
Секция 9. Инновационные проекты и передовые практики, направленные на гармоничное развитие личности в национальных системах физической культуры, спорта, здравоохранения и образования

Section 9. Innovative projects and best practices aimed at the harmonious development of the personality in the systems of physical culture and sports, health care and education

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PSYCHOLOGICAL AND MOLECULAR EFFECTS OF CYCLIC MEDITATION

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Abstract. The most significant challenge that the average person has in this fast-paced day is a troubled, unsatisfied mind as a result of leading an inappropriate lifestyle. The average person has also been significantly impacted by changes in the timing of their sleep and wakefulness, as well as by the absence of physical activity and the inclusion of outside junk foods in their diet. Ayurvedic scriptures identify ahara, nidra, and vyayam as the three sub-pillars of life. More specifically, ahara refers to one's nutrition; nidra refers to one's sleeping habits; and vyayam refers to one's physical activity. The consequences of living in such an unhealthy manner are seen in individuals today in the form of a wide variety of diseases, both mental and physical. The constant overstimulation of the sympathetic nervous system has also had a deleterious impact on the quality of sleep. Alterations to one's lifestyle, together with consistent yoga practice, may be useful in reversing the course of this worsening illness and enhancing the health and well-being of the general population. According to research, cyclic meditation may provide better body-mind relaxation than other forms of meditation by achieving a balance between the sympathetic and parasympathetic nervous systems. This may be helpful in the treatment of psychosomatic diseases as an alternative to the use of pharmaceuticals.

Keywords: meditation, wellbeing, health, sleep, physical activity.

ПСИХОЛОГИЧЕСКИЕ И МОЛЕКУЛЯРНЫЕ ЭФФЕКТЫ ЦИКЛИЧЕСКОЙ МЕДИТАЦИИ

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Аннотация. Самая серьезная проблема, с которой сталкивается среднестатистический человек это современный темп жизни – неподобающий образ жизни, влекущий за собой беспокойство и неудовлетворенность ума. На среднестатистического человека также существенно влияют изменения в продолжительности его сна и бодрствования, а также отсутствие физической активности и включение в рацион питания нездоровой пищи. Священные писания Аюрведы определяют ахару, нидру и вьяям как три столпа жизни. Более конкретно, ахара относится к питанию человека; нидра относится к его распорядку и культуре сна; и вьяям относится к его физической активности. Последствия такого нездорового образа жизни проявляются у современных людей в виде широкого спектра заболеваний, как психических, так и физических. Постоянная чрезмерная стимуляция симпатической нервной системы также оказывает пагубное влияние на качество сна. Изменения в образе жизни вместе с последовательной практикой йоги могут быть полезны для того, чтобы обратить вспять течение этого обострившегося недуга и улучшить здоровье и благополучие населения в целом. Согласно исследованиям, циклическая медитация может обеспечить лучшее расслабление тела и ума, чем другие формы медитации, за счет достижения баланса между симпатической и парасимпатической нервными системами. Это может быть полезно при лечении психосоматических заболеваний в качестве альтернативы использованию фармацевтических препаратов.

Ключевые слова: медитация, благосостояние, здоровье, сон, физическая активность.

Yoga

Yoga is a time-honored discipline that can be traced back to India, where it first appeared thousands of years ago. For those who are ill, yoga is a medication, and for those who are looking to improve their mental condition, yoga is a means to that end. Not only this, but in recent decades, there has also been a rise in interest in yoga among students and professionals from a variety of fields, such as scientists, doctors, businessmen, athletes, and so on. This is due to the fact that studies have shown that

yoga improves both the efficiency and quality of work. The esoteric wisdom of yoga was shaped by Maharishi Patanjali into the form of 195 sutras. According to Maharishi Patanjali, there are eight limbs of yoga (Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi). Through the seven various kinds of yoga practices, one may eventually achieve a higher state of consciousness known as samadhi, which is the ultimate objective of yoga. However, prior to that, the practice of meditation is of the utmost significance for

achieving success in any sector within the material world. Because of this, several monasteries, temples, and yoga institutes have made meditation a priority in accordance with their own set of beliefs and skills. In a similar vein, the practice of cyclic meditation, which is becoming more popular in modern times, has been shown by research to be a very efficient method of meditation. Numerous studies on cyclic meditation have shown that only 30 minutes of practice may provide the same level of relaxation as four hours of uninterrupted sleep.

Cyclic meditation (CM)

A description of cyclic meditation (CM) may be found for the first time in the Mandukya Upanishad. The method was further perfected by Dr. Nagendra, the founder of Swami Vivekananda Yoga Anusandhan Kendra, who introduced it to the general public as a very efficient practice. Meditation is often performed to focus the mind in an easy manner by sitting in one spot; however, the majority of people find that it is difficult to concentrate the mind just by sitting in one location. However, in cyclic meditation, the awareness is stretched to diverse portions of the complete body via a variety of asanas, which is why it is also known as “moving meditation.” The presence of many sorts of ideas in the mind continually disrupts the process of meditation. The primary mechanism of action behind cyclic meditation is that of alternating periods of stimulation and relaxation. The following are the eight stages that make up this process:

The first step is to begin praying: Prayer is spoken at the beginning of cyclic meditation. The prayer goes as follows: “*Asato ma sadgamaya, tamaso ma jyotirgamaya, mrtyor-maamrtamgamaya.*”

Om shanti! Shanti! Shanti! (Brihadaranyakaupani-shad — 1.3.28)

To put it another way, O Lord, guide me from error to truth, from darkness to light, and from death to immortality. Om Peace! Peace! Peace!

Step 2: Instant Relaxation Technique (IRT): Relaxation via the use of an approach known as I.R.T. is required prior to beginning cyclic meditation (Instant Relaxation Technique). The practitioner is given the instruction to go into the prone posture for this (in the position of Shavasana). After that, he is instructed to tense the entire muscles one at a time, working their way up from the toes to the head, and then, after he has completed tensing and stretching the whole body, he is to release all of the muscles at once and relax his body. One round of practice takes exactly one minute to complete.

The third step is to have linear awareness: The first step of the procedure is called Tad asana, and it is meant to assist the practitioner concentrate their body. Internal awareness is maintained during the performance of each position, which is done at a leisurely pace (observing, as a witness, various changes in the system with eyes closed)

Step 4: Standing Asana: Now in the same way, Ard-hakatiChakrasana must be performed gently from both the right and left sides while keeping one’s consciousness focused inside.

Step 5: Quick Relaxation Technique (QRT): Now we will perform the QRT (Quick Relaxation Technique), which will take around 5 minutes. In this part of the practice, the practitioner is given instructions to assume the Shavasana position once again and watch the movement of their abdominal muscles. This process has to be felt in order to be fully understood; during the exhale phase, the abdominal wall rises, and during the inhalation phase, the abdominal wall falls. The following instruction is subsequently given: “With each breath, feel yourself becoming more invigorated.” The more you exhale the more calm you will feel. By reciting only one akara, you may enter a state of profound quiet (the AAA.....sound).

Step 6: Sitting Asana: Now Vajrasana, Shashankasana and Ustrasana (ArdhaUstrasana, if Ustrasana is not feasible) are done slowly with mindfulness.

Step 7: Deep Relaxation Technique (DRT): Now in the final DRT (Deep Relaxation Technique), which is practiced for 10 minutes, the practitioner is once again asked to lie down in Shavasana and the instructions are given as follows: Part by part, from toes to top, relax your whole body by moving the consciousness from one part to other. **Step 8:** Progressive Muscle Relaxation (PMR): The final PMR (Progressive Muscle Relaxation) is practiced for 5 minutes. After then, proceed to sit down carefully in complete and utter stillness in accordance with your time. In addition to the practice of physical stimulation, CM also allows for the practice of sound (the chanting of Akara, Ukara, Makara, and Omkara) and visual stimulation (the attuning to a huge ocean).

The closing prayer is as follows: “*omsarvebhavantu-sukhina, sarvesantunirmaysarvebhadripayantu m kacid-dukhabhghaveta.*” This brings the ceremony to a close.

omśāntiḥśāntiḥśāntiḥ (Brihadaranyaka Upanishad — 1.4.14)

This translates to wishing for all sentient creatures to be at peace, for there to be no disease, for everyone to recognize good fortune, and for there to be no suffering.

Om Peace! Peace! Peace!

Health and wellness through cyclic meditation

The most significant challenge that the average person has in this fast-paced day is a troubled, unsatisfied mind as a result of leading an inappropriate lifestyle. The average person has also been significantly impacted by changes in the timing of their sleep and wakefulness, as well as by the absence of physical activity and the inclusion of outside junk foods in their diet. Ayurvedic scriptures identify ahara, nidra, and vyayam as the three sub-pillars of life. More specifically, ahara refers to one’s nutrition; nidra refers to one’s sleeping habits; and vyayam refers to one’s physical activity. The consequences of living in such an unhealthy manner are seen in individuals today in the form of a wide variety of diseases, both mental and physical. The constant overstimulation of the sympathetic nervous system has also had a deleterious impact on the quality of sleep. Alterations to one’s lifestyle, together with consistent yoga practice, may be useful in reversing the course of this worsening illness and enhancing the health and well-being of the gen-

eral population. According to research, cyclic meditation may provide better body-mind relaxation than other forms of meditation by achieving a balance between the sympathetic and parasympathetic nervous systems. This may be helpful in the treatment of psychosomatic diseases as an alternative to the use of pharmaceuticals.

Yoga

Yoga is a time-honored discipline that can be traced back to India, where it first appeared thousands of years ago. For those who are ill, yoga is a medication, and for those who are looking to improve their mental condition, yoga is a means to that end. Not only this, but in recent decades, there has also been a rise in interest in yoga among students and professionals from a variety of fields, such as scientists, doctors, businessmen, athletes, and so on. This is due to the fact that studies have shown that yoga improves both the efficiency and quality of work. The esoteric wisdom of yoga was shaped by Maharishi Patanjali into the form of 195 sutras. According to Maharishi Patanjali, there are eight limbs of yoga (Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi). Through the seven various kinds of yoga practices, one may eventually achieve a higher state of consciousness known as samadhi, which is the ultimate objective of yoga. However, prior to that, the practise of meditation is of the utmost significance for achieving success in any sector within the material world. Because of this, several monasteries, temples, and yoga institutes have made meditation a priority in accordance with their own set of beliefs and skills. In a similar vein, the practise of cyclic meditation, which is becoming more popular in modern times, has been shown by research to be a very efficient method of meditation. Numerous studies on cyclic meditation have shown that only 30 minutes of practise may provide the same level of relaxation as four hours of uninterrupted sleep.

Cyclic meditation (CM)

In cyclic meditation, a sequence of physiological adaptations begins and diminishes spontaneously as the voluntary muscles are led into a state of relaxation, which quickly leads to positive mood swings and extreme serenity. This is the ultimate technique to calm the mind and body. Its frequent practice may help lessen work and personal stress. It aids digestion, sleep, respiration, and other key functions of practitioners. Based on the idea of alternating stimulation and muscle relaxation, it is a terrific stress buster that can be done at any time of the day.

Further, a study reported the promising results of yogic meditation practice on overall well-being in pre-diabetic individuals (Kaur et al., 2021). Diabetes is a metabolic disorder that is not treatable after its onset, but it can be controlled at the pre-diabetic stage. It will be useful to halt the onset of diabetes, either mediated by various molecular or epigenetic changes or through yoga, which is a non-pharmacological approach. This can act as a transforming agent for pre-diabetic individuals to become normal. The research focuses on the use

of yogic techniques as a preventive measure for the treatment and management of diabetes or pre-diabetes. The study shows the beneficial result of yogic practices and witnesses the significant reduction in fasting blood glucose, glycated hemoglobin, body mass index, waist-to-hip ratio, body weight, and stress (Kaur et al., 2020). On the other hand, overall quality of life and attention levels have also significantly improved. Interestingly, in addition to the significant increase in angiogenin, VEGF (vascular endothelial growth factor) was also seen, which is primarily responsible for the formation of new blood vessels in the body. Likewise, BDNF (brain-derived neurotrophic factor) is also improved, which controls various cognitive functions and is responsible for neuronal functioning in the body (Kaur et al., 2021). The study has created evidence that yoga may help prevent the conversion of pre-diabetes into diabetes, believed to be mediated by molecular pathways like angiogenesis and neurogenesis. Therefore, yoga is a promising rejuvenating therapy for the amelioration of diabetes and pre-diabetes (Kaur, N., 2021).

Another study was conducted to explore the impact of yogic meditation and music on the performance of shooters. Shooting demands high levels of technical perfection, concentration, and physical as well as psychological stability. Competitive situations induce anxiety, fear, and extra tension, which can impair performance. Distractions and a lack of concentration are useless for an elite athlete. Music and meditative techniques can assist and, moreover, act as an ergogenic aid for shooters, which has the ability to not only help in focusing but also enhance the performance (Kaur, J., 2018). An experimental design would be implemented to assess the effects of asynchronous music and meditation on flow states, emotions (anxiety), cognitive abilities (attention and dual attention), and their correlation with Oxytocin and BDNF levels in shooters (Kaur, J., 2019). The significant impact of 12 weeks of interventions concluded that the obtained group-wise comparison results revealed changes in most of the flow state dimensions and other neuropsychological variables as these dimensions were highly significant (Kaur et al., 2012). Interestingly, salivary oxytocin levels in yoga groups were reduced as compared to music groups, though the changes were non-significant, suggesting that yoga could be a better therapeutic strategy to manage stress among the athletic players. It is also concluded that 12 weeks of asynchronous music intervention had an impact on the pre- and post-test scores of a music group on different neuropsychological variables, which exhibited changes in most of the flow state dimensions (balance, goals, and control), as these dimensions were significant. The impact of meditation yoga intervention on different neuropsychological variables before and after yoga meditation group revealed significant changes in most of the flow state dimensions such as (Balance, Merging, Goals Autotelic & overall Flow) at the 0.01 level of significance. The impact of 12 weeks of meditation, yoga, and asynchronous music on pre-post analysis to assess the biochemical changes (BDNF and oxytocin) has also

demonstrated non-significant changes in BDNF levels in control, music, and yoga groups. The pre- and post-analysis results of the yoga group showed a significant reduction in oxytocin levels, whereas the control and music groups did not show significant changes in the same, indicating that the yogic meditation intervention could be a better therapy to manage stress levels.

Investigations on Cyclic Meditation

1. Effective in Lessening the Impact of Occupational Stress

In a subsequent study that correlated CM with heart rate variability [2], a two-day CM treatment indicated a significant decrease in sympathetic activity in 26 asymptomatic male middle managers. This reduction in baseline autonomic arousal and occupational stress levels was attributed to CM's ability to lower sympathetic activity. Even though this is only a theory at this point, it is possible that the mechanisms that are driving the drop in occupational stress levels are connected to psychological factors in addition to a decline in autonomic arousal.

2. Managing Anxiety and Memory

Memory scores improved immediately after practice, and state anxiety was dramatically decreased when the participants were in a typical yoga calming position called Shavasana [3]. The cyclical arrangement of supine rest and yoga postures included in CM produced these results.

3. Beneficial to the General Level of Sleep Quality

In a research study, the night following a day in which 30 male participants exercised CM twice, full-night polysomnography data as well as the self-rating of sleep were analyzed. This was done in order to determine the quality of sleep. This was in stark contrast to another night in which they had gotten two periods of supine rest (SR), each lasting the same amount of time as the day before. When compared to the night following SR practice, the proportion of slow wave sleep (SWS), the number of awakenings per hour, and the percentage of rapid eye movement (REM) sleep were all significantly greater in the night after CM practice. It has been shown that taking CM at any point throughout the day will result in an increase in the percentage of slow-wave sleep experienced the following evening [4].

4. Beneficial to the Enhancement of Creative Cognition

It has been hypothesized that regular practice of CM strengthens associations and increases connectivity between the frontal and parietal lobes, which are the main nodes of the executive attention network and the default mode network, respectively, thereby enhancing key stages of creativity such as preparation, incubation, and illumination [5].

Cyclic Meditation and Its Psychophysiological Effects

Research indicated that the high-frequency component of heart rate variability (HRV) increased after the use of CM [6]. If we want to have a complete understanding of how it operates, then we need to have an understanding of the function of the vagus nerve as well as how it operates. During contemplative activities, a two-route paradigm has been suggested as a means of stimulating the respiratory vagal nerve. Direct stimulation of the vagus nerve may

occur in two distinct ways: top-down (characterized by a low respiratory rate and an inhalation/exhalation ratio) or bottom-up (efferent vagus nerve activation by upward impulses induced by a state of relaxation and low-threat perception generated by CM). This feedback loop of afferent and efferent stimulation, which has linked beneficial effects [7], further increases the vagal tone, which has related benefits. Cognitive benefits may be attributed to the activation of the autonomic nervous system (ANS) through its projections from the vagus nerve. There is also the possibility that experienced yogis have greater functional connectivity in the brain's motor, cognitive, and emotional circuits [8]. This is a concept that is supported by some evidence. We may deduce that CM may have a good effect on the gut-brain axis since stress, anxiety, cognitive capacities, and emotional well-being all play essential roles in the regulation of the gut-brain axis.

Conclusions

The practices of yoga and cyclic meditation have been found to have a number of beneficial effects on our standard of living. Yoga, pranayama, and meditation are all practices that may provide you with a variety of benefits and advantages. It has been shown that regular practice of yoga, pranayama, and meditation may decrease stress, anxiety, obesity, and other ailments associated with contemporary lifestyles. The practice of CM has the potential to improve cognitive and neuropsychological skills, as well as increase vagal tone. In addition to this, CM has been shown to have a beneficial and calming impact on a variety of aspects of one's physical, physiological, and mental health, and it also helps to suppress a variety of illnesses that are associated with the general well-being of humans. It has also been shown that participation in the CM programme reduces levels of occupational stress as well as baseline autonomic arousal. Following CM, there is also an improvement in performance when it comes to a task called letter cancellation. This activity needs selective attention, focus, visual scanning ability, and a repeated motor response. The hypothesis of cortical inhibition following CM was supported by the longer latencies of evoked potentials that were produced inside the cerebral cortex as a result of the practice of CM. It has been shown that engaging in CM throughout the daytime leads to an increase in the proportion of slow-wave sleep experienced over the following nights. According to this evidence, practicing CM may lower levels of autonomic arousal; (ii) boost levels of attention and (iii) enhance the quality of sleep.

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AN ANALYSIS OF RHETORICAL PHENOMENA OF THE LANGUAGE DISPLAYED ON EUROPEAN FOOTBALL STADIUM STANDS

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Abstract. Through the methods of literature, content analysis, interview and other research methods, aiming at the 199 TIFO images of European professional football matches collected as the research object, and analyzing the text information appearing in them, we can find that European fans mainly use common rhetorical devices such as metonymy, exaggeration, duality, vocative expression, pun, analogy and irony in the language expression of cheering in the stands.

Keywords: TIFO rhetorical European football

АНАЛИЗ РИТОРИЧЕСКОГО ФЕНОМЕНА ЯЗЫКА С ФАНАТСКИХ БАННЕРОВ НА ЕВРОПЕЙСКИХ ФУТБОЛЬНЫХ МЕРОПРИЯТИЯХ

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Аннотация. С помощью методов литературного анализа, содержательного анализа, интервью и других методов исследования, основываясь на анализе 199 TIFO-изображений с европейских профессиональных футбольных матчей, собранных в качестве объекта исследования, и анализируя фигурирующую в них текстовую информацию, мы можем обнаружить, что европейские болельщики в основном используют общие риторические приемы, такие как метонимия, преувеличение, двойственность, звательные выражения, каламбур, аналогия и ирония в языковом выражении аплодисментов на трибунах.

Ключевые слова: риторика, TIFO, европейский футбол.

Rhetoric is a phenomenon produced in the process of human language use. It refers to an activity of selecting appropriate means of expression according to the topic situation to improve the effect of language expression. Specifically, rhetoric includes the tempering of words, the choice of sentence patterns, the use of various figures of

speech, the organization of chapters, and the coordination of style. In the TIFO cultural display of European professional football matches, in addition to the visual cultural presentation such as images on the stand, the fans also use a large number of words as information carriers to express their attitudes, emotions and views.