studies provide evidence in support of this statement. [13,14]

In conclusion, music can be considered a useful working tool in medical and mental disorders, the advantage of its use being availability and acceptability, low costs and almost non-existent adverse effects.[15]

Hypothesis 2 – music as therapy

Returning to the central theme of the paper, I will continue to refer to the therapeutic intervention factor represented by music. Our the starting point is the assumption that music has a therapeutic effect.[16]

This aspect is currently confirmed by numerous studies, in the same evidence-based approach.

The similarity between verbal language and "musical language" is discussed more and more often with reference to the neurocognitive action mechanism. In-depth studies confirm the existence of a common pathway responsible for the processing of musical and linguistic information, which allows intervention through music therapy for speech and language disorders.[17] From the perspective of psychotherapy, most studies focus on the influence at the level of affect that the musical intervention achieves. One of the dilemmas of the role of music in human life is that although it does not respond to any essential biological need, music appeared and lasted over time. [18,19]

To explain the therapeutic effect of music, it is necessary to start from the relationship between man and music. Evolutionary theory studies demonstrate the existence of some singing instruments dating back 40,000 years. It can be assumed however, that music appeared much earlier in human evolution. Thus we can say that man's relationship with music is almost as old as humanity itself. In the context of the "social brain hypothesis", a theoretical basis emerges for the assumption that the (incremental) evolution of proto-music took place in the late Middle Pleistocene, about 400 Kya, and perhaps earlier." The hypothesis of the existence of the social brain is indisputably related to "the selection of mechanisms to amplify the emotional basis through which lasting social bonds were created." Thus, we can assume that from a social evolutionary point of view, the role of music is not only aesthetic but also functional. [20]

This is how, at least on a theoretical level, although obviously speculative, the human species has acquired emotional skills. This can be considered the first step for what throughout evolution has meant the fund of sensitivity absolutely necessary for the psychic life of individuals and undoubtedly a necessity for the establishment and consolidation of social relationships. The fact that this background also represents the vulnerable point of the human being through the appearance of emotional disorders, is closely related to the subject of the present article. In conclusion, music can be

considered an existing element in the retort in which the human psyche has been sublimated, constituting at the same time a contributing factor to the development of the human being as well as a way of intervention in case of emotional disharmony.

The connection with melotherapy brings to a higher level the possibilities of emotional balancing starting from the phrase "mood for music" [21] "Mood for music is something more, broader, deeper and more specific, it is a state of general delight ("enchantment = entry into singing"), of harmony, of special inner vibration... Being in a state of music means being in a state of supreme feeling of being, in a state of peace, love and light... The state of music means bringing the inner in a state of musicality: giving a certain rhythm to soul processes, a harmony, flows-movements to inner states, being ready to become what music itself is, with all its specific components, taking over and appropriating its harmonic qualities"[21]

What differs is man's awareness of the role of music in his life.

Strictly theoretical from an analytical perspective, we can classify the person's relationship with music in three directions: a cognitive relationship, an emotional one and a behavioral one. In essence, this triad perfectly overlaps the three components of the human psychological dimension. The influence of music on the human psyche is not conditioned by the musical education of the individual. In support of this statement, I bring the words of E. Cioran "There are musical souls who do not have musical education and culture. Which means that we are born with an amount of vibrations... We carry all the music that we haven't heard in the course of our lives, but which lies in the depths of our memory. All that is music in us is a matter of memory" [22] This finding represents a literary reflection of the evolutionary hypothesis of the social brain that I mentioned earlier, and as a psychotherapeutic concept "this sum of vibrations" can have a counterpart in the theory that postulates the need to give meaning to the emotional context in which the patient is.

In the case of using music therapy, the patient is in a double relationship: on the one hand with the therapist and on the other with the music. At this point, I will return to the initial working hypothesis: is music a working tool used in psychotherapy or is music therapeutic per se without the need for association with psychotherapy techniques? For objectivity or more precisely for scientific correctness, it is necessary to invoke some arguments in support of each formulated hypothesis.

Of course, on an empirical level, music undoubtedly has a therapeutic effect. [23] Otherwise, its effect in certain situations with a strong emotional charge could not be explained, without the choice and use being subject to criteria and standards confirmed by EBP.[24] Music is used on the occasion of all major events in individual and community life: weddings, funerals, festivities organized for various purposes (artistic, sports, scientific), celebrations of important dates in individual or community history.

It is obvious that the role of music in this case is predominantly social, as a binder of individuals, for a communion of the state of mind: joy, respect, sadness, relaxation. On an individual level, music can strengthen a bond, for example, mother – newborn, [25] it can relieve sadness (the case of funeral gatherings) or it can increase the feeling of joy or happiness, it can dress the meaning of a ritual or it can acquire a symbolic charge, as a signal of a behavior dictated by a certain emotion, for example, the song chosen by a couple whose meaning is known only to the two partners. A multitude of situations can be listed in which music accompanies man in his passage through life.

Returning to the working hypothesis, following the argumentation above, it is obvious that although music has an intrinsic therapeutic role, the ability to be chosen appropriately being possessed "natively" by individuals, the ability to be chosen therapeutically represents an entirely different aspect.

Consequently, music can be used in psychotherapeutic interventions precisely because of its intrinsic therapeutic potential. This fact is confirmed by studies in neuroscience that have built "current neurophysiological models that assume that the processing of speech and music, as well as the catalytic role of rhythm in language development, is based on the synchronization of internal neural oscillations with temporally regular stimuli". [26]

It is imperative to consider the clarification of the scientific aspects that are the basis of psychotherapeutic interventions, invoking an ancient principle from medicine, namely "primum non nocere". This aspect represents the foundation of any intervention on the human being, being part of the ethical principles of any profession that aims to restore the imbalance at the somatic or psychic level, leading the individual to physical and emotional harmony.

The concrete way of intervention based on scientific benchmarks which have theoretical and practical evidence will consider, in this case, the association of a psychotherapeutic technique with music or techniques and appropriate musical pieces. We thus get to tackle one of the most difficult and long-disputed aspects of music therapy, namely, the choice of musical pieces used in therapy sessions.

I previously stated that the purpose of this article is twofold, to clarify, to reconceptualize certain theoretical aspects. It also aims to materialize in a theoretical attempt to create a working algorithm for choosing musical pieces in music therapy. The starting point of the selection process of the musical pieces used in the therapeutic process is represented by the patient's problem and the established psychotherapeutic objective. [27] Moreover, between the psychotherapeutic process and the choice of music, as a substrate of the melo-therapeutic process, it is necessary to establish a concordance or to use a terminology adapted to the subject of the exposition, to harmonize them.

The literature offers numerous works based on patient choices using "personalized playlists" created with the help of "large historical data sets, preferences for songs or artists, regardless of the sequence in which they are listened to." These criteria are based on the belief "that adaptation takes place over a long period of time". [27] Consequently, this method of selection does not reflect the musical preferences of a customer "in real time". [28]

From the psychological perspective, in order to create a work algorithm, regarding the choice of musical pieces grouped in a personalized list, it is necessary to create a symbolic coding method based on a series of universally valid psychological operators [29] among which we can mention the concepts of temperament and personality. Individual factors such as age, gender, level of instruction and education, personal beliefs, religion, place of origin, transgenerational educational variables intervene in the intervention process of music. However, there are also specific variables, assimilable to an individual psychological projection strictly related to the ability to interact at the level of a therapeutic relationship, such as the meaning of experiences - the attribution of meanings, emotions, cognitions, behaviors, personal beliefs, irrational ideas, the ability to decode verbal, non-verbal or paraverbal language, emotional intelligence, empathy and the capacity for self-knowledge and self-efficacy, the ability to operate with logical or symbolic concepts, narrative and verbalization capacity, intuition and attention, creativity and coherence. In the context of the use of music, the individual relationship with music contributes to the completion of the therapy plan and participates in the creation of the algorithm that is the basis of the personalized choice of the therapeutic playlist. An important landmark in the choice of pieces for therapy is represented by the relationship with the music that the client/patient previously established on an intuitive, native level.

With reference to the way in which music is used for therapeutic purposes, this can be addressed to individual and/or group therapy, in this last situation considering the affinity of certain groups to a certain musical genre. Thus, addicted people, of a certain age could react positively to music approved by the age segment to which they belong.

All these details can only be obtained through an interview or anamnesis, using the classic terminology used in medicine (and in psychotherapy).

A fundamental characteristic of a psychotherapist, beyond the knowledge he accumulates through study, as well as beyond his empathic capacity, is represented by his creativity. In the elaboration of a psychotherapy plan, the theoretical benchmarks are essential, but the nuances that personalize the therapy plan arises from the psychotherapist's intuitive and creative capacity.

In the same way in which the patient-centered therapy in medical practice was taken from the person-centered psychology implemented by Carl Rogers [30] the reciprocal option is also possible. In this sense, we can extrapolate and apply in medical and psychotherapeutic practice as well the concept used in personalized medicine defined as "the right patient with the right treatment at the right time therapy. [31] The attributes of a personalized intervention in this sense would consist of the acronym "4 P" - personalized, preventive, predictive, participative [32] In a daily psychotherapeutic reality, effective therapeutic intervention is based on the psychotherapist's intuition in the sense of acquired clinical sense from experience. Of course, the personalization or individualization of therapy derives from the need for interventions that the therapist chooses from a wide range of possible interventions, just as a surgeon chooses from the surgical instruments what fits the intervention he is performing. [33,34] Creativity derives from the knowledge of the multitude of techniques that the psychotherapist chooses and combines depending on the clinical experience, his and the patient's personality, as well as the problem/symptomatology the patient presents and the established psychotherapeutic objective. The clinical conceptualization of the case in practice is thus superimposed on a theoretical model as well as on what the therapist previously acquired by working with other patients, an aspect embodied in a number of similarities between the psychological profiles, the symptomatology or the established objectives. Perhaps more than in "classical" psychotherapy, in music therapy, intuition and especially creativity play the role of the contextual hue factor. Considering such a varied list of factors that can intervene in the psychotherapeutic process (individual and specific factors described previously), a fixed combination or more precisely a valid universal pattern is difficult to establish. This also happens due to the fact that musical preferences are not in a fixed relationship with any of the mentioned variables. More precisely, musical preferences can be influenced by education, but the impact of music on the human psyche is not necessarily correlated with this aspect. As proof of this fact, there are the folklore influences taken over by cultured music from popular music. Music can be defined as "a collection of qualities, starting from the emotional ones to the intellectual ones". [35] Functional level reflection of these qualities can be successfully used in the psychotherapeutic process. The question that arises is whether the mirror projection of the emotions transmitted through music must find a correspondent in the patient's emotional register or be in opposition to it, in order to fulfill a therapeutic role. At the application level, in clinical practice, this is the most difficult aspect of choosing music therapy pieces. Therefore, we are faced with two options: the first, of the congruent emotional state-message transmitted through the music, the second of an opposition between the emotional state of the patient and the encoded message of the music.

The existing technology today theoretically makes possible the use of devices that facilitate the decoding of musical emotions, thus facilitating the easier choice of some pieces used in melotherapy. Of course, the possibilities of using these programs are still limited, but the rapid evolution in recent years from concept to digital product will certainly quickly offer this work option. [36] Recent studies point to the possibility of using methods in which "music is the main therapeutic factor in the absence of a specific relational process that is contextual to listening to music".[37] In this way, the therapeutic capacity of music per se is confirmed. The technique, called Therapeutic Music Listening (TML) although it excludes the therapeutic relationship (absence of the relational process) is based on "listening to individualized playlists created by a music therapist based on anamnestic and personal data about the user and scientific notions, with therapeutic goals in mind". The neurological substrate is represented by the activation of some neural mechanisms that involve the release of some neurotransmitters that intervene in "mediating the brain's responses to reward". [37]

Conclusions

Regardless of the approach and the paradigm of the use of music, it is important to note that recent studies in neuroscience prove the therapeutic effect of music per se, even without the establishment of a therapeutic relationship, in the classical model of receptive or active music therapy.

A second important aspect is the fact that the listening list will be compiled by a therapist and will be based on a series of individual psychological and cultural variables of the person.

It is also important to mention the fact that digital means and AI can represent ways of correlating some psychological parameters and the emotional needs of the person, and the characteristics of the music used in therapy.

Consequently, considering the complexity of the subject of music therapy, it is important to establish the future coordinates of action, having as a starting point the major potential of music in therapeutic terms. In the same register, it is obvious that without an interdisciplinary approach involving fields such as neuroscience, neuroimaging, psychotherapy, musicology, medicine and the philosophy of medicine, the potential I mentioned will not be used to the maximum. It is important to remember that perhaps not by chance in ancient Greece, the god Apollo was responsible for both medicine and music. Today, the double perspective appears more and more logical and promising - the art of a scientific practice and the science of practicing an art.

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