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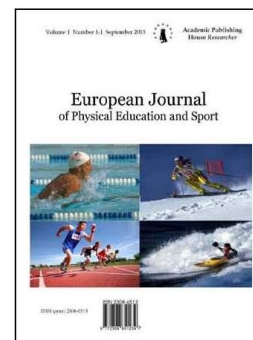
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Introducing Paneurhythmy – Group Exercises, Music, Poetry, Geometry and Nature Combined in Favor of Health

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Abstract

A growing number of scientific publications and researches explore practices with global impact on human health. As a relatively new mind-body practice Paneurhythmy is the least known and least studied in comparison with similar activities like Yoga and Tai Chi. Paneurhythmy is a universal physical practice that can unite people regardless of their race, gender, age, nationality and religion. It is a unique system of gymnastic musical exercises performed outdoors as a group activity. Paneurhythmy was created between 1922 and 1944 in Bulgaria by Petar Danov (1864-1944). Paneurhythmy has a profound philosophical meaning and combines harmoniously music, movement, thought and word. The participants maintain an upright and well-balanced posture, while moving in a circle. Each of the Paneurhythmy exercises reveals a basic philosophical idea expressed through its name, movements, music and the lyrics of its song. The Paneurhythmy movements are smooth and follow the musical beats, which are running rhythmically in a slow to moderate pace. This article discusses the visions of the author of Paneurhythmy for its purpose and effect, it also gives the main components of Paneurhythmy and presents some of the studies on it. Paneurhythmy exercises are easy to be done regardless of the age, financial condition and physical characteristics of the practitioners. Paneurhythmy is a pleasant and very effective method to put into action the ancient maxim "A healthy mind in a healthy body".

Keywords: outdoor exercise, mind-body practice, balance, mental health, Bulgarian.

Introduction

The interest in leisure time physical activities affecting all aspects of human health – physical, mental and social – has increased significantly over the last few decades. Many physical practices with philosophical and spiritual elements are being performed in places, which are far away from their origin.

Many exercises and activities have a complex positive impact on the physical health as well as on the emotional and mental state and even on the social welfare of the practitioners. The international scientific community nowadays is in a search for and in a study of such psychophysical activities, realizing their great potential and benefits. This is proven by the growing number of scientific publications and researches about such practices with global impact on human

health. The detailed studying of activities like Yoga, dancing, Paneurhythmy, Tai Chi and other eastern martial arts provides an opportunity to assess in detail 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 least studied of the above mentioned activities.

What is Paneurhythmy

Paneurhythmy is a universal physical and mental practice that can unite people regardless of their race, gender, age, nationality and religion. It is a unique Bulgarian system of gymnastic musical exercises performed in a group (all participants are arranged in pairs forming a circle). Paneurhythmy exercises are performed in the morning in nature - from March 22 to September 22 [1]. Paneurhythmy resembles a dance and has a complex beneficial impact on both physical and mental well-being of its practitioners. It can be compared to such activities as Tai Chi, Yoga and other eastern practices. It has a profound philosophical meaning and combines harmoniously music, movement, thought and word [2].

Each Paneurhythmy exercise has its own music composed by the author, which is clearly related to the movements and key messages of the exercise. The participants maintain an upright and well-balanced posture, while moving in a circle, always going in the counterclockwise direction. The musicians and/or singers are in the center. The Paneurhythmy movements are smooth and follow the musical beats running rhythmically in a slow to moderate pace [1,3].

Etymologically, „Paneurhythmy“ is derived from three roots: „pan“ – meaning whole, universal and cosmic, „eu“ – meaning true or supreme, the essential and substantial in the world, and „rhythmy“ – meaning correctness in the movements and every other external expression in life. The prefix pan denotes that this is an expression of the rhythm presented in the entire Nature and underlying the entire creation. According to this etymological derivation, „Paneurhythmy“ can be translated as Supreme Cosmic Rhythm [1,3].

Paneurhythmy was established in the first half of the 20th century in Bulgaria. Its creator, Petar Danov (1864-1944), also known as Beinsa Duno, is the founder of a spiritual community which he has led for more than 22 years [2]. His works consist of approximately 4,000 lectures, published in more than 250 volumes [4]; musical compositions, most of which were written with the lyrics; articles; letters and Paneurhythmy [2]. In 2015 Bachev defines the teaching of P. Danov as “representing the meeting between: man and the source of life, wisdom and intellect, East and West, prophetic and philosophical, culture and nature” [5].

For less than a century Paneurhythmy has attracted the attention of people from different cultures and nationalities. This was happening despite the 40-year totalitarian regime in Bulgaria, when teaching and practicing such practices was forbidden. Nowadays the interest in Paneurhythmy is growing even faster and it is being spread all around the world [2].

Each of the Paneurhythmy exercises reveals a basic philosophical idea expressed through its name, movements, music and the lyrics of its song [1,2]. P. Danov explains that every movement should be studied and performed in a conscious way. Each of the movements is related to a musical form. Each of the musical forms is related to a certain mental activity [6]. The sequence of the Paneurhythmy exercises is related to the continuous process of development of both the individual and collective consciousness of the human being [7,8,9].

Key features of Paneurhythmy as a complex of exercises

Paneurhythmy consists of three parts: Part 1 - “28 exercises”; Part 2 - “Sunrays”; Part 3 - “Pentagram”. Each part has its own characteristics, unique exercises, music arrangement and duration. Paneurhythmy exercises are aerobic and not competitive [1,3,7]. The movements are cyclic, rhythmic, within the physiological range of motion. Some exercises are simple, while others are more complex. The gait is characterized by contacting the ground first with the toes and balls of the feet, then with the heels. All these features help improving the locomotion, by straightening the muscles and maintaining a normal range of motion in the joints [2].

The duration of the performance, including the pauses between the exercises, is generally between 70 and 75 minutes (it could be longer in larger groups). Not counting the pauses, it takes approximately 60 minutes (1 hour) [10].

Paneurhythmy is always performed at a slow to moderate pace. The exercise intensity depends on the participants' health and physical fitness. It is expected to be low to moderate for athletic individuals and people in good health, and from moderate to high for elderly people, sedentary individuals or individuals with health problems leading to some limitations in their physical activity. The next Table shows the main components of Paneurhythmy.

Main components of Paneurhythmy

| Component | How it is presented in Paneurhythmy |
|----------------------|---|
| Movement | A variety of weight-bearing exercises, performed in an upright position for 60 min. (without the pauses between the exercises). The movements are smooth, rhythmic, synchronized with the music, at a slow to moderate pace. Most of the time the participants are forming a circle together. |
| Music | The 30 musical compositions were especially created for Paneurhythmy, also synchronizing the participants' movements. The music can be performed instrumentally and/or vocally. The musicians and singers are located in the center of the circle formed by the participants. |
| Poetry | The musical compositions have their own poetic lyrics, which form the Paneurhythmy songs. They can be sung by a singer/choir staying in the center of the Paneurhythmy circle and/or can be quietly sung by the participants. This lyrics reveals a world, in which one is surrounded by light, nature, beauty and music [11]. |
| Nature | Paneurhythmy is performed outdoors. The participants interact with the Sun, air, wind, with the different landscapes, sounds and smells of Nature. |
| Geometry | The participants perform the exercises together in a circle (first arranged in pairs and then in groups of 12 and 10). They move their upper and lower limbs in straight and curved lines, reaching certain angles. During the whole process they should form different geometrical figures (squares, circles, straight lines, radii, pentagrams). |
| Ideas and Philosophy | Each Paneurhythmy exercise has a profound spiritual meaning and symbolizes a sublime idea implied in its name (awakening, giving, reconciliation, ascending, liberation, etc.). The arrangement of the participants and the directions of their movements have also a symbolic meaning. Each part of the Paneurhythmy represents a story about the human path toward enlightenment. |

Petar Danov's concepts about Paneurhythmy and health

The topic of health and its importance in life is one of the main themes in the rich spiritual and cultural heritage left by P. Danov. It is focused on examining the different aspects of health, causes of diseases and various approaches to their treatment. P. Danov recommended many practical methods for achieving and maintaining good health through a healthy lifestyle, including body hygiene, work hygiene, hygiene of thoughts and feelings, proper nutrition, etc. Back in 1917, Danov stated that doctors needed to broaden their understanding of hygiene and began to deal also with mental hygiene in addition to body hygiene [12]. He also pointed out the importance of other health factors such as sufficient and appropriate physical activity, optimal use of sunlight, water and air, etc. His views on the close connection between mental and physical health, between humankind and nature were quite innovative and impressive. According to Sv. Baltova, P. Danov has given in his teaching "the key concepts of the holistic worldview about the human being and health as a whole laying down the foundations of the holistic medicine in Bulgaria" [13].

In the first published book about Paneurhythmy [1], the practice was primarily defined as a method for maintaining good health and for healing through the rhythmic and harmonic movements, combined with corresponding music, concentration of thought and correct breathing.

According to P. Danov Paneurhythmy exercises have an overall effect on one's physical condition and health. Being many and diverse in nature, they engage most of the muscles and joints of the human body. They are also designed to nourish and strengthen the nervous system, improve the emotional and mental health and stimulate the development of one's virtues and

talents [1]. During the exercises the one's mind should be concentrated on the movements and the sublime ideas, which they represent. Performing Paneurhythmy in vigilant awareness, with focused thought/attention, emotion and will intent may bring every and all participants into the state of harmony and unity [9].

P. Danov considers that Paneurhythmy movements "are being transformed into internal mental processes". They have a "major impact on the human consciousness" and can be used as a "method of self-development" [9, 14]. He points out that there is a cosmic rhythm "inwrought" in Nature (in the macro and microcosmos, including the movements of electrons in an atom) and that is why the rhythmic movements are so beneficial [1]. He states that the impact of a musical composition or a physical movement depends on its harmony and resemblance with this cosmic rhythm [9] and that all elements in Paneurhythmy satisfy these characteristics [1]. Modern researches in the field of chronobiology also state that "rhythm is an essential requirement, basis and regulator of life" [15].

P. Danov defines Paneurhythmy as a practice of high productivity and low energy consumption. "Paneurhythmy contains really efficient movements; not being complicated but easy and pleasant to be done, they lead to excellent results" [9].

Evidence of the therapeutic potential of Paneurhythmy

We are going to make a brief review of some of the researches about the effects of Paneurhythmy exercises.

A preliminary survey [16] on 140 individuals of age from 19 to 80 (mean age 46,9; 72,1% women) who have been practicing Paneurhythmy for different time: from 1 month to 65 years (average 6,9 years) was published in 2004 (Chervencova, 2004). 81.4% of the respondents have started practicing Paneurhythmy during the last 10 years before the timeframe of the survey. Only two of them (1.4%) reported about observed undesirable effects of the exercises like worsening relationships with people (0.7%) and unwanted weight gain (0.7%). The majority of the respondents indicated an improvement in the mental, physical and social aspects of their health. Most of them had observed: improvements in their social relationships (83,6%), increased concentration of attention (75%), increased self-confidence (75%), increased vitality (75%), more optimism (73,6%) improved gait (71,4%), improvements in motive characteristics (68,6%), posture (67,9%), physical endurance (65,7%), connectedness with Nature (65,7%), and improvement of their lifestyle (63,6%). The most frequently mentioned change is the stronger desire for a healthier lifestyle. A smaller percentage of the respondents also indicated: improvements in sleep (42,8%), increased physical strength (38,6%), positive influence on some diseases (35%), body weight regulation (21,1%), and reduced pain symptoms (20%).

A controlled study [17] on adults indicated a significant improvement in the quality of life due to the health improvement (as measured by the SF-36 Health Survey) coming as a result of the initial 6 month training of Paneurhythmy. The positive changes were observed in both the physical and mental component of health [17].

A controlled study on adults [2] established that a 5-6 month training of Paneurhythmy significantly increased the resistance of the participants to psychological stress. For objectification of the changes the following three questionnaires in the Bulgarian language adaptation were applied: Perceived Stress Scale (PSS) by Cohen, Kamarck, Mermelstein (1983); Ego Resiliency Scale (ER-89) by Block & Kremen, (Block & Kremen 1996); Sense of coherence (SOC) measured by Antonovsky, (1979, 1987) [2]. These tests were applied on an experimental group before and after the basic training in Paneurhythmy and with the corresponding control persons not practicing Paneurhythmy. The results showed the following significant changes from the initial 5-6 month Paneurhythmy training led by qualified teachers (2-1 times weekly, respectively): reduced Perceived Stress, increased Sense of coherence and increased Ego Resiliency. Meanwhile, in the control group there were no significant changes [2]. These are extremely important results related to the life of modern humanity. The concept of Ego Resiliency encompasses traits that emphasize flexibility and resiliency toward constantly varying situations and a general resourcefulness of personality. This is useful behaviorally: ego-resilient individuals are intelligent, resourceful and adaptive in stressful situations [18]. Individuals with a high Sense of Coherence are more resistant to the negative effects of stress and anxiety, which could otherwise result in a suppressed immunity system leaving an individual more prone to illness [19]. Therefore, even the 6-month

Paneurhythmy training for beginners, which is its incomplete and easier version, brings changes allowing people to manage stressful situations in life and stay well.

More information on Paneurhythmy research up to 2010 is presented in a lecture by Chervencova and Zsheliaskova-Koynova [23].

Paneurhythmy for healthy aging and prevention of balance loss

The prevention of falls and mobility-related disability among older people is an urgent public health challenge. Although many risk factors for falls have been identified, intervention trials have found that the effects of exercise as a single falls prevention intervention are comparable to those from multifaceted interventions.²⁰ Therefore, widespread implementation of exercise as a single intervention seems to be the best approach to falls prevention at a population level [20].

A controlled study found out that in adults both a 5-6 month (2-1 weekly sessions, respectively) training of Paneurhythmy and a 6-month (March – September) practice of Paneurhythmy had led to significant improvements in the static and dynamic balance of both the young and older practitioners (range of age 18-68) [2]. The analysis of Paneurhythmy exercises shows that they possess the necessary features to improve successfully one's static and dynamic balance, because there are many Paneurhythmy exercises with a reduced base of support, with movement of the center of gravity (control of the body position, while standing and moving in an upright position) as well as exercises stressing the postural muscle groups.² These are recommended features of a balance exercise designed for frequent fallers or individuals with mobility problems [21, 22]. Sherrington et al. [20] recommended that falls prevention exercise had to target both the general community and those at high risk for falls. We consider that the practice of Paneurhythmy is an excellent tool for falls prevention exercise targeting both the general community and those with moderate risk of falls who are able to walk independently. For the last mentioned is advisable to start with an adapted course in basic training of Paneurhythmy in order to increase gradually the requirements for balance and endurance. Paneurhythmy can provide a moderate or high challenge to balance and can easily be undertaken as recommended at least 2 hours because it is pleasant, socializing and with powerful positive influence on psychological state [2]. That is why it will be very interesting to study the impact of Paneurhythmy on reducing the risk of falls in physically active older people.

Although no amount of physical activity can stop the biological aging process, there is an evidence that regular exercise can minimize the physiological effects of a sedentary lifestyle and can increase the active life expectancy by limiting the development and progression of chronic diseases and disabling conditions [21]. Ideally, practice for healthy aging should include a combination of aerobic, strengthening, and flexibility exercises [21]. Paneurhythmy is an excellent practice for healthy aging, because it contains non-traumatic, aerobic and strengthening exercises good for maintaining the flexibility. Additionally, it significantly improves the balance in middle aged [2] and we foresee it as suitable for effective early prevention of falls in elderly people.

Paneurhythmy as an attractive physical activity in health-promotion settings

Physical inactivity is now identified as the fourth leading risk factor for global mortality. Physical inactivity levels are rising in many countries with major implications for the prevalence of non-communicable diseases and worsening of general health of the population worldwide [24]. Physical inactivity is estimated as being the principal cause for approximately 21–25% of the breast and colon cancer burden, 27% of diabetes and approximately 30% of ischemic heart disease burden.

Health-related behavior changes are increasingly important because many health conditions are becoming more chronic and less susceptible to biomedical interventions [25]. Beneficial changes in health-related behavior such as physical activity is part of the primary and secondary preventive health care, i.e. an important mechanism for maintaining health.

Paneurhythmy is an accessible, pleasant and effective group outdoor physical activity. So, it is easier to practice it on a regular basis and for years. The regular practicing of Paneurhythmy may help the primary and secondary prevention of major non-communicable diseases such as obesity, coronary heart disease and type 2 diabetes, in which the physical activity is a proven protective factor.

There are many exercises and activities which have a complex impact on health and positively affect both the physical and the mental state, even the social welfare of the practitioners. Physical

activities such as Paneurhythmy, which are significantly improving all aspects of health, have a higher overall health positive.

Because of its unique harmonious combination of components (movement, music, speech, socialization, contact with Nature and philosophy) even a 5-6 month Paneurhythmy training for beginners has a strong positive impact on the mental health of the practitioners [2]. Controlled researches revealed that a basic training in Paneurhythmy in the course of 5-6 months (2-1 weekly sessions respectively) had reduced Perceived Stress and Depression and had increased Sense of Coherence, Ego Resiliency, Optimism and Hope measured with popular psychological scales adapted in the Bulgarian language (PSS, BDI-2, SOC, ER89, LOT-R and THS) [2]. Modern controlled researches are showing the significance of these psychological risks or protective factors for the major non-communicable diseases: depression [26,27,28,29], stress [30,31,32,33] optimism [34,35,36] and hope [37,38,39,40].

Paneurhythmy is an effective mind-body-spirit practice for maintaining and improving health and quality of life of social groups and countries, which have insufficient financial resources for expensive preventive health care services [2]. It is extremely accessible regardless of the age, financial condition or physical characteristics of the practitioners, because it can be performed by people of age from 5 to 85 years, it does not require expensive equipment or facilities and it is also suitable for people with certain chronic physical disorders. The movements involved in Paneurhythmy are smooth, performed at a low absolute intensity and with short pauses between the exercises.

Paneurhythmy possesses the potential to achieve significant results with minimum investments and resources.

Conclusion

Paneurhythmy is a unique system of rhythmic group outdoors exercises for the human mind-body-spirit unity. It puts the participants in touch with the higher forms of life such as beauty, arts, virtues and Nature. It is a precious part of the Bulgarian spiritual treasury and the world cultural and spiritual heritage. Nevertheless, we are still at the dawn of its research and dissemination. Paneurhythmy is a very pleasant and effective practice. It validates the ancient maxim "A healthy mind in a healthy body". In an accessible and gracious way the regular practice of Paneurhythmy can improve the physical, emotional, mental and social condition of the individual.

Author Disclosure Statement

No competing financial interests exist.

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**Представляя Паневритмия – групповые упражнения,
музыка, поэзия, геометрия и природа объединены в пользу здоровья**

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Аннотация. Растущее число научных публикаций и исследований изучают практики с глобальным воздействием на здоровье человека. Как относительно новая практика тела и ума паневритмия является наименее известным и наименее изученным в сравнении с аналогичными деятельностями, как йога и тай-чи. Паневритмия это универсальная двигательная практики, которая может объединить людей, независимо от их расы, пола, возраста, национальности и религии. Это уникальная система гимнастических музыкальных упражнений, выполняемых на открытом воздухе как групповая деятельность. Паневритмия была создана между 1922 и 1944 в Болгарии Петром Дыновым (1864-1944). Паневритмия имеет глубокий философский смысл и гармонично сочетает в себе музыку, движение, мысль и слово. Участники поддерживают вертикальное и хорошо сбалансированное положение, двигаясь парами по кругу. Каждое из упражнений паневритмии показывает основную философскую идею, выраженную через его имя, движений, музыки и лирики его песни. Движения паневритмии плавные и следуют музыкальные ритмы, которые исполнены в

медленных и умеренных темпах. В настоящей статье обсуждаются взгляды автора паневритмии касающихся ее целей и эффекта, она также дает представление об основных компонентах паневритмии и перечисляет некоторые из исследований о ней. Упражнения Паневритмии легко исполнять, независимо от возраста, финансового состояния и физических характеристик практикующих. Паневритмия приятный и очень эффективный метод введения в действие древний афоризм "здоровый дух в здоровом теле".

Ключевые слова: упражнения на воздухе, практика тела и ума, Баланс, психическое здоровье; болгарская гимнастика.