The Impact of Musical Preferences on Students' Adaptation

E V Romanova¹,a*, Yu R Pirozhenko²,b, N V Patz²,c, V A Bobrovsky³,d, and L M Lapshina⁴,e

¹Altai State University, 61 Lenina pr., Barnaul 656049 Russia
²Grodno State Medical University, 80 Gorkogo str., Grodno 230009 Republic of Belarus
³Omsk State Technical University, 11 Mira pr., Omsk 644050 Russia
⁴South Ural State Humanitarian and Pedagogical University, 69 Lenina pr., Chelyabinsk 454080 Russia

*a*romanovaev.2007@mail.ru, bpirozhenko.yuliya@mail.ru, cpats_nataly.2003@mail.ru, dgena41@mail.ru, elapshinalm728@mail.ru

*Corresponding author

Keywords: music, adaptation, stress, musical taste, classical music, rock'n'roll, popular music

Abstract: The article considers the influence of various musical genres on the adaptation of first-year students to the educational process. The dependence of the level of adaptation on the frequency of listening to music is traced. The most popular music genre is defined. The characteristic features of the influence of the most popular musical genres on first-year students are highlighted and described. A brief description of the electrical activity of the brain is provided, which manifests itself in the form of brain waves. The principle of action of musical waves on the physiological rhythms of a person and the waves emitted by the brain is described. The influence of the media on changing the musical preferences of modern youth is determined. The influence of rhythm and various frequencies on the psychoemotional state of students is also shown. The main goals of listening to music are identified. Classical music is proved to have a significant harmonizing effect on a person’s mental state. A comparison of the influence of classical, rock, and pop music on students is made in the paper. The percentage of students who have adapted and not adapted so far is calculated, and the dependence of this phenomenon on the preferred musical genres is revealed. The use of music as aid is established. Its main effect is aimed at regulating psychosomatic and psychoemotional processes and correcting personal development. The article describes the basic functions of music, such as sedative (relaxation), stimulating, and cathartic. The article describes the following: elements of musical culture (music and musical instruments); musical values and tastes; musical communities (professional and non-professional), as well as individual actors (musicians and persons performing musical activities); the audience and individual listeners of musical works; musical organizations and structures providing relevant activities; social practices that should be accompanied by music (including holidays, ceremonies, rituals). The main content of this research is the analysis of the results of a survey conducted among students of humanities and natural areas. The article summarizes materials on the topic under study, but the effect of various sound stimuli on humans is not well understood and requires further research.

1. Introduction

From the point of view of many researchers, modern culture, including music, has a serious impact on the minds of young people, the lifestyle of young people is being modified [1, 2]. In the course of adaptation to the surrounding social environment, a certain load on the consciousness and human body, rethinking, and searching for means of adaptation to changing conditions occur [3, 4]. Addictive behaviors are not excluded [5].

Musical culture is used as an auxiliary tool, the main impact of which is aimed at regulating psychosomatic and psychoemotional processes, correction of personal development. Music performs sedative (relaxation), stimulating, and cathartic functions.
Sound irritations have the most substantial effect on human emotions. The positive emotional excitement observed when correctly selected pleasant music sounds enhance attention, activates the central nervous system, increases the verbal and non-verbal intelligence, stimulates muscle activity, reduces the load on the working links of the human body [6].

The sedative (relaxation) function is associated with the fact that as a result of specially organized musical activity, muscle and emotional stress is relieved, a person calms down, restores physical and emotional forces.

The stimulating function is aimed at mobilization and activation of all physical and emotional capabilities of a person. It tones muscles, vital systems of the body, fills with positive emotions. Major, rhythmic dance music is used in this.

The cathartic function of music resists sedation and stimulation. Its essence is not in the making up for missing emotions but in ridding a person of his/her oppressive feelings [7].

2. Materials and Methods

The aim of the work is to identify the psychological influence of the preferred genre of music on the adaptation of freshmen. The objectives of the study are to identify the most popular genres of music through a survey, questionnaires, and conversations with students; based on the data obtained, to determine the effect of music on students' stress levels, and to compare the influence of classical, rock, and pop music. The following research methods are used: questionnaires, personal conversation, observation, analysis, and synthesis of information.

3. Results

The study was conducted in the spring of 2019. The survey involved 356 respondents. As a result of a sociological survey examining the change in musical tastes under the influence of the media, the following results were obtained: 46% of respondents believe that under the influence of the media, their musical taste does not change, 34% do not notice the influence of the media; 20% are influenced by the media. Thus, we can note the low impact of the media on youth.

| The number of respondents, % | The answers                                                                 |
|------------------------------|-----------------------------------------------------------------------------|
| 8                            | The calming influence of music (classical, author's song, quiet rap)         |
| 28                           | The stimulating effect of music (rap, electro, hip-hop, R-n-B, rock and roll, chanson) |
| 30                           | Significant removal of emotional stress (rap, classical, pop, electro, hip-hop, blues) |
| 30                           | All of the above effects (hip-hop, rap, rock and roll, pop music, classical) |
| 4                            | Music does not affect them                                                  |

In the study, a correlation was made between the level of adaptation and musical preferences for various genres of music (see Table 2).

| The number of respondents, % | The answers                                                                 |
|------------------------------|-----------------------------------------------------------------------------|
| 74                           | Fully adapted, this is such music as classical, pop music, romance, hip-hop (the tracks are very energetic, rhythmic, and the text is positive) |
| 18                           | Partly yes, this is such music as rap, pop music, electro (these tracks can be described as calm, but sharply interrupted by any sharp sounds) |
| 4                            | No (rather aggressive tracks are indicated)                                  |
| 4                            | Partially not (quite energetic music, but negative song lyrics)              |

According to the criterion of the frequency of listening to music, the following results were obtained: 18% of respondents listen to music several times a week (a common feature is a slow adaptation in the period September-December), 82% listen to music every day (increased adaptation and reduced stress level can be seen in the period September-December)
For the purpose of listening, the following results were obtained: 50% of respondents listen to music spontaneously, like the background with other actions; 46% listen to music purposefully, to achieve any effects; 4% of respondents were not able to answer. The study presents the results regarding the preferences of certain genres of music and the emotional states of youth (Table 1).

4. Discussion

The human brain is an electrochemical organ (in an active state, it produces up to 10 watts of electricity). This electrical activity manifests itself in the form of brain waves, of which four types stand out:

- Beta waves generated by the active brain, they are characterized by fast oscillations with a small amplitude, frequency – 15-40 Hz;
- Alpha waves; their amplitude is greater, and the frequency is 9-14 Hz; in this state, the person rests after the work done or meditates;
- Theta waves; the amplitude is even greater, and the frequency is 5-8 Hz; in theta wave state, the person is resting and almost falling asleep. In this state, one doesn't notice how time has flown by, and actions are approaching automation, the formation of new ideas is taking place;
- Delta waves, with a maximum amplitude of oscillations and frequency, is 0.5-4 Hz, deep sleep without dreams is 2-3 Hz. 150

With the active perception of music, resonance occurs between the physiological rhythms of a person and the musical beat, frequencies. The ability of the human nervous system and muscles to master rhythm or liability is one of the physiological foundations of musical influence.

Theta and alpha waves balance the left and right hemispheres. This state is achieved through meditation. Such equalization allows a person to use all the capabilities of his/her brain [8]. Another effect that occurs in the alpha and theta waves mode is the mechanism of reflex self-regulation of a biological system, that is, under certain conditions, the system is left to its own devices. It seeks to reduce the excitation of parts.

Sounds of different tones calm the brain and allow its hemispheres to interact better. For this, the sound stream is divided into tones. Sounds of the same hue are sent to the right ear, and, accordingly, are perceived by the left hemisphere. Sounds of a different tone are sent to the left ear and are perceived by the right hemisphere. The synchronization of sound flows between each other is achieved by strengthening the interhemispheric connections of the brain [8]. The result is a patient acquiring a state of rest and internal balance. If the connection between the regions of the cortex responsible for processing sounds is disturbed, the perception of music by a person is impaired.

The action of music is based on the fact that electrowaves change in the recipient’s brain. The “Music of the Brain” treatment is close to this technology. This treatment is based on the experimentally confirmed belief that the human brain can produce music that has the ability to affect a person as much as ordinary music. That is, an electroencephalogram is taken from the patient, and the electromagnetic waves produced by the brain turn into music.

5. Conclusion

Thus, the study revealed that the dominant genres in popularity among young people are rap, pop music, rock and roll, hip-hop, classical, electro, and author. The most popular musical genre among young people aged 18-20 is rap. In the process of social interaction, a change in musical preferences is possible, a kind of “mirror individualization” occurs.

References

[1] Vorontsov, P. G., & Ushakova, E. V. (2019). Changes in the lifestyle of a young man: Healthy, unhealthy and manipulative. Health, Physical Culture and Sports, 2(13), 3-19.

[2] Romanova, E. V. (2017). Modern interpretations of the health phenomenon: An analytical review. Health, Physical Culture and Sports, 2(5), 3-48.

[3] Duginist, P. Ya., & Romanova, E. V. (2016). Features of the adaptation of the athlete's body to physical activity: An analytical review. Health, Physical Culture and Sports, 2, 3-13.
[4] Belousko, D. V. (2019). Mirror individualization as a pedagogical system. *Health, Physical Culture and Sports, 1*(12), 54-64

[5] Romanova, E. V. (2016). Youth health in the study of addictive behaviors. *Health, Physical Culture and Sports, 2*, 14-24

[6] Gevorkyan, E. S., Minasyan, S. M., Abraamyan, E. T., & Adamyan, C. I. (2013). The influence of music on the functional state of students. *Hygiene and Sanitation, 3*, 3-6

[7] Popok, A. G. (2012). Music therapy for children with disabilities. *Izvestiya of the Herzen Russian State Pedagogical University, 150*, 244-249

[8] Serebryakova, E. A. (2014). The influence of music on the psychophysical state of man. *Bulletin of BSU, 1*, 32-35.

[9] Demkina, E. E. (2003). Individually typological features of the effects of music perception on the psychoemotional state of girls. *Bulletin of the Tambov University. Series: Natural and Technical Sciences, 1*, 41-43

[10] Volchek, O. D. (2008). The value of music and its potential impact. In S. A. Varzin & O. Yu. Taraskovskaya (Eds.). *Proceedings of the 3rd All-Russian Scientific Conference with International Participation “Health is the Basis of Human Potential: Problems and Solutions”*. St. Petersburg, Russia: Polytechnic University Press.

[11] Osmuk, L. A., & Kassina, L. D. (2013). Music in modern society as a form of meaning. *Ideas and Ideals, 1*(15), 149-156.