

## **Introduction**

Health is the most important value in human life. Let us recall the popular wisdom: in a healthy body there is a healthy mind; you will be healthy - you will get everything. The fast pace of life makes a person react to reality with anxiety and reduce the adaptability of the body. In the emotional and aesthetic sphere of modern schoolchildren, it is noted: a decrease in emotional tone, an increase in negative manifestations, a decline in the development of aesthetic emotions and feeling

But how to stay healthy? There is a need to search for ways of a systemic nature that affect not only individual mental processes, but also personality structures in general. One of these methods is music therapy. Currently, in our country, music therapy is being developed and used for therapeutic and corrective purposes, in various areas of medicine, psychology and pedagogy. It has been proven that music is a means of harmonizing and developing the psyche, improving the personality of a child.

But will this method of healing the body always be effective? Or do you need certain conditions? These are the questions that interest me, they are due to the relevance of my given research.

Objective of the study: to determine the conditions when music has a health-improving effect on human health.

Tasks:

1. Study theoretical sources on this topic, summarize and systematize the collected material.
2. Conduct testing and comparative diagnostics of the assessment of the functional state of students before and after listening to musical works of different directions, draw conclusions about the effect of music on a person's condition.
3. Suggest recommendations for improving the body by means of musical art.

Subject of research: the emotional state of 9th grade students.

Hypothesis: a health-improving effect on the body occurs when listening to and experiencing classical music.

Research methods:

- study and synthesis of literature on the research topic;
- testing;
- comparative diagnostics;
- observations.

Practical significance.

The materials of this research can be used to promote human health improvement by means of classical music. The results of the research and the proposed recommendations will be of interest to teachers, students and their parents, as well as those who care about their health and love music.

## Chapter 1. Perception of music and bodily reactions.

### 1.1 History of the issue.

Studying theoretical sources on the topic, I came to the conclusion that the question of the influence of music on a person has been studied by scientists for a long time. The largest ancient Greek philosophers Pythagoras, Plato, Aristotle pointed to the healing properties of music, its ability to establish harmony in a person's state from traumatic experiences of the psyche. Music therapy was widely used in ancient China in accordance with the rules of traditional Chinese medicine. In ancient India, music therapy was based on the idea of the unity of the Universe and the laws of rhythm that affect the spiritual essence of a person

The perception of music is carried out through the ear, which serves as an orienting instrument.

### 1.2. The structure of the auditory analyzer.

The auditory analyzer plays an important role in human perception of the environment. With the help of hearing, people communicate, exchange information.

The peripheral section of the auditory analyzer is represented by the organ of hearing, that is, the ear. The outer ear, middle ear, and inner ear are isolated. The outer and middle ear are auxiliary formations that ensure the transmission of sound vibrations to the inner ear, where sound vibrations are converted into nerve impulses.

The nerve impulse is transmitted along the auditory nerve to the auditory area of the cerebral cortex, located in the temporal lobe. There, the recognition of sounds and the formation of sensations takes place.

### 1.3. Sound waves

Sound waves are mechanical vibrations of bodies perceived by a human hearing aid. When the guitar strings are touched, air molecules begin to vibrate around them. These vibrations travel through the air and reach our ears.

If you direct the source of infrasound (i.e. low-frequency sound waves) at a person, you can achieve an amazing effect. Infrasound can destroy our psyche. People exposed to infrasound become unreasonably anxious.

Musical sound is an acoustic signal with a wave structure. By acting on the cells of a living organism, it changes its activity.

## **1.4. Строение головного мозга. Центры, отвечающие за обработку звуковых сигналов.**

1.4. The structure of the brain. The centers responsible for the processing of audio signals.

The brain is the control center of the human body. It consists of two hemispheres: the right (responsible for intuition, creativity, imagination) and the left (responsible for verbal information, analytical thinking, logic, language abilities). Everything that happens to a person every second throughout his life affects the brain to one degree or another. And music is no exception. Under its influence, the exchange of information between the two hemispheres is activated, allowing them to work in harmony.

In the left hemisphere, in the lower frontal lobe of the brain, there is a section of the cortex that controls the muscles of the face, tongue, pharynx, jaws - Broca's zone. Broca's center and its connections are responsible not only for language, but also for other cognitive functions, such as music perception or attention

### 1.5. Regularities of perception.

Perception is a reflection in human consciousness of integral complexes of properties of objects and phenomena of the objective world with their direct impact on the senses at a given moment. [6]

In the course of perception, the ordering and combining of individual sensations of the properties of objects and phenomena into a single whole occurs, that is, an image of an integral object is formed by means of reflecting the entire set of its properties. A person does not live in a world of isolated light or color spots, sounds or touches, he lives in a world of things, objects and forms, in a world of difficult situations, i.e. whatever a person perceives, he deals not with individual sensations, but with whole images.

Human perception is closely connected with understanding the essence of an object and proceeds as a dynamic process of searching for an answer to the question "What is it?" The meaningfulness of perception means to reveal the objective meaning of its sensory data through analysis and synthesis, comparison, distinguishing properties, and their generalization. Thus, thinking is included in perception itself, preparing at the same time from within the transition from perception to sensory representation and from it to thinking. The unity and interpenetration of the sensual and the logical constitute an essential feature of human perception.

1.6. The term "musical perception" reflects the situation "when the subject of the action is a person with normal hearing, and the influencing object is acoustic signals" [30, p.91]. Musical perception (musical and auditory activity) is aimed at comprehending and comprehending the meanings that music possesses as art, as a special form of reflection of reality. The perception of a piece of music includes not only the psychoacoustic plan of analysis, but also the understanding of the perception of music "as an activity with an internal structure [16, p. 73].

Musical perception is based on the auditory perception of sounds. A musical sound, or tone, is a periodic sound, that is, vibrations that repeat over and over again after a certain period.

Music is an art of sound, an art that unfolds in time. Moreover, these sounds are specially formed and organized into sound structures that have their own symbolic meaning.

Rhythm affects the emotional sphere of a person.

The tempo adjusts the person to the perception of the whole work.

The alternation of different tempos maintains attention

Thus, considering the perception of music as a complex process, it can be concluded that the integral creation of an image in the process of music perception is influenced by such factors as the acoustic properties of musical sounds, as well as individual mental properties of the personality, life experience, and previous auditory impressions.

Only repeated perception of music allows a person to form a full-fledged holistic image of a work.

### 1.6. Singing for health: singing is good

I would like to immediately cite as an example the words of Plato: "The power and strength of the state depends on the kind of music that sounds in the state, for loose rhythms and modes give rise to a licentious beginning in people."

Scientists have proven that when a person sings, a sound wave arises, 80% of which is spent on bringing our internal organs into a state of vibration. Singing is an effective means of preventing disease, premature aging of the body. During singing, self-massage of the organs takes place, active ventilation of the respiratory organs.

## **Chapter II. The healing power of music**

The healing power of music has been recognized by many nations. Passed from generation to generation, the tradition of music healing has been preserved in our time among primitive peoples.

Even in Ancient Egypt and Greece, doctors treated patients with sounds. Ancient Chinese doctors believed that music can cure any disease, and even wrote out "musical recipes" for influencing one or another organ

Since 1969 there is a music therapy society in Sweden. Thanks to the employees of this organization, it became known to the whole world that the sounds of the bell, containing resonant ultrasonic radiation, kill typhoid sticks, causative agents of jaundice and influenza viruses in a matter of seconds.

The Bible says that King Saul, who was tormented by an evil spirit, called David, who skillfully played the harp: "David, taking the harp, played, Saul became more comforting and better."

Playing the strings of the lyre restored Alexander the Great to health. Research conducted by the center under the guidance of Professor Lazarev has shown that musical vibrations have an effect on the entire body.

The famous French actor Gerard Depardieu got rid of stuttering in three months, because, on the advice of a doctor, he listened to Mozart's music every day.

There is a term "Mozart effect", coined by American researchers in the early 90s. Its essence is that after 10 minutes of listening to the music of this famous composer, the speed of solving problems on spatial thinking increases. Wizard Mozart activates mental activity.

### Chapter III. Music for good, music for harm

In our complex world, any phenomenon can be used both for good and for harm. Music is no exception.

The advent of rock music in the 1950s was marked by an outbreak of suicide. Modern rock bands operate in the ranges from 80 thousand hertz to 20 and even lower. There

have been cases when an overabundance of high or low frequencies seriously injured the brain. At rock concerts, there were sound burns, hearing loss and even memory loss.

The Japanese, having conducted a funny experiment, found out: when Mozart's music sounds in a bakery, the dough comes up 10 times faster.

How does music affect children? If embryos listen to quiet classical music, then after childbirth, "experimental babies" develop better physically: their hair grows thicker, nails become harder and longer, milk teeth appear faster. In one of the clinics in Tennessee (USA), newborns listen to the harp, lullabies, tunes from Disney cartoons, classics. Babies become calmer, sleep better, and recover faster

#### Chapter IV. Effects of Music on School-Age Children

To test this hypothesis, I investigated the influence of music on 9A grade students in our gymnasium.

1. The survey showed: 70% of students listen to pop music, 5% - rock. Students listen to classical music only in music lessons.

2. To study the state of health in the work, the methodology "Thermometer" was used.

During the lesson, students were asked to record their associations, noted their well-being, activity and mood before listening to music. Then they included musical excerpts from different styles: rock music, pop music and classical music.

The results are presented in diagram

When listening to rock music, the majority of the state of health did not change, the mood of 7 students improved. Associations say something else. The pupils associated rock music with chases, lateness, computer games, the sound of a knife on glass: The activity increased as a result of the influence of rhythm.

When listening to pop music, the state of health improved in 7 students, mood in 10, activity increased in 9. Pop music does not make you think. All children's associations are associated with recreation: discos, friends, fun vacations.

When listening to classical music, a decrease in all indicators was noted. Some of the students imagined passive rest, sleep. Only two noted the immersion in feelings.

Based on the above, the following conclusions can be drawn:

Musical perception is a physiological process that every person possesses.

Music is capable of generating a special energy of influence on the body and on the life of a particular person.

The main result of the research work proved:

1. The possibility of influencing the well-being, and hence human health.
2. The condition for recovery is the experience - the ability to listen to music.
3. Classical music is a means of healing, provided that you can listen to it.

## **References**

1. Барышева Т.А., Шекалов В.А. Креативный ребёнок: Диагностика и развитие творческих способностей 2. – Ростов-на Дону: 2004.
  2. Киселева М.В. Арт-терапия в практической психологии и социальной работе. - С.П: 2007.
  3. Лобанова Е.А. Здоровье сберегающие технологии на уроках музыки. - Образование в современной школе, 2005, №9.
  4. Петрушин В.И. Музыкальная психология. – Минск: 2004.
  5. Райгородский Б.Д. Что может музыка? - Музыка в школе, 2004, №4.
  6. Фролова Т.А. Влияние музыки на здоровье человека. - Музыка в школе, 2008, №1.
  7. Холопова В. Теория музыкальных эмоций: опыт разработки проблемы.- Музыкальная академия , 2009, №1.
  8. Чередниченко Т. В. Музыка в истории культуры. - Долгопрудный: Аллегро-пресс, 1994.
- Интернет-источники:
9. <http://byzon.ucoz.ru/publ/3-1-0-4>
  10. <http://olqa.ucoz.ru/blog/2009-01-13-1>

11. <http://forums.freedomdv.ru/index.php?showtopic=1380>
12. <http://vahe-zdorovye.ru/novosti/vliyanie-klassicheskoy-muzyiki>
13. <http://moikompas.ru/compas/muzikoterapiya>
14. <http://www.vashaibolit.ru/4391-vliyanie-muzyki-na-zdorove-i-nastroenie.html>
15. <http://www.domsovetofof.ru/publ/51-1-0-914>
16. <http://veinik.ru/science/any/article/928.html>
17. <http://cendomzn.ucoz.ru/index/0-2733>
18. <http://muslib.ru/groups/112/journal/2373.html>
19. [http://russlav.ru/stat/vliyanie\\_muziki.html](http://russlav.ru/stat/vliyanie_muziki.html)
20. <http://www.profistart.ru/ps/blog/26533.html>