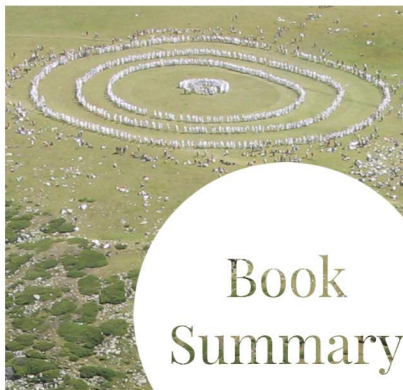
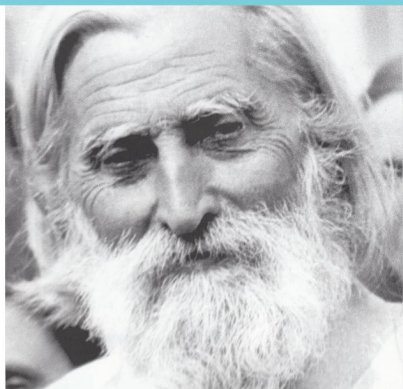


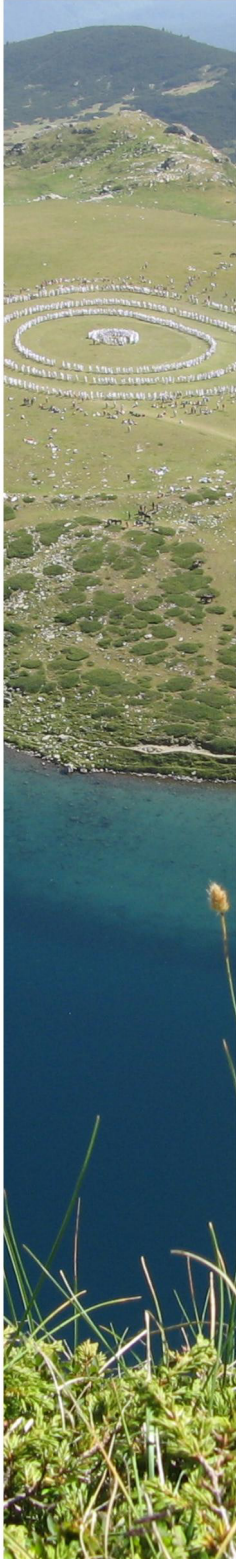
LUDMILA
CHERVENCOVA



Book Summary

PANEURHYTHMY Health and Wellness





About the Author

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Paneurhythmy is a universal physical practice for health of the human body, mind, emotions and spirit.

Paneurhythmy appeared and developed as a system of exercises in the cultural environment of an ancient European and Christian country. It is an attractive European psycho-physical and spiritual practice, similar to Yoga in Asia, but originating from the Christian tradition and Western cultural heritage. That's why Paneurhythmy may be called the Yoga of the West.

Paneurhythmy attracts the attention of people from all over the world who study it in courses and practice it. For about 80 years from its appearance it has already been spread in countries on the 5 continents. It has the amazing potential to make life more meaningful, joyful and beautiful uniting people from different races, sexes, ages, nationalities and religions.

Ludmila Chervencova

Book Summary

PANEURHYTHMY

HEALTH AND WELLNESS

A BULGARIAN MODEL OF PHYSICAL ACTIVITY

BIALO BRATSTVO PUBLISHERS

Sofia, 2020

The present text presents a summary of the book “Paneurhythmy, Health and Wellness: a Bulgarian model of Physical Activity” by Ludmila Chervencova, published in 2013 in Sofia by “St Kliment Ohridski” University Press (in Bulgarian). The Summary is made by the author.

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Book Summary

Paneurhythmy, Health and Wellness: a Bulgarian Model of Physical Activity by Ludmila Chervencova

Paneurhythmy is a universal physical practice for health of the human body, mind, emotions and spirit. It is impressive in its effectiveness and has a positive impact on one's physical, psychological and social state.

Paneurhythmy appeared and developed as a system of exercises in the cultural environment of an ancient European and Christian country. It is an attractive European psycho-physical and spiritual practice, similar to Yoga in Asia, but originating from the Christian tradition and Western cultural heritage. That's why Paneurhythmy may be called the Yoga of the West.

Paneurhythmy attracts the attention of people from all over the world who study it in courses and practice it. For about 80 years from its appearance it has already been spread in countries on the 5 continents. It has the amazing potential to make life more meaningful, joyful and beautiful uniting people from different races, sexes, ages, nationalities and religions.

The monograph which Summary you are reading now is the first in its kind theoretical and empiric research of Paneurhythmy that traces the mechanisms of its impact in details and gives the results of the newest studies of that unique Bulgarian model of physical activity.

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Introduction

Many exercises and activities have a complex positive impact on both physical health and the emotional and mental state, even on the social welfare of their practitioners. The international scientific community nowadays is in search and in study of such psychophysical activities, realizing their potential and benefits. That is proven by the growing number of scientific publications and researches about such practices that have a global impact on human health. The detailed research of activities like Yoga, Folk dancing, Paneurhythmy, Tai Chi and other eastern martial arts provides the opportunity to assess in details and make full use of their maximum potential impact by identifying their specific advantages and disadvantages associated with a certain health condition, age or other social parameters. As a relatively new mind-body practice Paneurhythmy is the least known and studied of the above-mentioned activities.

The over 80 years' experience in practicing Paneurhythmy in Bulgaria and the existing scientific publications prove it to be an accessible and highly effective practice that has an integral effect on health. After the democratic changes in Bulgaria, the Bulgarian society rediscovers Paneurhythmy, which was known only to a few people in the totalitarian communist regime. Since 1989, the number of those who practice Paneurhythmy in Bulgaria has been gradually increasing and the interest towards it in the Bulgarian cultural and scientific circles has been arising.

Paneurhythmy attracts the attention of people from all over the world. Since 1939 it has been gradually spread outside Bulgaria and it has been practiced in dozens of countries throughout Earth.

The present Monograph is another step that we make towards the Paneurhythmy interpretation in the perspective of

modern scientific achievements. Our many years' experience in practicing, teaching and studying Paneurhythmy shows us that Paneurhythmy is quite actual today, because in a very accessible, effective and beautiful way it meets most of the essential conscious needs of the contemporary person. On the other hand, Paneurhythmy is a completely unique system for physical activity that integrates the physical, mental, social and spiritual improvement. It combines in a brilliant way a considerable number of natural methods for bettering one's psychophysical state and health that are proven to be productive and useful. All that makes us assert that Paneurhythmy deserves to be an object of even more diligent scientific research and to take its honored place among all other similar better-known practices in the world that enrich the world community in the terms of culture and health.



Holiday Paneurhythmy at the plateau by the lake “Babreka”
in the Rila Mountain (Photographer: Toshko Martinov).

IMPACT OF PHYSICAL ACTIVITY ON HEALTH

Maintaining of regular and sufficient physical activity is a key factor for both physical and psychic health and wellbeing in any age.

It is important to remember that many significant health benefits are achieved as a result of passing from a sedentary way of life to minimal levels of physical activity. That is why persons who have a sedentary way of life should be encouraged to first achieve the next higher level of physical activity possible for them, even if it does not cover completely the levels recommended for them in principle.

For more adults (older than 18 years) it is recommended to do programs of physical activity that endorse exercises of average intensity and greater duration. These types of programs, in comparison with the programs containing exercises of higher intensity and smaller duration, are better for general physical fitness and safer for the health of most adults, due to the great percentage of them who along with their sedentary way of life have at least one factor for a cardiovascular disease.

Physical activities like dances and tai-chi that are similar in some of their features with Paneurhythmy, exercise a huge positive impact, not only on the physical, but also on the psychic and social health of their practitioners. Paneurhythmy has significant differences and advantages as compared to those practices and it will be useful to also research in detail its influence on people.



The author of Paneurhythmy, yet at the beginning of the last century, exposed a theory according to which physical activity is of key importance for one's physical and psychic health. He considers that the lack of enough movement leads to health issues, while the suitable physical activities regulate blood circulation, help integrate the functions of different body systems, consolidate will power, make thoughts stronger and beneficially affect emotions. P. Danov sees the stronger healthy effect of definite movements in the following basic things: movements should be rhythmical and musical; they should be performed in good mood and also done in awareness. He recommends to his listeners for the purposes of preserving health and increasing the work capacity to do either separate physical exercises or complexes of them, to do also breathing exercises, singing, walks, excursions in the mountain, and Paneurhythmy,

Maintaining of regular physical activity is a health-related behavior. In the current conditions of life, with unwillingly increasing physical inactivity of population, beginning and maintaining of regular physical activity is a key to good health. Paneurhythmy as a practice has important qualities, giving it the perspective to be added to the useful physical activities that are accessible to a large range of people, so that it makes it easier and more probable to be practiced on a regular basis.



Paneurhythmy (Photographer: Zhsivko Stoilov).

PANEURHYTHMY – CONCEPTION AND MODERN LOOK

What is Paneurhythmy?

Paneurhythmy represents a unique Bulgarian system of callisthenic musical exercises that are performed in a group (in pairs arranged in a circle) out in nature. It combines music, movement, thought, and word in harmonic oneness and it is laid on a profound philosophical foundation.

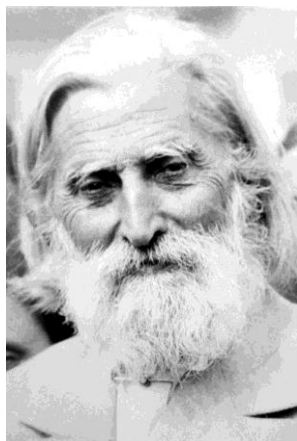


The first part of Paneurhythmy (“28 exercises”). Paneurhythmy in Plovdiv, Bulgaria (Photographer: Zhsivko Stoilov).

Paneurhythmy was created in Bulgaria in the first half of XX c. by Petar Danov (1864-1944), known also as Beinsa Duno. In his youth he received his musical, theological, and medical education and later he became famous as the founder of a unique spiritual school that he personally ran over 22 years in Bulgaria. P. Danov left a rich spiritual and cultural legacy – almost 4,000 lectures, published in more than 250 volumes; as well as articles; conversations; letters, specific musical works; Paneurhythmy, and others. For his encyclopedic knowledge, wisdom and his unusual gifts and virtues, he was respectfully

called “the Master” by his followers and those who sought his help, advice, healing, and guidance.

The respect and recognition received by P. Danov far exceeded the boundaries of Bulgaria. which is proven by the many translations of his works in foreign languages and the interest to them in different parts of the world. It is considered that P. Danov is the most translated and read Bulgarian author abroad. It is worth mentioning that yet in the distant 1939 professor Alfred Lomoni from the University of Toulouse defined the ideas of P. Danov as “needed for the revival of culture and opening of new horizons before the humankind”. Pope John XXIII stated that P. Danov was the greatest philosopher of the “today’s epoch”.



Paneurhythmy exercises are performed in nature, in the morning, from March 22nd to September 22nd (in the Northern hemisphere of Earth). The music to them is specially composed by the author and is closely related to the movements and core messages of the exercises; that is why, they are always played to that music. In the performance of Paneurhythmy participants move mainly in a circle in the center of which there are musicians. The movements are light and precisely aligned to the lyrics; they are performed rhythmically in slow to moderate tempo, in upright stand of the body, and they comprise a great variety of independent and (more often) combined movements of the limbs.

Paneurhythmy consists of three parts, which are performed altogether for about 70-80 minutes, one after the other in the following order: Part I (entitled “The 28 Exercises”); Part II (“The Sun Rays”), and Part III (“The Pentagon”). The three

parts have different exercises with different durations, characteristics and arrangement of participants.

Every Paneurhythmy exercise has a fundamental philosophic idea that is expressed through its music, movements, title and lyrics. P. Danov explained that “the movements are like a quiet speech” to be studied and each of them reveals a certain idea and thought.

All exercises as well as the three parts of Paneurhythmy are set in a meaningful order reckoned to ensure both practical aims and ideological integrity of the Paneurhythmy complex.

Paneurhythmy is laid on a profound philosophical foundation and it ranks it among the free time psychophysical practices, which exercise a more complex impact on people like tai chi, yoga and others. The teaching given by P. Danov that stands in the base of Paneurhythmy is a spiritual teaching postulating that the human being is a spiritual being whose soul unlike the body is immortal. He said, “I preach a teaching of the development of soul, mind, and heart. It is a teaching that brings calm to the heart, light to the mind, renewal to the soul, and empowerment to the spirit”.

Paneurhythmy attracts the attention of people from all over the world who study it in workshops and practice it – it is present in countries on the five continents. It is a universal physical practice that can unite people of different races, sexes, ages, nationalities, and religions.

Paneurhythmy aims at harmonizing one’s physical, emotional, mental and “spiritual” state. P. Danov said about the spiritual, “The sublime, beautiful, pure in a person, that is the spiritual within oneself. It represents the true human being.” According to him, one’s spiritual life gives meaning to the physical life.

Brief Analysis of the Paneurhythmy Complex of Exercises

General Description. Paneurhythmy is performed collectively in pairs. In most cases they move in a circle in the center of which the musicians (instrumentalists and often singers or a choir) stand and play the music.



Performance of Paneurhythmy with the biggest number of participants can be seen on 19th of August, when it is played at the plateau by the lake “Babreka” (the fifth of the Seven Rila Lakes) in Bulgaria. On this day, people from all over the world gather there to play Paneurhythmy. On this holiday they are dressed in white, for that color, according to the author of Paneurhythmy, is a symbol of purity, generosity, and harmony.

However, for the everyday performance of Paneurhythmy in the settlements where the groups are smaller, people are dressed in different colors and they usually form only one circle (Photographer: Toshko Martinov).

The Paneurhythmy exercises are played to strictly determined music, in sync with it. Every exercise has its name and main idea to be revealed. The author (and poets) have created verses to the melodies that are performed as songs. Mihalkova (2001) pointed out that the text of the songs contains many positive programs that improve the psychic state during the performance of Paneurhythmy. In its lyrics there are 273

words related to Light (including their repetitions) and 270 words standing for positive feelings (including their repetitions) (Ancheva, 2003, p. 66). Thus, in the net Paneurhythmy performance time of about 60 minutes, practitioners hear and/or sing about Light and positive feelings averagely every 7 seconds at the beginning of their day.

Basic Characteristics of the Paneurhythmy Complex of Exercises

The Paneurhythmy exercises are in an aerobic regime and do not have a competitive character. The tempo of their performance is slow or moderate. The movements are cyclic, rhythmical, and in a physiological volume of motion. Some Paneurhythmy exercises are simpler, so they are executed in the basic planes of motion, while others are more sophisticated. The duration of the whole complex of exercises is about 70 minutes (or more with bigger groups), but the net time is about 60 minutes.

First position: all Paneurhythmy exercises are performed in an upright body position with graceful movements, executed in specified sync with the music.



The exercises are rhythmical, cyclic, dance-like (but they are not danced). They engage almost all muscles and joints of the human body: for the limb muscles they are mainly isotonic, while for the back and abdomen muscles they

are in the most part isometric. Various big and small groups of muscles are involved in Paneurhythmy, so it has an overall impact on maintaining and training the muscularity.

The gait during the entire performance of Paneurhythmy is specific and unusual – the lower limb always touches the ground first with the toes, and then with the whole foot. The

Paneurhythmy complex of exercises sets all joints in motion while adequately maintaining the normal volume of motion of the upper limbs and improving the locomotion of the lower limbs.

Intensity: for persons in young and middle age in good functional state, the intensity of Paneurhythmy is low to medium. For healthy old people in poor physical condition and for persons in any age who have recently passed through heavy diseases or who have health issues, the intensity of Paneurhythmy is supposed to be medium or high.

Low risk of traumatism. Due to the light, not difficult movements with overcoming the body weight and the moderate tempo of performance of Paneurhythmy, it is among the activities of low risk of traumatism and is suitable even for untrained people and for persons with past traumas or with some compensated diseases.

As a rule, Paneurhythmy is performed outdoors early in the morning, which allows one to know beforehand the weather conditions that are important for some chronic diseases.

Other features. Breathing: all exercises are performed with natural breathing. In the Paneurhythmy complex, there are two special breathing exercises which are accompanied by limb movements.

Balance training. The analysis of the Paneurhythmy complex of exercises shows that it has great possibilities for improving the static and dynamic balance. Paneurhythmy contains balance training with multi-task exercises, performed in upright position with a reduced base of support, loading the postural muscle groups, and with existing dynamic moments, deviating the total body's center of mass in position or in motion. A more detailed analysis of the Paneurhythmy potentials for balance training is given along with the results of the tests for balance in this summary.

Accessibility. The Paneurhythmy exercises are accessible for persons of any age: from children to old people. The experience shows that children of late pre-school and elementary school age are capable of learning and practicing the Paneurhythmy exercises. Practicing Paneurhythmy is well within the reach of healthy old people. P. Danov himself has practiced Paneurhythmy by the last year of his life (includingly), when he was 80 years old. We know persons who participate in Paneurhythmy practice in the age of 89-93.



Paneurhythmy in Rila Mountain (before 1940) - in the middle of the picture, on the left, you can see the group of musicians, and to the right of them, in the circle is Peter Danov.

P. Danov recommended Paneurhythmy as an economical, highly effective, and unique in its results practice: “Paneurhythmy implies economical – not complicated, but expedient movements that give an excellent result.” According to him, Paneurhythmy assists mainly for improving and maintaining people’s health, but it also helps one’s psychic, ethical and spiritual development as well as attainment of virtues. The author of Paneurhythmy said that through its practice, a person can easily acquire inner balance, connect with the ascending creative powers within oneself and in nature, and be youthful.

Specific characteristics and results

The specific characteristics and results of the Paneurhythmy performance are given in Table 1.

Table 1. Specific characteristics and Results of the Paneurhythmy Performance

Specific characteristics	Results
1. Relatively slow and always smooth and light movements	Opportunity for conscious control of movements. Great accessibility with reference to motion (accessible for persons from 5 to 95 years old).
2. Rhythmic performance	Easier to learn. Develops a sense of rhythm and a sense of union through performance in the same rhythm.
3. Specific gait (always stepping on your toes first)	Decreased micro commotions while walking. Improved gait. Strengthened shank muscles.
4. Music is a key element in the exercises	The practice is more pleasant. Music has an emotional and an aesthetic influence. Music therapy.
5. Poetic text and a basic philosophical idea for each exercise.	Influence through the spoken word (the song lyrics, the names of exercises). Adequate thought stimulation and connecting the activity with noble ideas. Development of abstract thinking, seeking correspondence between the ideas, music and motion.
6. A requirement that all movements should be meaningful and beautiful.	Greater involvement of thought. Creativity – participants seek to discover and do those beautiful movements.
7. Outdoor performance in a beautiful natural environment.	Healing effect of the natural factors (sunlight, wind, water, cleanliness, ionization of the air, etc.). Stress relieving and aesthetic influence of the natural environment.

Specific characteristics	Results
8. Geometry and coordination. The exercises are performed in pairs and movements are performed in accordance with many factors requiring time and/or space coordination (with music, the partner in the pair, adjacent pairs, other pairs, the performance of joint geometric figures, outside natural objects).	Conditions are provided for considerable and constant thought involvement of the participants. Development of intellectual skills (space orientation, improvement of concentration of attention, abstract thinking, etc.). Attention span is improved naturally with increased practice, and special skills of awareness to group activities are developed, on several levels.
9. Group performance (approximate number of participants: from 10 to 500-1000 and more) and forming of geometric figures in common.	Very good conditions for development of team-working skills in an informal environment. Social contacts.
10. Performance in pairs which are organized in circles and/or form many groups of 10 or 12 people, arranged in complex regular geometric figures.	Higher requirements for coordinating the individual and collective movements. Great potential for improvement of the concentration and scope of attention. Forming a sense of partnership. Developing an awareness of the social roles.

P. Danov examined profoundly the Paneurhythmy components and ways of impact. According to him, “people of today suffer from not going to nature” and often have small

effectiveness and unharmonious movements devoid of the simultaneous manifestation of thoughts, feelings and actions, but having only one or two of these three components. In this respect, he said, “It is most difficult to coordinate the exercises with the thoughts and feelings” and recommended Paneurhythmy as a highly efficient tool for harmonization of thought, feelings and will power.

The author of Paneurhythmy defines it as a science: “Paneurhythmy is a science that regulates one’s physical, spiritual, and mental functions and is a combination of human thoughts, feelings, and actions,” And also, “You should get acquainted with the scientific side of Paneurhythmy. Nature likes to reach great achievements with the smallest efforts.”



If there is no instrumentalist to perform live music with Paneurhythmy, it is sung and/or played back. Paneurhythmy on March, 25, 2018 in Vitosha Mountain, Bulgaria (Photographer: Christo Vodenicharsky).

EXPANATORY MECHANISMS ABOUT THE IMPACT OF PANEURHYTHMY ON HEALTH AND WELLBEING

Paneurhythmy is an aerobic physical activity with a low to moderate intensity and as such, when practiced regularly, it exercises the positive influence characteristic of such physical activities having similar in type and size workouts.

It would be useful to a great number of practitioners for maintaining their normal joint mobility, improving or maintaining gait, equilibrium, coordination of movements; and to persons who have a sedentary life – for improving their general physical endurance.

The Paneurhythmy workouts would assist in maintaining bone density and prevention of incidences with healthy, physically active persons in advanced age, to whom it is applicable in principle. The calm and light movements along with the not high tempo of performance reduce to minimum the risk of traumatism, even for persons without previous experience in sport activity.

As the performance of Paneurhythmy is with a greater duration and the intensity of loading for healthy persons up to middle age is low to medium; for many of them it can provide considerable physical activity half of the year. It is important that for some of the aged persons, Paneurhythmy has moderate intensity and complies with the recommended safe physical activity level for persons over 18 years of age.

Due to its features, Paneurhythmy is a suitable physical activity for prophylaxis and as a part of the treatment of laboratory controlled arterial pressure in persons having hypertension; for primary and secondary prevention of ischemic

heart disease and diabetes type 2; for maintaining the volume of motion in many joints; for improved body build and increased strength endurance of specific muscle groups; for increased motivation toward a healthier way of living. Due to the wide-ranging beneficial psychic influence of Paneurhythmy, it is expected to give good results in the prevention and overall treatment of a series of somatic diseases, for which not only lack of physical activity, but also certain elements of the psychic state are proven as important factors (such as the ischemic heart disease, arterial hypertonia, atherosclerosis of carotid arteries, diabetes, carcinogenic diseases, and others).

The Paneurhythmy practice has a positive mental impact because it is an aerobic physical activity; then, it is chosen by will; and it is in the forces of performers. It has been established for that kind of activity to have a favorable psychic effect. The Paneurhythmy impact is also increased by listening to special music and singing during performance as well as by its similarities with dance and art therapy, that are separately proven to improve one's psychic state.

According to the specialists, the lyrics of the Paneurhythmy songs have a beneficial psychic effect. As it is practiced in groups, Paneurhythmy has also a social effect. It creates conditions for: finding a supporting social environment and more positive relationships, expanding social contacts and improving social skills during the physical activity and in the free time. Furthermore, during the performance, different role situations are recreated, which support the social relation awareness. Thanks to the necessity of simultaneous alignment during Paneurhythmy of both own movements with the music and with the movements of others, especially during the synchronized performance of group geometric figures of several overlapping levels and increasing complexity, activation of thinking, focused attention and increased awareness is achieved. There is probably a positive impact on the psychic state also due to the fact that Paneurhythmy simultaneously

engages one's thoughts, feelings and body movements, which supports the integration of a person at all levels of functioning. The fact that every Paneurhythmy exercise expresses an elevated idea which also engages one's thought in a positive way and assists the achievement of a useful cognitive redefining, is not of less importance. During the outdoor practice of Paneurhythmy in nature, the influence of physical factors is added (like clean ionized air, more sunshine, etc.); sound therapeutic effect of the natural acoustic environment; restorative, recovering, and stress-reducing effect of the natural green surroundings; in warm weather when practitioners play bare-footed on the grass, there is also a foot massaging effect and healthy exchange of electrons between the human body and Earth. The philosophy standing in the foundation of Paneurhythmy enhances the achievement of a greater personal wellbeing through the process of becoming aware of the key scientifically proven ideas for that in concern of today's people.



Musicians playing during the Paneurhythmy performance in Plovdiv, Bulgaria (Photographer: Zhivko Stoilov).

To summarize, the regular Paneurhythmy practice can provide important and easy to explain opportunities for beneficial influence over the psychic, physical, and social state of practitioners.

HISTORY OF PANEURHYTHMY

Paneurhythmy was created by P. Danov, step-by-step, in the period between 1922-1942 as a system of music and movements. The first books about it were published in 1938, 1941, and 1942. Later, there were issues in



foreign languages and new, better publications in the Bulgarian language. Paneurhythmy has been spreading all over the world since 1938 and today it is practiced on the five continents. The Bulgarian school of Paneurhythmy is the first and best developed despite the historic vicissitudes (45 years of totalitarian regime in the country). Due to the interest of more and more people willing to practice Paneurhythmy, and the experienced teachers of Paneurhythmy who were trained in the circles of P. Danov's followers; due to the activity of non-governmental organizations and the increasing number of university teachers and higher schools in Bulgaria, it laid the beginning of modern group training of teachers of Paneurhythmy and its scientific research. Since 2001, a lot of scientific studies of Paneurhythmy have been published. Thanks to the participation in them of a greater number of competent university teachers, the number of high-quality research works has also been increasing.

SCIENTIFIC RESEARCHES OF PANEURHYTHMY

Representatives of different scientific areas are engaged with the study of Paneurhythmy, which thanks to its rich contents, needs to be investigated by specialists of different humanitarian and medico-biological disciplines. The lyrics of the songs are well analyzed, and, on that ground, it is estimated to have a strong positive impact on human psyches. The beginnings of scientific research of Paneurhythmy music are laid as well. The pedagogues consider Paneurhythmy as an educational system that enriches the modern pedagogic theory and practice.

The results published so far from the experimental researches on the beginner training of Paneurhythmy for adults, show that it can be useful for people with compensated diabetes or increased risk of diabetes. It has a positive effect on one's self-esteem and increase of self-confidence. The activity and mood of people is uplifted even in one Paneurhythmy workout. Our earlier publications of results from a research that was mentioned in the present Summary show an improvement of balance and increase of resistance to stress.

The Paneurhythmy training of children is a central component in a broader educational and training program that contains also other psycho-physical activities; that is why, it is difficult to determine exactly its specific influence. As a result of this program for the elementary education of children what is registered is: development of attention properties: endurance and shifting of attention, development of short audio memory, increase of the speed of solving non-verbal intellectual tasks, maintaining the state of activity, and increase of mental stability,

forming a group cohesion and sense of belonging to school and school life, value adjustment toward nature and environmentally friendly lifestyle, self-control and self-discipline in the course of Paneurhythmy training; beneficial effect on prescoliosis and first degree scoliosis, reduction of anxiety, reducing aggressiveness, increase of motivation for learning and improved social relationships among the children, bettering of the general physical fitness, motor coordination skills and sense of rhythm of students.

The number of scientific publications related to Paneurhythmy has been gradually increasing along with the engagement of more specialists with a higher qualification from different Bulgarian universities. This allows quality improvement of scientific publications and provision of more objective many-sided information about the impact of Paneurhythmy practice.



Petar Danov (1864-1944) and his disciples in Rila Mountain.

METHODOLOGY OF THE RESEARCH

The objective of the Research is to trace the impact of Paneurhythmy workouts on the psychophysical state of practitioners. Two studies were executed – Study I (determining the impact of the Beginner Paneurhythmy training), and Study II (determining the impact of one season Paneurhythmy practice on long-time practitioners). Studies I and II were carried out in the period from 2007 to 2011.

In the course of the big Research (summing up Study I and II) totally 325 persons were studied twice. They were distributed in 4 groups: 2 experimental and 2 control groups. The age range of the researched people is from 18 to 70 years.

Description of the researched groups and their activities

The persons from *the First experimental group* (EG1) were submitted to a Beginner course of Paneurhythmy training organized indoors in the evening. Participants had not practiced Paneurhythmy before the course. The exercise training classes were arranged once (duration 100 min) or twice (duration 90 min each session) a week respectively for 5 or 6 months (October – March or April). The persons from EG1 chose by themselves the type of training they wanted to join: either one workout per week (totally 21 workouts), or 2 workouts a week (totally 33 trainings).

Training included consecutively learning and training of the exercises, songs, names and the basic humanistic messages of all Paneurhythmy exercises (part 1 - “28 exercises”, part 2 - “Sunrays” and part 3 - “Pentagram”). All classes were led by certificated Paneurhythmy instructors. They also kept an attendance record for each of the participants. EG1 included

only participants with not less than 50% attendance at the Paneurhythmy training. The research with the test battery was executed right after the end of training.

The second experimental group (EG2) included persons who before their inclusion in the Research, had practiced Paneurhythmy outdoors and in its completeness for approximately 9 years and not less than 1 season (6 months). They were researched with the test battery right before and right at/after the end of one Paneurhythmy season of 6 months lasting from March 22 to September 22 (in the Northern hemisphere of Earth). The Research was executed right before the beginning and right at the end of the researched Paneurhythmy season. EG2 included persons who had performed not less than 24 Paneurhythmys during the Research.

The first control group (CG1) – the researched people in this group had not practiced Paneurhythmy and were selected to correspond by gender, age, education, state of physical activity and general functional state to the persons of EG1. They were researched twice in the same interval of time and months as EG1.

The second control group (CG2) – the researched people had not practiced Paneurhythmy and were selected to correspond by gender, age, education, and general functional state to the persons in EG2. The persons in CG2 were researched twice in the same interval of time and months of the year as those in EG2.

Selection of the researched persons

The persons in EG1 and EG2 were volunteers – they wanted voluntarily to attend the publicly announced experimental training of Paneurhythmy or respectively the announced 6-month Research of Paneurhythmy practitioners. The researched persons in the two control groups were also selected through public announcements and were also

volunteers. For each group there were determined and observed criteria for inclusion and exclusion from the Research.

Methodological tools

For the objectives of the Research a test battery was specially prepared and applied twice to all researched groups. It consists of physical tests and questionnaires (psychological tests and other tests), which are shortly described below. The tests used in the Research are given in details in the Annexes of the book.

Test battery

Anthropometric tests

Height

Body weight

Static Balance Tests

Tandem Stance Eyes Closed (Tandem EC)

Unipedal Stance Test on foam surface

Eyes Open (Unipedal Stance EO)

Unipedal Stance Test on foam surface Eyes Closed (Unipedal Stance EC)

Unilateral Forefoot Balance Test (Unilateral Forefoot BT)

Flamingo Balance Test (Flamingo BT)

Dynamic Balance Tests

Four Square Step Test (FSST)

Timed Up and Go Test with manual task (TUGman)

Walking in a Figure of eight Test (Walking8T)

Strength Endurance Tests

Static Strength Endurance (SSE) test of the muscle abductors in shoulder joints

Dynamic Strength Endurance (DSE) test of the muscle flexors in ankle joints

Psychological tests (Bulgarian versions)

State-Trait Anxiety Inventory (STAI –Y)

Perceived Stress Scale (PSS)

Beck Depression Inventory (BDI)

Buss-Durkee Hostility Inventory (BDHI)

Mindful Attention Awareness Scale (MAAS)

Self-Esteem Scale (SES)

General Self-efficacy Scale (GSE)

(Adult) Trait Hope Scale (THS)

Life Orientation Test (LOT-R) (quantifies optimism)

Ego Resiliency Scale (ER89)

Sense of Coherence (SOC-29)

Satisfaction with Life Scale (SWLS)

Positive and Negative Affect Schedule (PANAS)

Inspiration Scale (IS)

Fordyce Emotions Questionnaire (FEQ) (assess the intensity and frequency of happiness)

Subjective Happiness Scale (SHS)

Questionnaires

MOS 36-item short-form health survey (SF-36)

Modified Baecke Questionnaire (measures physical activity)

RESULTS AND ANALYSIS

Results of the physical functional tests

The statistic results of all applied tests and their interpretation are presented in the book.

Results of the Balance tests

Static balance of EG1 и CG1

According to all static balance tests Paneurhythmy trainees (first experimental group – EG1) received a significant improvement after the training, while in the corresponding control group (first control group – CG1) there were no changes for the same period. The results of the static balance tests are illustrated in Fig. 1-4.

Finding statistically significant improvement in the results of all varied static balance tests applied to EG1 in comparison with the lack of any reliable changes in CG1, proves with a very high degree of certainty that the conducted Beginner Paneurhythmy training has improved the static balance potentialities of trainees.

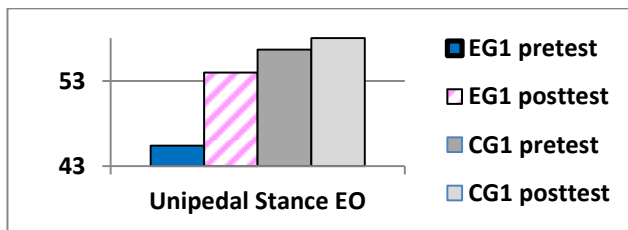


Fig. 1. Mean values of Unipedal Stance Test on foam surface Eyes Open (Unipedal Stance EO) of EG1 and CG1. *Higher value=better functionality.*

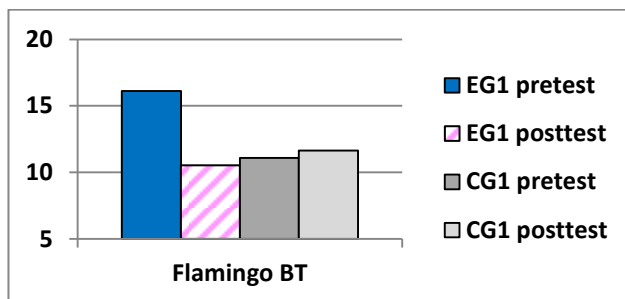


Fig. 2. Mean values of Flamingo Balance Test (Flamingo BT) of EG1 and CG1. *Lower value=better functionality.*

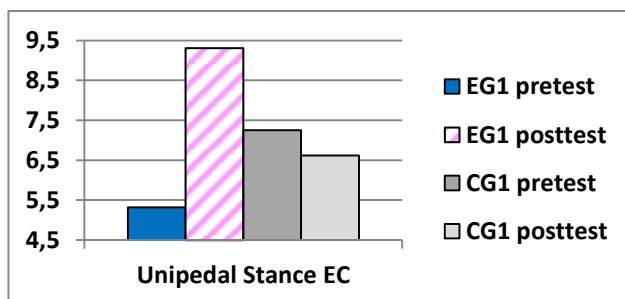


Fig. 3. Mean values of Unipedal Stance Test on foam surface Eyes Closed (Unipedal Stance EC) of EG1 and CG1. *Higher value= better functionality.*

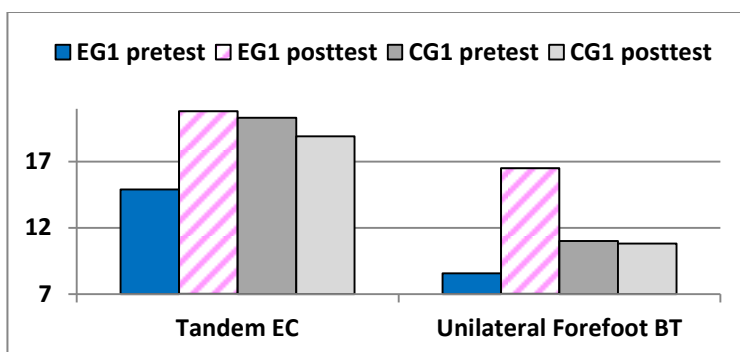


Fig. 4. Mean values of Tandem Stance Eyes Closed (Tandem EC) Unilateral Forefoot Balance Test (Unilateral Forefoot BT) of EG1 and CG1. *Higher value=better functionality.*

Dynamic and functional balance of EG1 and CG1

According to the three applied tests there are no significant changes in CG1, while in EG1 there are considerable changes showing improvement of the dynamic and functional balance as a result of the Paneurhythmy training. The test results are illustrated in Fig.5 and 6:

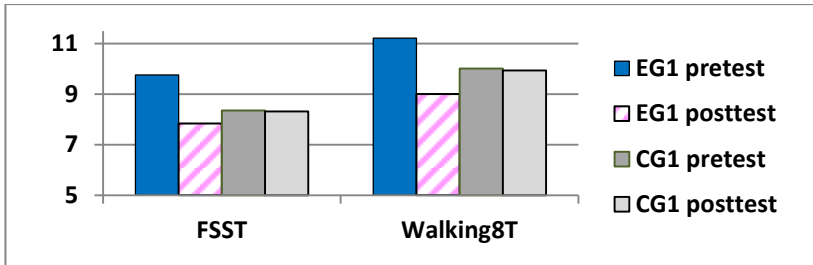


Fig. 5. Mean values of Four Square Step Test (FSST) and Walking in a Figure of eight Test (Walking8T) of EG1 and CG1. *Lower value=better functionality.*

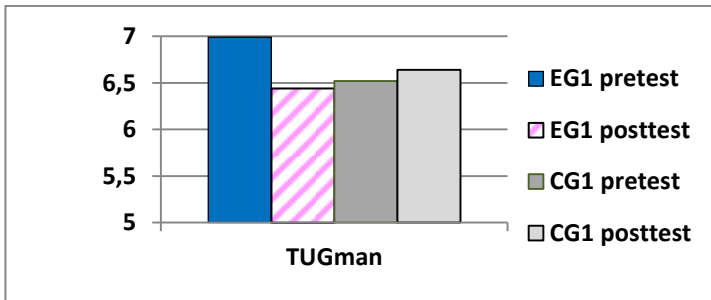


Fig. 6. Mean values of Timed Up and Go Test with manual task (TUGman) of EG1 and CG1. *Lower value=better functionality.*

Finding statistically significant improvement in the results of the experimental group EG1 on three different dynamic balance tests in comparison with the lack of any reliable changes in CG1, proves that the conducted Beginner Paneurhythmy

training has improved the dynamic balance potentialities of trainees. The additional analysis shows that there is significant improvement of the static and dynamic balance abilities of all Paneurhythmy trainees from EG1 regardless of their age.

Static balance of EG2 и CG2

In all static balance tests EG2 (Paneurhythmy practitioners) receive significant improvement during the Research, while CG2 do not have significant changes. Therefore, practicing Paneurhythmy for 1 season (more than once a week) improves the dynamic balance abilities of practitioners. The test results are illustrated in Fig.7-10:

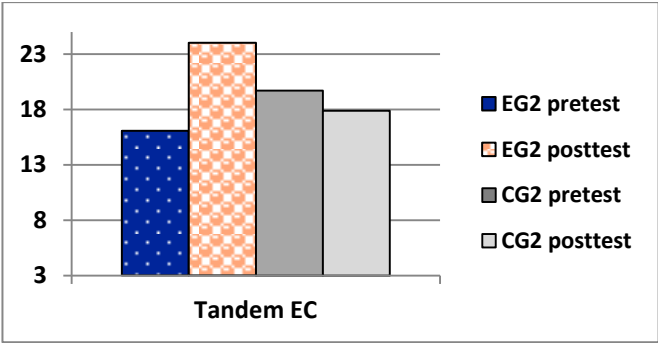


Fig. 7. Mean values of Tandem Stance Eyes Closed (Tandem EC) of EG2 and CG2. *Higher value=better functionality.*

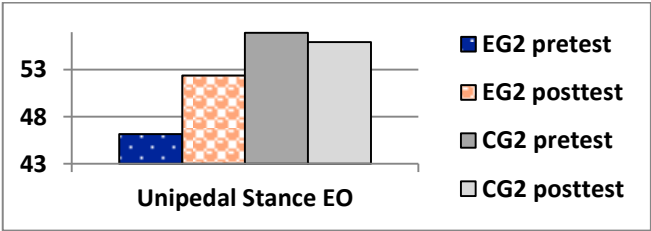


Fig. 8. Mean values of Unipedal Stance Test on foam surface Eyes Open (Unipedal Stance EO) of EG2 and CG2. *Higher value =better functionality.*

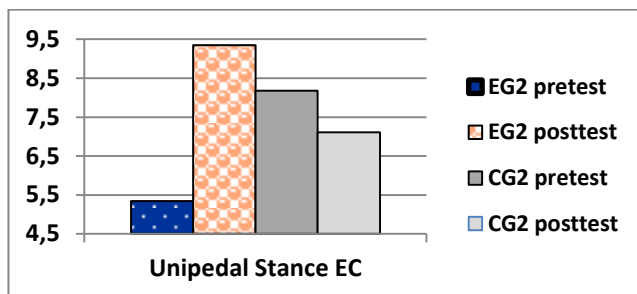


Fig. 9. Mean values of Unipedal Stance Test on foam surface Eyes Closed (Unipedal Stance EC) of EG2 and CG2. *Higher value=better functionality.*

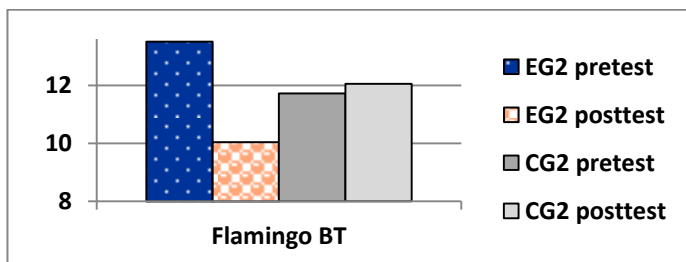


Fig. 10. Mean values of Flamingo Balance Test (Flamingo BT) of EG2 и CG2. *Lower value=better functionality.*

Dynamic and functional balance of EG2 and CG2

During the Research (in the period from March to September) CG2 and EG2 have improved statistically significantly their dynamic balance. But the Paneurhythmy practitioners have improved their dynamic balance abilities statistically more significantly than their control group. For one season, there is improvement of the static and dynamic balance abilities of both the young and the more aged Paneurhythmy practitioners. The test results are illustrated in Fig. 11.

The additional analysis, which we did shows that the results of the applied static and dynamic balance tests are with statistically significant improvement even of the youngest group

of researched persons (18-33 years old) who were trained in Paneurhythmy.

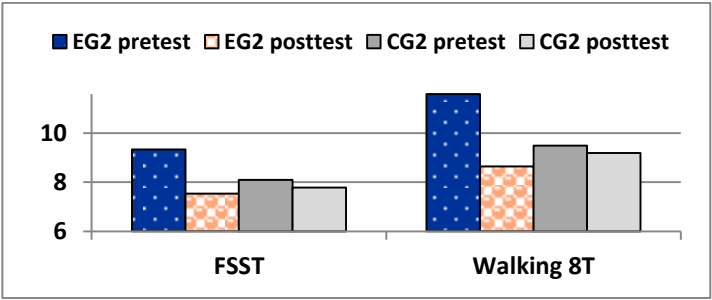


Fig. 11. Mean values of Four Square Step Test (FSST) and Walking in a Figure of eight Test (Walking 8T) of EG2 and CG2. *Lower value=better functionality.*

Characteristic features of Paneurhythmy connected with balance training

The Paneurhythmy exercises that require most balance efforts are difficult enough to train the balance of even younger persons in good health and condition. On the other hand, some of the balance requiring details of those exercises can be spontaneously and easily modified or not performed by the persons who find them very difficult and in this way, they have the opportunity to participate in Paneurhythmy. Due to this peculiarity, it is possible for people with great differences in their balance motor skills to play Paneurhythmy at the same time and each of them has conditions for improving their functional state.

Our results are evidence that both practice and training of Paneurhythmy improves the static and dynamic equilibrium.

Table 2 presents the characteristic features of Paneurhythmy that account for its strong effect on balance training.

Table 2. Characteristic features of Paneurhythmy connected with balance training

PANEURHYTHMY FEATURES CONNECTED WITH BALANCE TRAINING	
Position of the body	standing position without support that requires balance
Specific gait	always stepping on toes first (changes the BOS and lifts total body's COM)
Dynamic and weight shifting balance exercises	progressive reduced support base, movements executed with all body (with or without stepping) combined usually with movements of extremities shift COM in the anterior-posterior, mediolateral, up-down or more complex directions
Base of support	reduced in very different configurations (some shapes of BOS reduce stability in anterior-posterior, mediolateral or more complex directions) and this trains better balance
Moderate or high challenge to balance	groups with different equilibrium abilities; persons with lower balance abilities can be unaided to facilitate execution of exercises too difficult for them
Surface	for beginners: in a hall with hard flat surface; real Paneurhythmy practice (more challenging for balance): outdoors on a meadow/glade which is not so flat (there is always some unusual roughness), nor hard (because of the grass)
Dual- and multi-tasking balance exercises	serious cognitive engagements with wide range of cognitive tasks: practitioners gradually have to pay attention and coordinate their movements to more surroundings (coordination with music, partner, terrain, distance to the next couples, consciousness of geometric adjustments like all circle, straight lines and even more complex and challenging figures; detach from distractive outside stimuli)

Notes: BOS - base of support; COM - total body's center of mass.

The practice of Paneurhythmy has potentials to improve or maintain other important factors for good balance in late age like leg strength, endurance, flexibility of leg joints and agility. In this area, more researches are needed.

Falls prevention exercise should be targeted not only at those at high risk for falls, but at the general community as well (Sherrington et al. 2011). It is economical to recommend for the general community a wide range of appropriate balance training physical activities, which are effective in the early prevention stage, and which are cost-effective as well as attractive enough to become an ongoing exercise.

Paneurhythmy seems to be a promising physical activity to keep fit in locomotion and balance and to prevent bone loss, because it improves balance and is a safe weight bearing exercise for physically active middle-aged and older persons. It may directly prevent the decline in physical functioning and mobility. Paneurhythmy is extremely economical and inexpensive since it does not require any special outfit, equipment or sport terrain. Paneurhythmy is enjoyable, socializing and with wide and powerful positive influence on psychological state too. All this improves motivation and increases potentiality for Paneurhythmy to be practiced regularly for a long time period which is very important for every prophylactic exercise program.

Results of the strength endurance tests

Strength endurance (SE) of EG1 and CG1

As a result of the Beginner Paneurhythmy training, there is improvement of the static strength endurance (SSE) of abductor muscles (AM) in the practitioners' shoulder joints (SJ) and improvement of the dynamic strength endurance (DSE) of their flexor muscles (FM) in ankle joints (AJ). At the same time, there

are no such changes in CG1 except a significantly worsened result of the SSE test related to the abductor muscles in shoulder joints (SJ). These results show that the Paneurhythmy training has improved SSE of abductor muscles in SJ and dynamic SE of flexor muscles in AJ of the trainees. The test results are illustrated in Fig. 12 and 13.

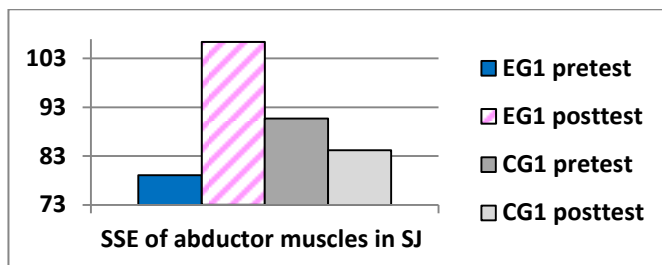


Fig. 12. Mean values of SSE of abductor muscles in SJ of EG1 and CG1. *Higher value=better functionality.*

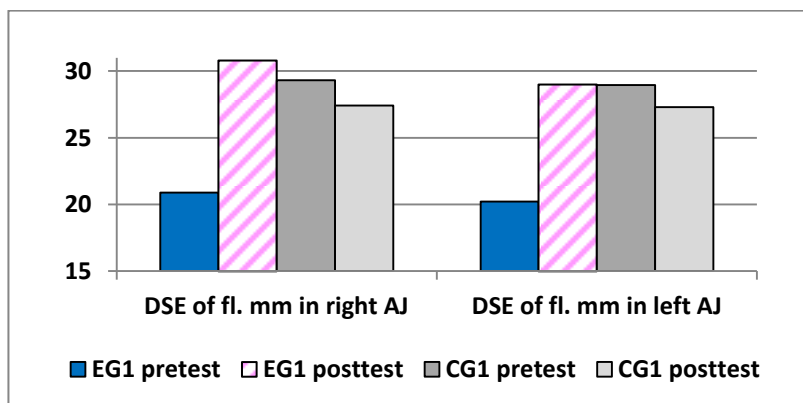


Fig. 13. Mean values of DSE of flexor muscles in AJ of EG1 and CG1. *Higher value=better functionality.*

Strength endurance (SE) of EG2 and CG2

Practicing Paneurhythmy for one season (6 months) improves the static SE of abductor muscles in both SJ and the dynamic SE of flexor muscles in both AJ of the practitioners

from EG2. At the same time, there are no statistically significant changes in CG2 except an improvement of the dynamic SE of flexor muscles in the right AJ, which however, is significantly less than the improvement of EG2 at the same test. The test results are illustrated in Fig, 14 and 15.

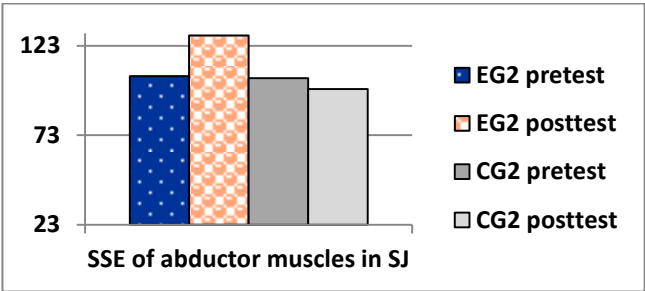


Fig. 14. Mean values of SSE of abductor muscles in SJ of EG2 and CG2. *Higher value=better functionality.*

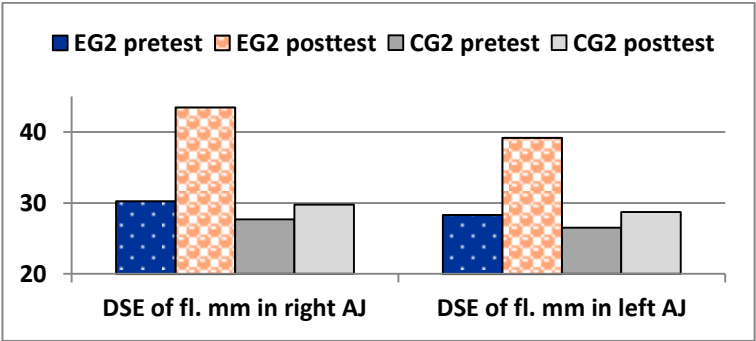


Fig. 15. Mean values of DSE of flexor muscles in AJ of EG2 and CG2. *Higher value=better functionality.*

The strength endurance improvements, recognized in the Paneurhythmy trainees and practitioners are characteristic not only for the young, but also for the more aged of them.

Psychological test results

Psychological test results of EG1 and CG1

As a result of the beginner training of Paneurhythmy, the persons from EG1 have a statistically significant reduction in the values of all features that reflect negative psychological conditions, which means improvement of their psychological state (fig. 18-21). There are statistically significant improvements of the Paneurhythmy trainees (EG1) according to all next tests reflecting positive psychological features. At the same time, there are not statistically significant changes in either of the features with the control group (CG1) (fig. 22-31).

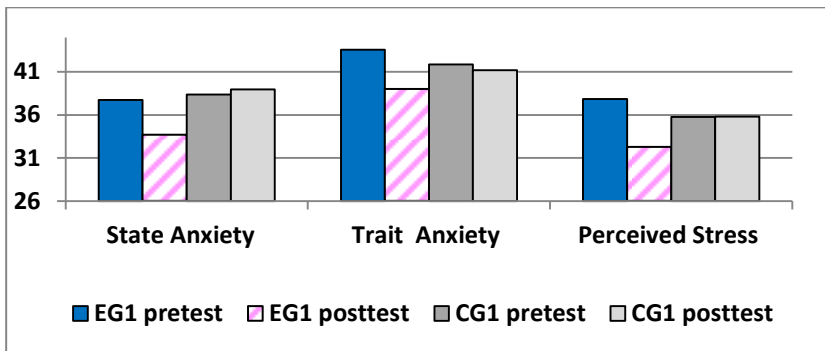


Fig. 18. Mean values of State Anxiety, Trait Anxiety and Perceived Stress of EG1 and CG1. *Lower value=better functionality.*

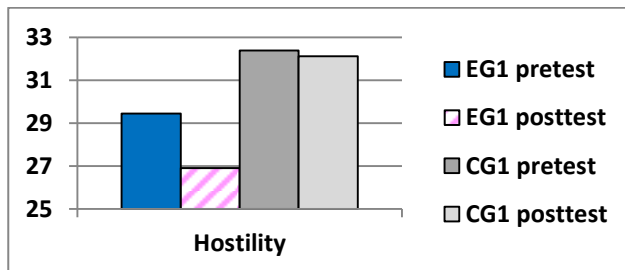


Fig. 19. Mean values of Hostility Inventory (BDHI) of EG1 and CG1. *Lower value=better functionality.*

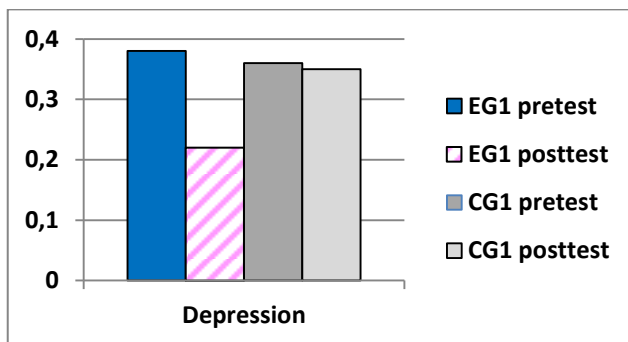


Fig. 20. Mean values (for a single item) of Depression (BDI) of EG1 and CG1. *Lower value=better functionality.*

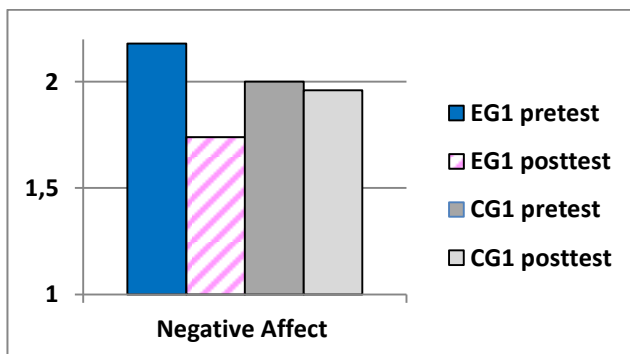


Fig. 21. Mean values (for a single item) of Negative Affect (PANAS) of EG1 and CG1. *Lower value=better functionality.*

The Beginner Paneurhythmy training enhances the situational awareness of trainees, which experimentally proves that Paneurhythmy has common characteristics with the awareness-based therapies and adds to the theoretical suggestions about certain closeness of Paneurhythmy to them. We think that the clearer awareness of what is going on “here now” prevails when practicing Paneurhythmy due to the many practical mental tasks which are set in any moment of its performance: the correct first position (one’s own and of the

group), controlling the direction, amplitude, form and preciseness of one’s own movements (at the moment) and their attunement to the musical rhythm and phrases, synchronization and interaction with a partner, bigger group and all participants, requirement for good order in the group geometrical figures (attention is required to several levels simultaneously in the group geometrical formations), etc.

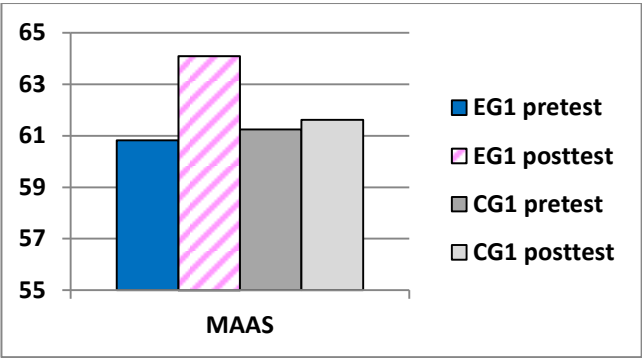


Fig. 22. Mean values of Mindful Attention Awareness (MAAS) of EG1 and CG1. *Higher value=better functionality.*

Additionally, comes the need of increased care for what is happening in any moment in the beginner training due to learning of many new movements and considering the specific way of treading.

All that probably stimulates trainees to create a habit of greater awareness of their own state and that of the things happening at the moment. On the other hand, Mihalkova (2000) formulates that one of the positive psychological effects of the lyrics of Paneurhythmy songs is the awareness of the idea of the consciousness being “here now”. She emphasizes that the songs are in the present tense (so one can be aware of the preciousness and uniqueness of the present moment) and in this way, the principle “here now” is applied directly and credibly. The

trainees sing the Paneurhythm or at least, at the beginning, they listen to the songs during the training.

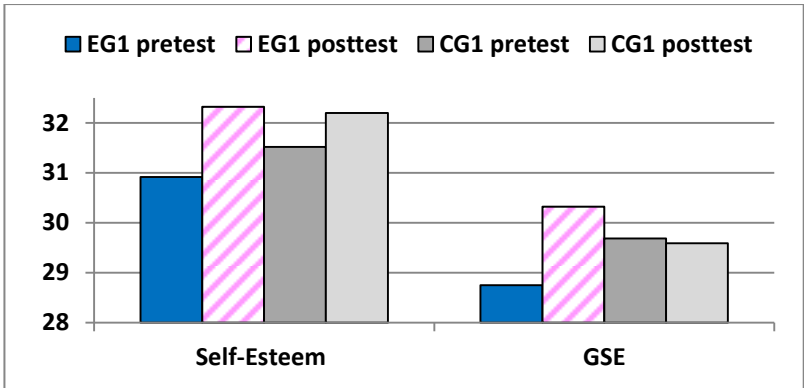


Fig. 23. Mean values of Global Self-Esteem (SES) and General Self-efficacy (GSE) of EG1 and CG1. *Higher value=better functionality.*

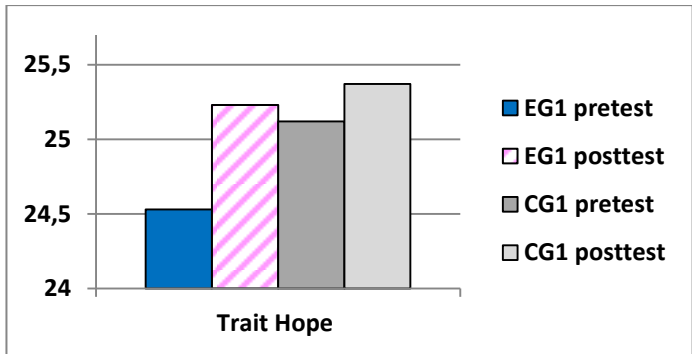


Fig. 24. Mean values of Trait Hope (THS) of EG1 and CG1. *Higher value = better functionality.*

It was found that the 5-6-month Beginner training of Paneurhythm considerably increases both the psychic adaptability of trainees (fig. 26) and their sense of coherence (fig. 27). That is proof that the Beginner training of Paneurhythm is a successful tool for stress reduction that

increases the ability of coping with life stressors and maintaining health despite them.

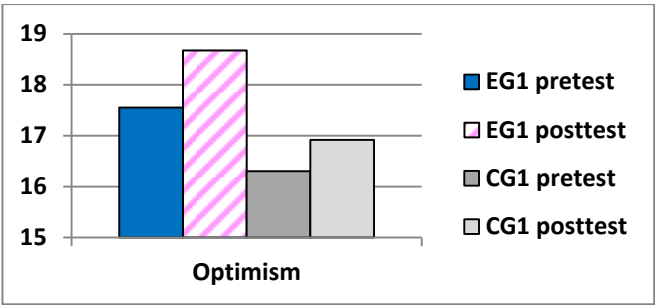


Fig. 25. Mean values of Optimism (LOT-R) of EG1 and CG1. *Higher value=better functionality.*

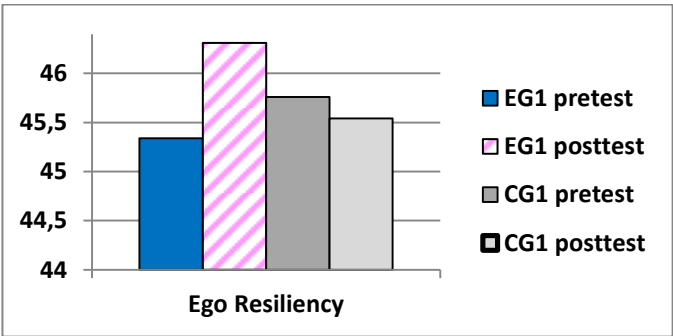


Fig. 26. Mean values of Ego Resiliency (ER89) of EG1 and CG1. *Higher value=better functionality.*

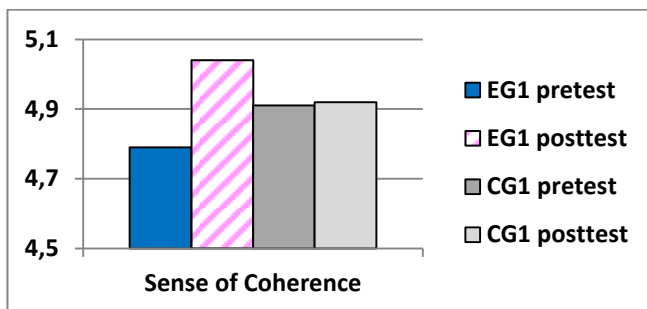


Fig. 27. Mean values of Sense of Coherence (SOC-29) of EG1 and CG1. *Higher value=better functionality.*

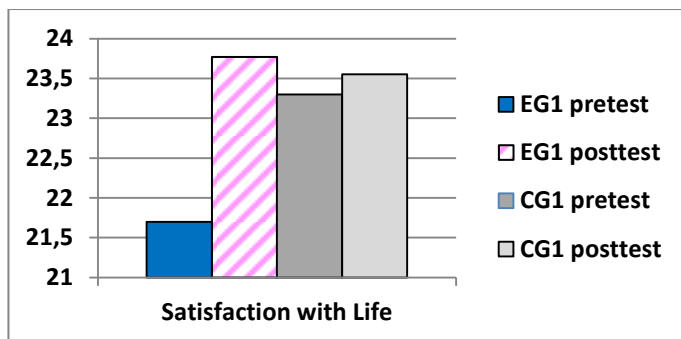


Fig. 28. Mean values of Satisfaction with Life (SWLS) of EG1 and CG1. *Higher value=better functionality.*

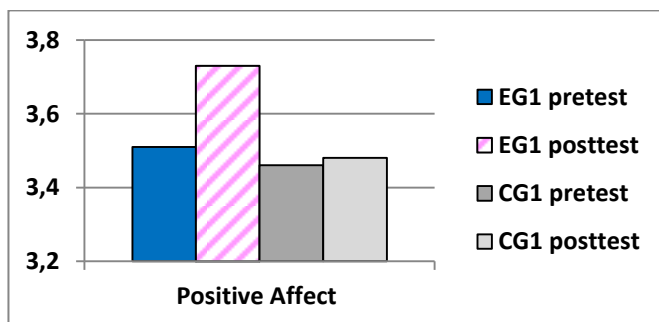


Fig. 29. Mean values (for a single item) of Positive Affect Schedule (PANAS) of EG1 and CG1. *Higher value=better functionality.*

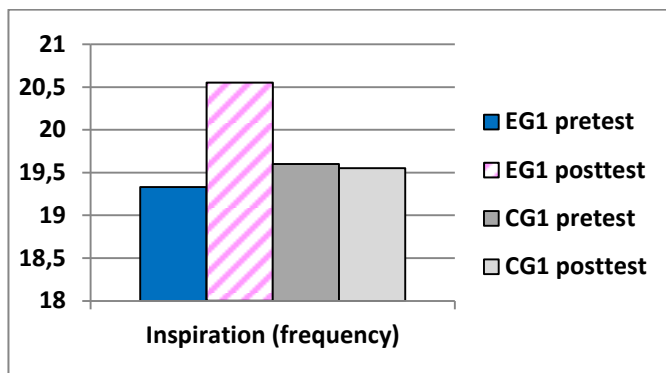


Fig. 30. Mean values of Inspiration (frequency) of EG1 and CG1.
Higher value=better functionality.

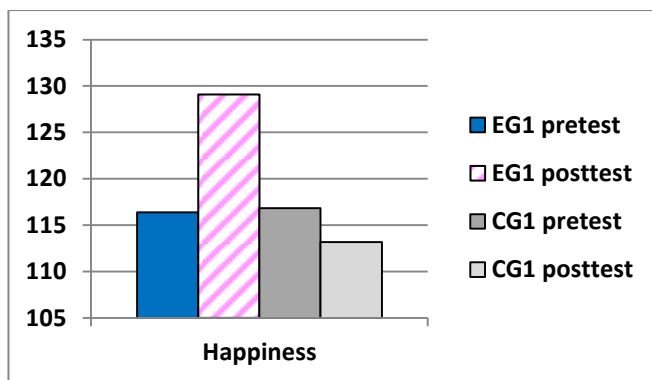


Fig. 31. Mean values of happiness (FEQ) of EG1 and CG1.
Higher value=better functionality.

Summary of the psychological test results of the Paneurhythmy trainees (EG1) and their control group (CG1)

The control group (CG1) has not shown any statistically significant changes (neither improvements, nor deteriorations) in any of the psychological tests. It was found out that there was

improvement of the psychic features of trainees as a result of the conducted Beginner training of Paneurhythmy as follows:

- Reduction of state and trait anxiety;
- Reduction of perceived stress;
- Reduction of depression symptoms;
- Reduction of hostility;
- Increase of mindful attention awareness;
- Increase of global self-esteem;
- Increase of general self-efficacy;
- Increase of trait hope ;
- Increase of dispositional optimism;
- Increase of ego resiliency;
- Increase of sense of coherence (how people cope with stress);
- Increase of satisfaction with life;
- Increase of positive affect;
- Reduction of negative affect;
- Increase of happiness (measured with FEQ);
- Increase of frequency of inspiration.

All results that we attained indicate that the applied 5-6-month Beginner training of entire Paneurhythmy has not worsened any of the many investigated psychic features but has significance in value and noticeable in range positive impact upon the psychic state and health of the trained adults. Without requiring a lot of effort, this training improved the overall mental state in the desired healthy direction.

Psychological test results of the Paneurhythmy practitioners (EG2) and their control group (CG2)

Figures 32-47 illustrate the average values of the psychic features of EG2 and CG2.

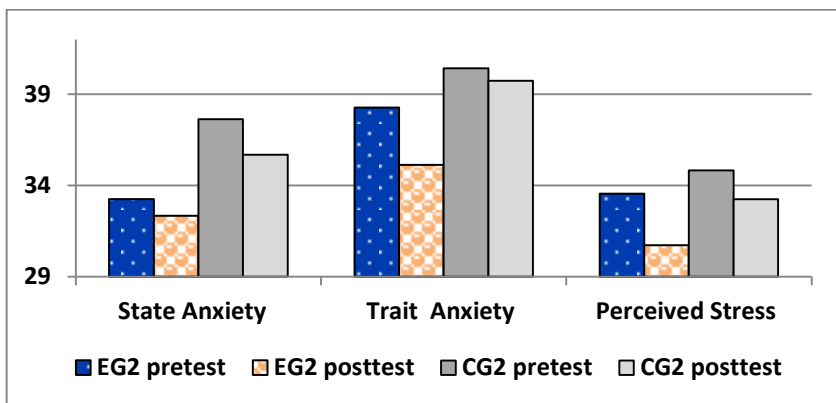


Fig. 32. Mean values of State Anxiety, Trait Anxiety and Perceived stress of EG2 and CG2. *Lower value=better functionality.*

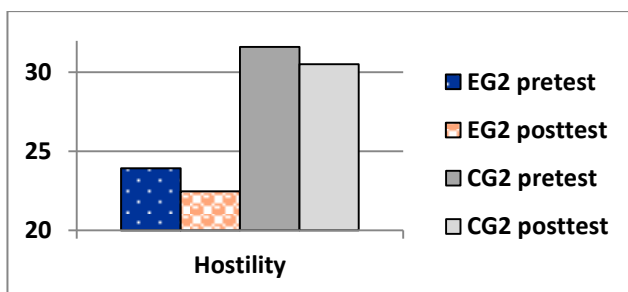


Fig. 33. Mean values of Hostility Inventory (BDHI) of EG2 and CG2. *Lower value=better functionality.*

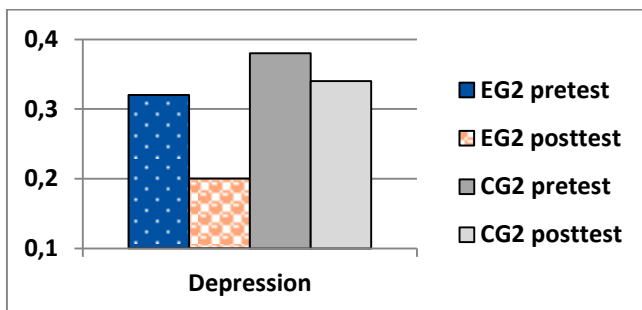


Fig. 34. Mean values (for a single item) of Depression (BDI) of EG2 and CG2. *Lower value=better functionality.*

Regarding *depression* we should note that the investigated persons of EG1, EG2, CG1 and CG2 did not have clinical depression. It was found out that both the Beginner training of Paneurhythmy in the autumn and winter seasons and its practice for one season by more advanced participants reduced significantly depression symptoms.

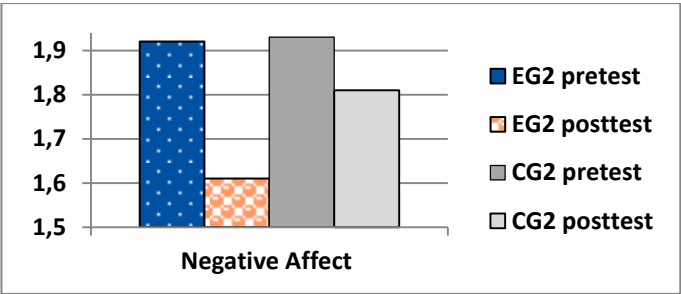


Fig. 35. Mean values (for a single item) of Negative Affect (PANAS) of EG2 and CG2. *Lower value=better functionality.*

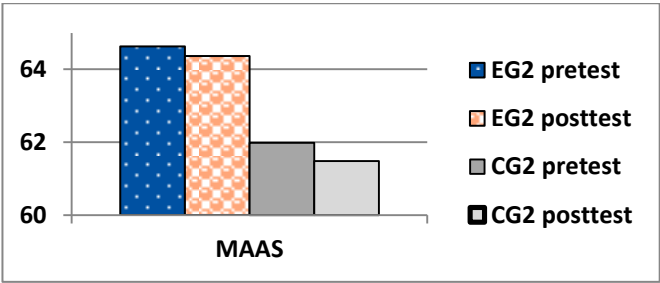


Fig. 36. Mean values of Mindful Attention Awareness (MAAS) of EG2 and CG2. *Higher value=better functionality.*

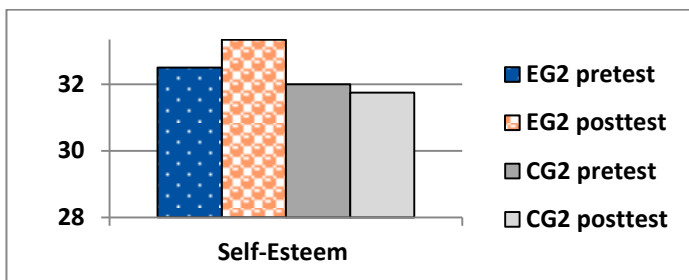


Fig. 37. Mean values of Global Self-Esteem (SES) of EG2 and CG2. *Higher value=better functionality.*

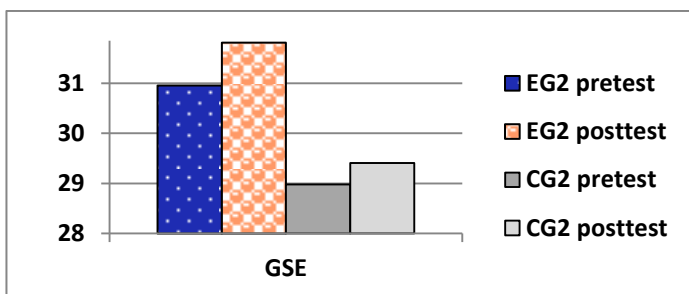


Fig. 38. Mean values of General Self-efficacy (GSE) of EG2 and CG2. *Higher value=better functionality.*

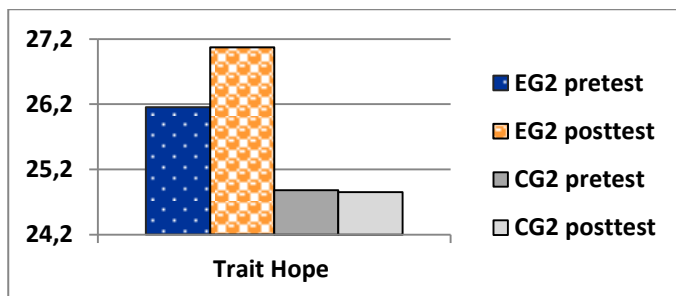


Fig. 39. Mean values of Trait Hope (THS) of EG2 and CG2. *Higher value =better functionality.*

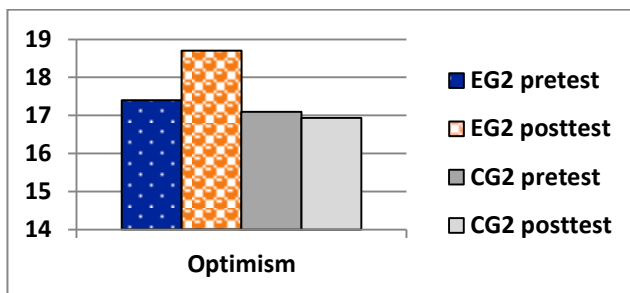


Fig. 40. Mean values of Optimism (LOT-R) of EG2 and CG2. *Higher value=better functionality.*

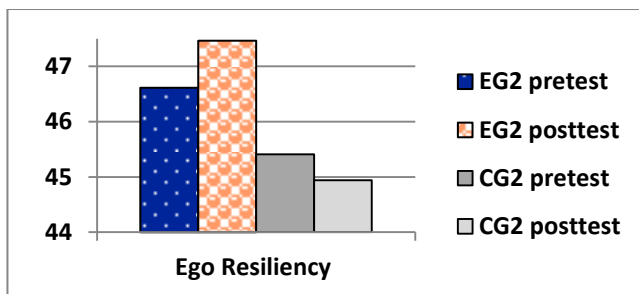


Fig. 41. Mean values of Ego Resiliency (ER89) of EG2 and CG2. *Higher value= better functionality.*

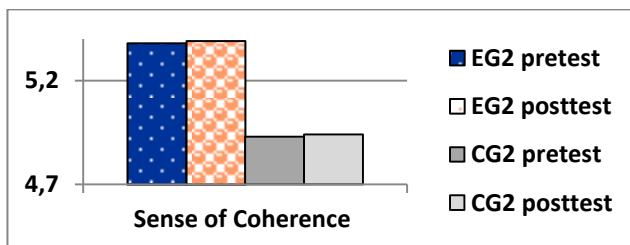


Fig. 42. Mean values (for a single item) of Sense of Coherence (SOC-29) of EG2 and CG2. *Higher value=better functionality.*

The term “resiliency” was used for the first time in psychology by D. Block in its broader meaning of “resourcefulness, adaptability, and commitment to the world”.

“Resiliency” is further used in psychology just in the sense of ability for fast recovery after a psycho trauma or crisis.

The content of the test questions about Ego resiliency ER89 (the test used by us) suggests that individuals with high resiliency live a life filled with energy and passion, being inquisitive and open to new experiences; they recover immediately after stressful experiences and do not hide anger; they are kind to themselves and others, like those around and are generous to them (Block & Kremen, 1996).

The results attained by us show that both the Beginner training of Paneurhythmy and its practice for one season increase significantly the Ego resiliency of the practitioners; i.e. increase their interest in life and their ability for successful adaptation, regardless of the serious challenges or threats of their surroundings.

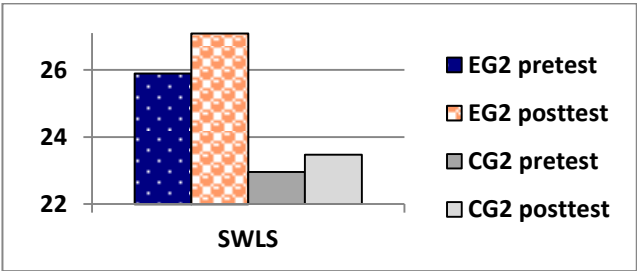


Fig. 43. Mean values of Satisfaction with Life (SWLS) of EG2 and CG2. *Higher value=better functionality.*

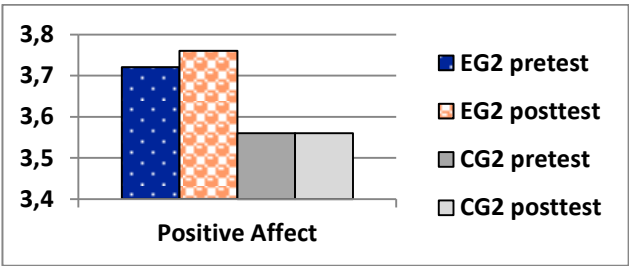


Fig. 44. Mean values (for a single item) of Positive Affect Schedule (PANAS) of EG2 and CG2. *Higher value=better functionality.*

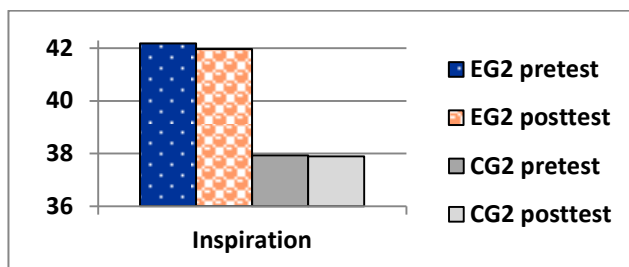


Fig. 45. Mean values of Inspiration Scale (IS) of EG2 and CG2. *Higher value= better functionality.*

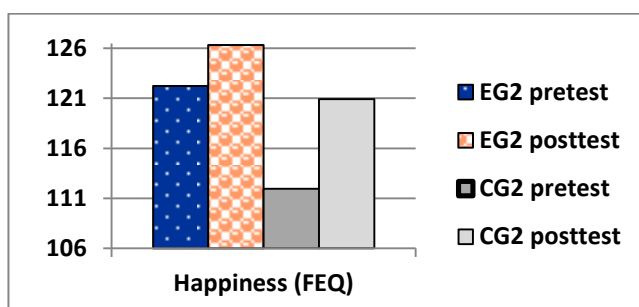


Fig. 46. Mean values of Happiness (FEQ) of EG2 and CG2. *Higher value= better functionality.*

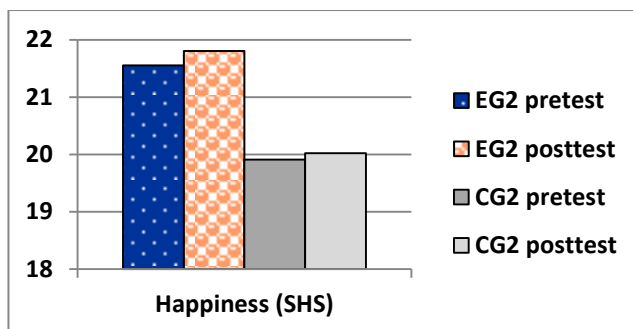


Fig. 47. Mean values of Subjective Happiness (SHS) of EG2 and CG2. *Higher value= better functionality.*

Summary of the psychological test results of the Paneurhythmy practitioners (EG2) and their control group (CG2)

At the beginning of the Research, CG2 and EG2 did not differ significantly in part of the researched features. For the rest psychological features, the two groups had a reliable difference between them even in the first research and in all those cases the Paneurhythmy practitioners had a better result compared to CG2. During the Research, EG2 maintained a better level (in comparison with CG2) of the researched features or improved them statistically significantly. The only tests where EG2 had not a reliable difference with CG2 in both investigations are the tests for everyday awareness and happiness (FEQ). Regardless of that, the persons in EG2 in the second research had a significantly higher level of positive emotions compared to CG2, maintained a higher result in the happiness test and during the Paneurhythmy season their negative emotions decreased significantly, which shows a good level of their emotional wellbeing.

CG2 had no reliable changes in all psychological researches that were made except one – improvement in their emotional wellbeing that has to do probably with the season of the Research.

The longtime Paneurhythmy practitioners are distinguished in comparison with CG2 yet in the first research with significantly better level of development of a number of psychological features, namely:

- lower state anxiety;
- lower hostility;
- higher general self-efficacy;
- higher result of trait hope;
- higher sense of coherence (how people cope with stress);
- higher satisfaction with life;

- higher level of positive affect;
- higher result of inspiration;
- higher level of subjective happiness (measured with SHS).

As a result of practicing Paneurhythmy for one season (workouts were averagely exceeding one time a week) the longtime practitioners show the following statistically significant changes:

- reduction of trait anxiety;
- reduction of the level perceived stress;
- reduction of depression symptoms;
- increase of global self-esteem;
- increase of general self-efficacy;
- increase of trait hope;
- reduction of pessimism;
- increase of dispositional optimism;
- increase of ego resiliency;
- increase of satisfaction with life;
- reduction of negative affect.

We found out from the last results achieved that even in the longtime practitioners improvements of a number of psychic features were observed as a result of one season of Paneurhythmy practice.

Summary of the psychological test results

Paneurhythmy training for beginners reduces situational and personal anxiety.

A lower level of situational anxiety is maintained in the advanced practitioners before and during one Paneurhythmy season in comparison with their control group.

Both the Beginner training and the one season practice of Paneurhythmy reduced personal anxiety, perceived stress and depression of the researched adults. The results indicate a

significant reduction of the values of those psychological constructs that reflect significant psychic states and qualities.

It is worth to pay more attention to the fact that mainly due to the peculiarities of Paneurhythmy itself, and additionally, due to the characteristics of the Beginner training of Paneurhythmy and its practice that we research a significant influence is observed in the direction of depressive symptoms reduction. The Beginner training of Paneurhythmy combines at least five methods that are found to have effective influence on depressive symptoms: attention diversion, physical exercises, enjoyable activities, music and singing. And in the outdoor Paneurhythmy workouts held in nature (with EG2) there is an additional factor proven to affect depression beneficially: the negative ionization of air. In this way, we have a combination of at least six methods that are separately proven to be effective for reducing depression. On the other hand, both the beginner training and the one-season practice of Paneurhythmy amplify significantly three proven protective factors (global self-esteem, self-efficacy, and resistance to stress), which additionally enhances the prophylactics of depression.

Those factors are extremely important when we take into consideration that:

- depressive disorder is the most common health problem for the citizens of many countries - members of the European Community (WHO Europe, 2008);
- worldwide since 2000 depression has been the main cause for disability, incapacity measured in life years (disease limitations) (WHO, 2012);
- now depression is the second important cause for disability-adjusted life years (DALYs) regarding men and women of age between 15 and 44 (WHO, 2012);
- in Europe one in ten persons has a mental illness, in Bulgaria – one in five; and most common that is depression (NCPHA, 2011).

In this sense, both Paneurhythmy training and Paneurhythmy practice that are group activities, financially non-engaging and reducing the depressive symptoms in persons with a low level of depression, can meet adequately the contemporary needs and can be pointed out as a very good alternative of the other physical activities that are practiced for the purpose of depression prophylactics.

We found out that the Beginner training of Paneurhythmy lasting for 5-6 months could reduce aggressiveness of adult trainees. The longtime Paneurhythmy practitioners had in our exit research significantly lower level of aggressiveness in comparison with their control group and they maintained it throughout the research. In the context of the social state of the contemporary Bulgarian society that lives in the conditions of a economic and spiritual crisis that leads to increasing alienation and aggressive behavior, the reduction of aggressiveness as a result of a six-month Paneurhythmy training and maintaining a low level of aggressiveness with the longtime Paneurhythmy practitioners is a significant outcome for both the individual personality and the society.

Both the Beginner training and the one-season practice of Paneurhythmy lead to the raise of global self-esteem, general self-efficacy, hope, and dispositional optimism. Those results show a significant change in the personality mental state and more specifically, in the substructure “activity of the individual”.

Four results of our Research clearly show an increased resistance to stress in Paneurhythmy trainees. These are: reduction of the perceived stress, increase of coping-efficacy (general self-efficacy), psychic resiliency and sense of coherence. With the advanced practitioners the observed changes in those four features as a result of one season Paneurhythmy practice are identical with those of the Paneurhythmy trainees with the only difference that in the advanced practitioners the sense of coherence yet in the first

research is considerably higher in comparison with CG2 and is maintained at that high level throughout the research. Therefore, both attending a course of Paneurhythmy for beginners and one-season Paneurhythmy practice increase tolerance and resistance to stress. That is a very important result when taking into consideration that stress (or more precisely, distress) is a common and significant for health issue for most people of today. Due to the increased resistance to stress the Paneurhythmy practitioners can meet challenges more successfully and better preserve their psychophysical health regardless of the stressful experiences in life.

There is a great variety in the definitions of mental well-being (Ganeva, 2010). The Paneurhythmy workouts improve many mental features, including those marked as reflecting the emotional well-being (availability of much more positive than negative emotions), satisfaction with life, vitality, self-esteem, optimism and resiliency (mental adaptability), positive functioning and sense of happiness (Michaelson et al., 2009, Cohn et al., 2009).

The Beginner training of Paneurhythmy researched by us reduces the negative and raises the positive emotions, frequency of inspiration moments, emotional well-being and satisfaction with life of the trainees. In longtime Paneurhythmy practitioners, in the frames of one-season practice, negative emotions are reduced, higher level of inspiration is maintained and senses of happiness and satisfaction with life are increased. In both trainees and practitioners of Paneurhythmy that outcome is also accompanied by raise of vitality (result of SF-36 test), self-esteem, optimism and resilience. Consequently, the Paneurhythmy training increases comprehensively the personality mental well-being.

Results of the physical activity test

Using the modified test of Bake (Pols et al., 1995) we stated the exit level of physical activity of the researched groups and observed it throughout the Research. The Paneurhythmy trainees and their Control group did not have significant difference in their exit level of physical activity.

We also found out that except the passed Paneurhythmy training there was no other difference in the total result regarding the level of physical activity of EG1 and CG1.

EG2 did not have significant changes in the level of their general physical activity during the research, which shows that the Paneurhythmy practitioners did not include significant physical activities in that period except Paneurhythmy.



Paneurhythmy in the Rila Mountain, Bulgaria (Photographer: Boris Mitov)

Results of the health-related quality of life test (SF-36)

The statistic results of the summary scales about SF-36 of EG1 and CG1 are illustrated by the mean values per groups on fig. 48.

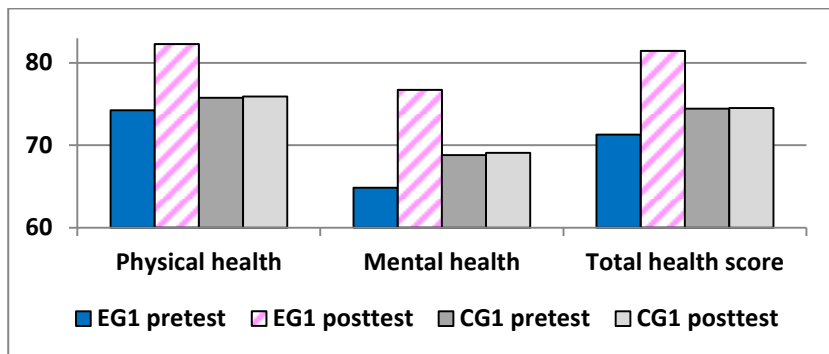


Fig. 48. Mean values of the summary scales of subjective health in the test SF-36 of EG1 and CG1. *Higher value = better functionality.*

The Paneurhythmy training for beginners improved the health-related quality of life by exercising a significant positive influence on both physical and mental state of the trainees, but the influence on mental state was much stronger.

The advanced Paneurhythmy practitioners (EG2) who had more than two workouts a week improved significantly their Total result of SF-36 test, e.g. they improved their health-related quality of life.

CONCLUSIONS FROM THE RESEARCH

I. Conclusions about the Beginner Paneurhythmy training for adults:

1. The Beginner Paneurhythmy training for adults improves the **static balance, dynamic balance and general mobility**.

2. The Beginner Paneurhythmy training for adults improves the **strength endurance**– the static strength endurance of the abductor muscles in shoulder joints and the dynamic strength endurance of muscle flexors in ankle joints.

3. The Beginner Paneurhythmy training for adults **reduces the expression of a number of negative mental conditions and features: reduces considerably the** negative affect, state and trait anxiety, perceived stress, hostility, depression symptoms.

4. The Beginner Paneurhythmy training for adults **increases the expression of a number of positive mental conditions and features: there is a significant raise of the level of** positive affect and emotional well-being, the frequency of inspiration is increased as well as the mindful attention awareness, there is raise of: global self-esteem (e.g. personality self-esteem), general self-efficacy (the skill of coping with problems and difficulties in life), trait hope, dispositional optimism, ego resiliency, sense of coherence and satisfaction with life. The obtained results proved that due to the Beginner training of Paneurhythmy trainees had adapted easier to different situations in life, they had achieved their aims easier and had managed with their problems and obligations, there is more meaning and inspiration in their life and they felt more

precious as individuals and finally – happier and more satisfied with themselves and the life they had.

5. The Beginner Paneurhythmy training for adults improves the health-related quality of life by reducing the role limitations caused by physical and emotional problems; it reduces the sense of physical pain, increases emotional well-being, vitality, general health, social functioning, and working capacity. Thus, the Beginner training of Paneurhythmy affects significantly both the physical and mental component of the subjective health, but its influence over the psyche is stronger. The improved health related quality of life is expressed in better working capacity, greater freedom and effectiveness in performing physical, mental and social activities.



Paneurhythmy in Plovdiv, Bulgaria
(Photographer: Zhivko Stoilov)

II. Conclusions about the adults who have practiced Paneurhythmy for a prolonged period:

1. For those adults who are longtime practitioners, the one-season (6 months) practice of Paneurhythmy improves their **static balance and dynamic balance**.

2. For those adults who are longtime practitioners, the one-season (6 months) practice of Paneurhythmy improves their **strength endurance** – static strength endurance of the abductor muscles in shoulder joints, and dynamic strength endurance of flexor muscles in ankle joints.

3. Those adults who have practiced Paneurhythmy for a longer period of time are distinguished even in the first research by a **significantly lower level of hostility and state anxiety** in comparison with the control group, **and by higher:** general self-efficacy (the skill to cope with problems and difficulties in life); trait hope; sense of coherence; inspiration; happiness; satisfaction with life; positive effect, also by better health-related quality of life. The systematic practice of Paneurhythmy contributes for maintaining and keeping the better mental features of the longtime practitioners.

4. For those adults who have practiced Paneurhythmy for a longer period of time, the one-season (6 months) practice of Paneurhythmy **reduces the expression of a number of negative mental conditions and features:** reduces trait anxiety, level of perceived stress, depression symptoms, negative expectations (pessimism) and negative effect.

5. For those adults who have practiced Paneurhythmy for a longer period of time, the one-season (6 months) practice of Paneurhythmy **increases the expression of a number of positive mental conditions and features:** trait hope,

dispositional optimism, ego resiliency, global self-esteem (e.g., personality self-esteem), general self-efficacy (skill to cope with problems and difficulties in life) and satisfaction with life. Therefore, the longtime practitioners of Paneurhythmy have significant mental benefits from maintaining their Paneurhythmy practice.

6. Hope, general self-efficacy and satisfaction with life of the longtime Paneurhythmy practitioners are not only at a significantly higher level in comparison with the control group, **but they are also increased within the Paneurhythmy season**, ensuring in this way considerable mental resources for setting and achieving goals, handling problems and difficulties, which brings high self-satisfaction and satisfaction with one's own life.

7. Those who practice Paneurhythmy more than twice a week improve significantly their health-related quality of life. In this way, they delay aging and maintain their good psychophysical condition and increased working capacity.



Paneurhythmy in the Rila Mountain, Bulgaria (Photographer: Boris Mitov)

CONCLUSION

Paneurhythmy for healthy persons in young and middle ages is an aerobic activity of low to medium intensity that **has an overall and considerably positive influence over many components of one's psychophysical state.**

The Beginner training and one-season practice of Paneurhythmy improve balance abilities and thus improve gait, general mobility, and stability at stand and motion of practitioners. The Beginner training and one-season practice of Paneurhythmy improve strength endurance of two important groups of muscles of the upper and lower limbs. Reduction of pain complaints and limitations caused by physical problems of the practitioners are also added to the physical function-related results of the Beginner training of Paneurhythmy

Training and practice of Paneurhythmy render significant influence, both in power and range, over mental condition changing positively many of the researched psychological features. The fact that Paneurhythmy workouts reduce stress and increase the resistance to it is of great importance due to its vast spread in today's society and its significant impact on the psychophysical health. We should also note that both the Beginner training and one-season practice of Paneurhythmy reduce the depressive symptoms, which is of huge importance considering the vast spread and great effect of depression over the life of contemporary people, as well as the forecasts (WHO, 2012) for depression raised in the period until 2020. Last but not least, the fact that Paneurhythmy training reduces aggressiveness even of adult persons deserves special attention as it is very important in the today's situation of problematic aggression, recognized as a problem yet in childhood and reflecting the crisis of the whole society. Thus, Paneurhythmy provides considerable psychophysical resources for higher

working capacity, better physical and mental health and well-being.

In our opinion, that strong positive influence of a physical activity that does not require high levels of exercise and many efforts is due to many synchronously influencing factors in Paneurhythmy which effect is not only summed up but is also strengthened by their simultaneous application. The simultaneous influence of movement, music, singing, word, concentration of thought, profound ideas, group synchronous practice in pairs with performing complex common geometrical figures as well as the multilateral impact of the outdoor natural environment present a notably well-founded combination by the author of Paneurhythmy.

In respect with combining of the listed components of influence in a complete and widely accessible system of exercises, Paneurhythmy is unique and no analogue to it is known to us in the world practice of sports and other physical activities for free time.

Paneurhythmy is a motor activity for free time that combines the care for both physical state and spiritual needs of the individual. Paneurhythmy is not just gymnastics, but also communication with the beauty of nature, approaching music and poetry, tool for expanding social contacts and skills, way of self-expression and self-knowledge, as well as philosophy that teaches people to respect and love life and become creators of their own destiny. We find that the value system embedded in the philosophy of Paneurhythmy reflects the highest universal human values: love, knowledge, freedom, justice and virtues (mercy, generosity, patience, purity, prudence, charity, tolerance, and others) that make human life meaningful, complete and beautiful.

Paneurhythmy training improves the physical, mental and social well-being of practitioners, which are recognized as the three health-forming components (WHO, 1948). Thus, by practicing Paneurhythmy, in a pleasant and widely accessible

way, practitioners achieve improving and maintaining of physical and mental health and well-being, social functioning and quality of life.

It is also important that Paneurhythmy activities are pleasant, accessible and attractive for persons in a wide range of ages, health functionalities and social-economic status. In this way, it is possible to widely apply Paneurhythmy for health maintaining, prophylactics of many socially significant diseases and improved quality of life.

The fact that practicing Paneurhythmy is related with minimal or no additional financial requirements for practitioners makes it perfectly suitable for maintaining and preserving the psychophysical health of a wide range of the population even in countries of poor financial state with limited personal and state financial resources for prophylactics and limited access to sports facilities, equipment and health care.

We share the opinion that Paneurhythmy is a valuable part of the Bulgarian and world spiritual and cultural heritage and its good knowledge and practice can contribute for the better health and well-being of many people all over the world and for peace and understanding between people and nations.

We hope that this monograph that examines the influence of Paneurhythmy practice from a scientific point of view may support its better knowledge and may arouse interest in even broader circles of the scientific community, stimulating further researches of that unique psychophysical and spiritual activity.

About the Author



The associate professor Ludmila Chervencova (PT, PhD) is a lecturer in the Department of Physical therapy and rehabilitation in “Vassil Levski” National Sports Academy. She has many years of experience in the field of physical therapy in pediatrics, internal diseases and geriatrics. In 2000 she finished the first course for Paneurhythmy teachers organized in the Academy. She is a Paneurhythmy teacher and researcher of long standing. Her additional professional qualification in the field of physical activity as a teacher of physical education gives her the opportunity to integrate the physical therapy and pedagogical approach in her studies of different physical practices and in training of Paneurhythmy teachers.

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The entire book (in Bulgarian) and more research are freely available on the author's websites:

- <http://nsa-bg.academia.edu/LiudmilaChervencova>
- https://www.researchgate.net/profile/Ludmila_Chervencova

For more information

1. Sites for Paneurhythmy:

- **Paneurhythmy** <http://paneuritmia.info/?lang=en>
- **Materials for the Paneurhythmy**
<https://bb.beinsadouno.org/category/paneurhythmy/materials-for-paneurhythmy/>

2. Videos about Paneurhythmy:

- [Paneurhythmy with Svetla Baltova, MD](#) on YouTube
- [Life Is Parable](#) on YouTube
- [ПАНЕВРИТМИЯ оригинал](#) on YouTube

3. Book about Paneurhythmy in English:

Beinsa Duno (2015) PANEURHYTHMY. Music, Ideas, Movements. Third edition. Byalo Bratstvo Publishers, Sofia.

<http://paneuritmia.info/materials/books/?lang=en>

4. Other books by Petar Danov:

Byalo Bratstvo Publishers - Books in foreign languages:

<https://bialobratstvo.info/produkt-kategoriya/knizharnitsa/knigi/knigi-na-chuzdi-eziци/>