Effects of Balancing Asana on Self-Expressive Creativity and IQ in Adolescents

Submitted by

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MS. JAGRITI PATRA

STANDARD INTERNATIONAL TRANSLITERATION CODE USED TO TRANSLITERATE *SAMSKṚTA* AND BENGALI WORDS

अ	आ	इ	ई	उ	ऊ	ऋ
a	ā	i	ī	u	ū	ṛ
অ	আ	ই	ঈ	উ	ঊ	ঋ
ऌ	ए	ऐ	ओ	औ	अं	अः
ḷ	e	ai	o	au	aṁ	aḥ
ঌ	এ	ঐ	ও	ঔ	অং	অঃ

	क	ख	ग	घ	ङ	
	ka	kha	ga	gha	ṅa	
	ক	খ	গ	ঘ	ঙ	
	च	छ	ज	झ	ञ	
	ca	cha	ja	jha	ña	
	চ	ছ	জ	ঝ	ঞ	
	ट	ठ	ड	ढ	ण	
	ṭa	ṭha	ḍa	ḍha	ṇa	
	ট	ঠ	ড	ঢ	ণ	
	त	थ	द	ध	न	
	ta	tha	da	dha	na	
	ত	থ	দ	ধ	ন	
	प	फ	ब	भ	म	
	pa	pha	ba	bha	ma	
	প	ফ	ব	ভ	ম	
य	र	ल	श	ष	स	ह
ya	ra	la	śa	ṣa	sa	h
য	র	ল	শ	ষ	স	হ
		क्ष	त्र	ज्ञ		
		kṣa	tra	jña		
		ক্ষ	ত্র	জ্ঞ		

Content

Effects of Balancing Asana on Self-Expressive Creativity and IQ in Adolescent.

Abstract

Background: Teenage is the turning point of human development where individuality starts from parenting. The ability of self-expressive skills and IQ get diverted easily in teenage. Hence there is a

need for natural remedy to maintain self- expressive skills and IQ at teenage. Present study focusses on Yogic practices to maintain such psycho-physiological health.

Aim: Balancing asana can improve self-expressive creativity and IQ in adolescents.

Methods: Pre-Post study.

Sampling: The study population total of 15 adolescents (12-17 YR.) Convincing sampling.

Parameters: The following instruments were used: Rosenberg Self-Esteem Scale (RSE), the Creativity personality test (25).

Intervention: Yoga routine practice time 45 mints for 26 days. (D. 01.10.2021 – 30.10.2021)

Result: The data will be analyzed in the MS-excel and the average and Standard deviations also calculated by the MS-excel.

Conclusion: The visual ability, voice recognition as an indicator of IQ, self-expressive creativity and static balance is improve by inhibit the extra curriculum of the brain with the yogic practices.

Keywords: self-expressive creative, IQ, Adolescents, cognitive development, self- esteem, standing-asana, yoga.

CHAPTER-1

INTRODUCTION:

1.1 Adolescent characterization & development:

Adolescence is the period of life when transition from the dependence of childhood to adulthood's independence.in this time youth get matured by not only physical health but also having changes on mental & emotional health. Youngster influence through the drilling of encouraging, Facilitating, forwarding towards the determination, developing path, self-sufficiency, self-esteem, will-power and interpersonal skills. (1)

Adolescence, which turns from the start of teenage years to adulthood, it is a creative period in Which changes in cognition, emotions, and interpersonal behaviour which reflect after wide-ranging biological alterations from early stages, specially brain of adolescence .Cooperatively, puberty, is the neurobiological, cognitive, and psychosocial changes that take place during adolescence portray. a period of great opportunities for young people to embellishment. When it is frequently thought of as a time of misperception danger for young people, adolescence is more truly considered as a time of growth chances for youth to acquire a knowledge and evolve the intelligence, prepared with their own wealth and livelihood, the regular process of growth and development can help teen-agers to form strong relationships with peers and peoples, develop a sense of individuality and self, and experience ironic and unforgettable memory's with the world. Adolescence thus forms a critical connection between childhood and adolescent and is a serious frame to the development of positive, changing lives. As a positive window of opportunity, youth represents a moral period, the benefits of young people and their development can lead to the deterioration of community.(2)

Several previous studies have examined the range of metacognition training in adolescence. Improves self-esteem between adolescence and adulthood by working with concepts, spaces, and social contexts. The program represents adolescence as a time in which a sense of self-knowledge is undergoing high level development (Sebastian et al., 2008). represents how clearly see your own values, passions, aspirations, and self-individuality are not understood, slow but sure improvement of the cognitive ability during the period of adolescence can be related to increasing egocentricity, self-perception, and

self-consciousness. Hypothetically, this enables teenagers to be more reliable with their role on stage, as they become more aware of and value the judgments of others (Sebastian et al., 2008), and when they are developed in detail. Individualities separated from their families (Lapsley, 1991). (3) The evolution of the reproductive system at adolescence is associated with the rise of gonadal steroid hormonal concentration. The brain has a large density of steroid receptors, and thus it is likely that sex hormones may have an effect on a neutral network during adolescence. (Sisk and Foster 13) We propose that the second wave of brain restoration occurs in adolescence, building on sexual differences during the earlier perinatal period. In this model, puberty hormones affect the further structure of the adolescent brain, so that it results in permanent reformation of the brain, while neural networks are effectively detected for their active hormonal effects. Adult hormonal applications have different effects on hypothalamic-pituitary-adrenal AX (HPA) in boys and girls: The rise in androgens in boys apparently inhibits hypothalamic secretion of corticotrophin - hormonal releasing (CRH), while Oestrogen's in girls. To control the HPA axis upwards. Oestrogen's can make girls more accessible, while androgens makes boys more accessible to them. (1)

Stages of adolescence or middle adolescence (12-15 yrs.) stage, puberty is completed for both males and females. It slows the growth of the body in females, but persists in males. Young people in this state continue to increase the range of abstract thinking. In this regard, young people begin to extend their longstanding goals and to consider the significance of life and moral reasoning. Adolescents in this stage of development experience many social changes and social movements, including increased self-inductions and increased threats of independence.

1.2 Intelligence\ IQ & self-expressive creativity:-

The description of intelligence is a large quantity of our cognitive construction to enable effective alteration. Many cognitive processes, such as perception, learning, memory, reasoning, and problem solving, are needed in the correct way to learn, understand and handle new situations All intelligence examinations, from unified tasks to multi-faceted tasks, tend to generate a powerful general element that "general intelligence".[4]

Meta-intelligence as a way to comprehend the interactions of control and coordination between a creative, analytical, practical and wisdom-based approach to difficult resolving (Sternberg n.d.b). Innovative, investigative, applied, and intelligent approaches can be grounded in wisdom - or at least through meta-intelligence. An implicit approach involves the intelligent skills and approach see also (Sternberg 2003) to be applied to one or more problems.[5]

The gray matter of the cork varies in intelligence, albeit to a lesser extent than the gray cortical matter. The neuro image study shows the self-motivated essence of the brain-intelligence relations. Ramsdens and colleagues, combining the structure and function of the imagination, found that instabilities in verbal intelligence in adolescents were accompanied by changes in the gray matter region that was influenced by speech, whereas non-verbal intelligence variations were complemented by changes in the gray matter region. Which are activated by finger movements. In postpartum brain growth, of Gray matter first reaches in the primary sensorimotor cortex, and the prefrontal cortex develops last. The subcortical areas of the brain, especially the limbic system and the limb, develop more maturely, so that during adolescence there is an imbalance between the more mature subcortical areas and the less developed prefrontal regions. Distinctive patterns of behaviour among adolescents, even the most exposed. The high ecological encouragement of adolescent brain plasticity allows them to engage in mainly strong cortical effects in the cortical for many can obtain different ways of significant formation. According to investment theory, creativity requires a conjunction of six distinct but logical resources: logical abilities, awareness, intellectual, personality, motivation, and environment. (6)

Previous studies shows that Result of yoga practices on psycho-motor abilities among intelligently disabled teenagers. [7]

The presented studies focus on the balancing asana can improved IQ & self-expressive creativity or not?

1.3 Anatomy of Self Esteem and intelligence:

Deliberating consciousness, thoughts, memory, we know little about the mechanisms of memory but People do not know the neural mechanisms of a thought which demolition the large portions of the cerebral cortex that does not stop a person from experience the line of thinking and force into the depth of the thoughts and also the mark of consciousness of the ambiances. Individually believed positively immediate signals in many portions of the cerebral cortex, thalamus, limbic system, and reticular formation of the brain stem. Elementary thoughts probably depend almost entirely on lower interiors; the thought of discomfort is probably a good example because electrical stimulation of the human cortex infrequently produces all new serious discomfort, stimulation of certain areas of the hypothalamus, amygdala, and mesencephalon can cause unbearable pain. On the other hand, a type of thought pattern that does involve large association of the cerebral cortex is that of vision because loss of the visual cortex causes complete incompetence to remark visual form or color. We might frame impermanent definition of a thought in terms of neural activity as follows: Understood the Consequences from of intention of encouragement of many parts of the nervous system at the same phase, in all probability containing significantly the cerebral cortex, thalamus, limbic system, and upper reticular formation of the brain trunk. This is called the complete concept of thoughts. Secreted areas of the limbic system, thalamus, and reticular formation are whispered to decide the common landscape of the thought, present such abilities as desire, unhappiness, discomfort, security, rough modalities of sensation, to cultured areas of the body, and other common physical characteristics. Though, particular secreted areas of the cerebral cortex regulate separate physiognomies of the thought. (1) exact determination of outrage on the surface of the body and of substances the creative power, (2) sensation of the touch of cloth,

(3) optical recognition of the four-sided pattern of a concrete block wall, and (4) new different appearances that move in into one's overall cognizance of a specific express. Consciousness can maybe be defined as our ongoing rush of awareness of any wall or our consecutive opinions.

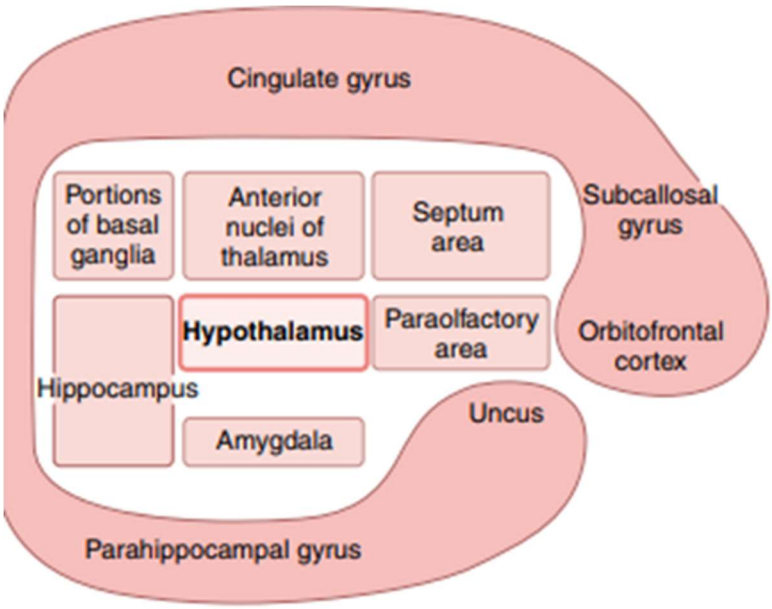


Image -1: Limbic system viewing the important location of hypothalamus

Nervous function and endocrine system are mainly accountable for the regulator and integration of all the body functions. Both Somatic (involuntary) as well as autonomic (Involuntary) Nervous system are intimately interlinked. All conscious-unconscious phenomena, vegetative or volitional functions, enduring or constantly changing activities in the body, are all integrated through neuro-endocrinal functions. asana, Bandhas, Pranayama and Mudras are known to influence neuro-endocrinal functions favorably through pressure changes within the body so as to contribute to qualitative effects on the psycho- physiological make-up of the Yoga practitioner (Readers may, with advantage, refer Abstracts and Bibliography of

Articles in Yoga, Vol.182 Kaivalyadhama Publications, Lonavla, India, for research findings pertaining to these Yoga techniques.) Integrative functions of the brain: The brain receives sensory information through sensory nerves from the peripheral sensory organs. It interprets this information and integrates it with information retrieved from the memory. Apart from Basic Rest Activity Cycle (BRAC), the brain also has altered states of conscious-ness that may occur under the influence of psychedelic drugs, during brain lesions and injuries or during meditative states or during yoga practices. Apart from memory the speech, as well as, emotions are the other most important functions of the brain. The limbic system of the brain is the nodal center for the neuro-endocrinal functions. Drugs like tranquillizer and antidepressants may affect this center influencing emotions in the process. Based on this integrated information it then initiates the motor action through the motor nerves to send out appropriate messages. Brain stimulation through yoga practices, via stimulation of vegetative system through pressure changes and enhanced circulation of oxy-hemoglobin to the brain, may influence the quality of a total consciousness favorably. It is now established that if the brain does not receive sufficient oxygen for the process of cerebration (i.e. mind-body activity), then carbon dioxide will cause severe hallucination and emotional over- reactions. Today's metropolitan pollutions can thus be implicated with the rising violence and crime amongst city dwellers, particularly. No part of the brain functions in isolation but functions with total integration and co-ordination with all other parts. Left hemisphere is concerned predominantly with linguistic ability and the right hemisphere plays dominant role in non-speech sounds like melodies, tactile sensations as well as abstract thinking and perceptions. Still integration is perceived within both the hemisphere on the functional level. This integration is well perceived through the influence of Anuloma Viloma Pranayama and other Yoga techniques proving to be vital in opening up of both the nostrils with equal force of breathing within them.

Sensory Feedback Phenomenon: sensory nerves bring instincts associated with outside world as well as within the body, through all sensory organs and make these accessible to the higher centers of the brain. Sensibility instincts are mixed up with our environment outside the body and sensibility instincts are implicated with the changes taking place in internal body roles. Sensitivity to stimuli originating outside of the body impulses are of two types:

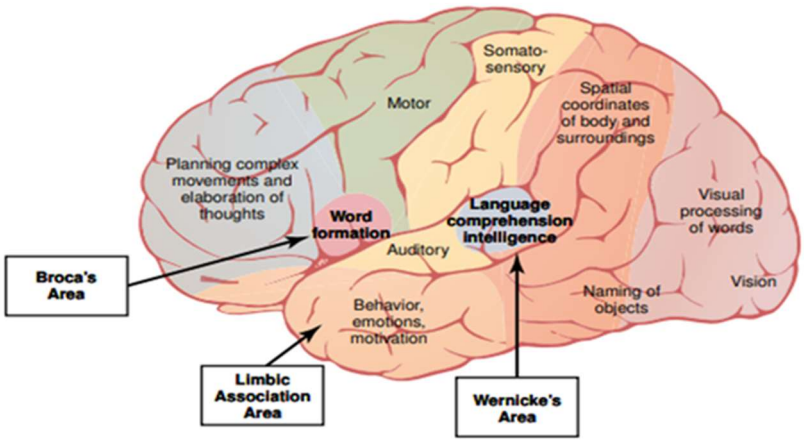
proprioceptive (concerning movements in the joints, body positions and a general awareness associated with muscular system) and viscероceptive (impulses associated with visceral organs).Significantly, in a larger extent the exteroceptive impulses, as well as, almost the whole of the interceptive impulses do not enter into the sphere of our consciousness because of reflex actions and homeostatic functions associated with lower centers of the Nervous system. Yoga practices try to bring these internal sensations to the field of o comprehensive awareness. The ensuing sensory feedback phenome brings a conscious control on all our internal activities. Biofeedback techniques, available today, work on the principle of Conscious-Sensory Feedback phenomenon. It is possible to make the internal c (visceral organs, Forehead muscles and even smooth muscles of the heart and brain) respond in a desired way through these techniques using some audio-visual signals. Thus one leans to influence the functions d the organ concerned. One can exercise some control on one's blood pressure, body temperature and even wave patterns of the brain toward the desired direction. Yoga techniques, however, increase our field of comprehensive awareness, including even the subtle-most internal activities, by virtue of inward awareness of the yogic nature. The comprehensive awareness of such activities gradually endows a yoga practitioner with an ability to control and regulate the functioning of the internal organs to a significant level. Psycho-physiological effects claimed for in Hatha Yogic texts point toward these phenomena the comprehensive awareness of such

activities gradually endows a yoga practitioner with an ability to control and regulate the functioning of the internal organs to a significant level. Quite convincingly.

1.4 Physiology of Self Esteem and intelligence:

The limbic region is in the anterior pole of the temporal lobe, in the visceral portion of the frontal lobe, and in the long curved structure on the medial surface of the cerebral hemisphere's the cerebral cortex of the mid surface of the limbic system lying deep in the long way crevice on the mid surface of each cerebral hemisphere .most of the part highly developed in the predominant side of the brain .the left side of the brain. the left side of the brain in almost all right handed people and it plays the role of any part of the cerebral cortex for the higher awareness levels of brain function that is called intelligence.so, this region has been called by different names indicative areas, that has importance – the general interpretative area, the intelligence area, the knowing area, the tertiary association area, and so on. It is best known as Wernicke's cortex. The neurologist who first described its special significance in the intellectual process psychological studies in patients with damage to the Dominant hemisphere have suggested that this hemisphere may be especially important for understanding and interpreting music, nonverbal visual experience (visual patterns), spatial relations between the person and their surroundings, the significance of " body language" and intonations of people's voices, and probably many somatic experience related to use of limbs and hand according to psychological studies in patients with damage to the dominant hemisphere .as, a result although while we talk about the dominant hemisphere , it is mostly for cognitive process focused on language the so called dominant hemisphere may really be dominant for some other forms of intelligence. In meditation keeping the spine upright prevents the chance of compressing viscera in the abdomen and releases the mind from burden of body. The blood circulation to the pelvic area is improved which strengths the coccygeal and sacral nerves. The body produces the least amount of carbon dioxide as a result of slower metabolic activity brought on by

contemplative posture. The practitioner's mental activity consequently virtually ends. After that both conscious and unconscious bodily actions and triggers have no impact on the mind.



1.5 Changes in adolescents with corona Situation or Pandemic:

Covid-19 pandemic has led to mental health hazards in children, with 24% of children aged 5-11 experiencing timely visits, and 31% of teenagers 12-17 experiencing emotional difficulties. Beginning in 2021, there will be a rise of more than 50% in the number of suspected suicide attempts and visits to the ER among females between ages of 12-17. Children and pubescent young people can show the signs of pain with symptoms, such as changes in mood that are not beneficial to your child, such as permanent irritability, feelings of despair or anger, frequently conflicts with friends and family. Pandemic related stress and traumas may have long-lasting effects on children psychological development, changes ones behaviour and detaching from intimates ties. Loss of interest in previously enjoyed activities , difficulty falling asleep , difficulty staying asleep or sleeping constantly , changes in appetite , weight , or eating habits, such as never being hungry or eating constantly issues with memory thinking or defects. More specifically, changes such as lack of basic absence individual well-being, an increase in risks

or excessive behaviour, like drug or alcohol use, thoughts of death or suicide, or talking about it, are less appealing to determine in schools and academic studies.

1.6 Modern medical treatment:

In neuro typical populations, there is strong positive proof that SBYP can help with depressive disorders, self-esteem, subjective and psychological well-being, attention, and academic performance, and there is moderate evidence that it can help with stress, self-concept, resilience, executive function, inhibition, and working memory.

This study provided proof that three months of yoga practice had a positive impact on EF, and it may be a helpful tool for young orphans to regularly practice yoga for cognitive health. The long-lasting impact of yoga on EF that was shown in the current study may have consequences for learning, classroom behaviour, and handling difficult situations, as well as serve as an intervention for mental health issues.

1.7 Deeper aspect of yogic branches:

One of India's oldest and major psycho-spiritual traditions is yoga. Over 5,000 years of development have allowed it to encompass a huge array of ethical and moral precepts, mental postures, and physical exercises. The Sanskrit word "yuj," which meaning to yoke or unite, is where the word "yoga" originates. Body, mind, and spirit unification are frequent terms used to describe yoga. The "yamas" (moral discipline), "niyamas," "asanas," "breath control," "pratyahara," "sense inhibition," "dharana," "conflict," "dhyana," and "samadhi" are typically included in this "triple path" technique.

All these forms seek Conscience, realization, and an incitement to their true self. In these unwanted texts we also have Hatha yogic, Raja yoga, Karma yoga, Bhakti yoga etc. The most

important thing in today's world is the Patanjali yoga sutra and Hatha yoga. Naturally and comprehensively, these "eight-fold" exercises have been shown to improve the discipline, moral, mortal, ethical, compassion, kindness, attention, working-phase, mind-body-intelligence, visual orientation, and the cognitive function of Jnanaindrya and Karmendriya**. Concentrative Meditation involves stimulus repetition, leading to stimulus habituation and inhibition of cognitive construing. This practice inhibits anticipatory stance, reducing cognitive constructs and hemispheric activity, potentially resulting in transcendence.** The system of Mento -spiritual training for realizing the true nature and the Creative potential of the Transcendental Consciousness' (Eternal Self) and its freedom from the conscious and unconscious impulsions, reactivity's and conditioning of the Phenomenal Consciousness' (Empirical Self). Hathapadipika mentions about the conscious mental dynamics alleviation of psychosomatic disorders (H. P. V. 9.). The ancient men the West knew "Mens Sano in Corpore Sano". Ayurveda has an elaborat co understanding about the interdependence of the mind and the bod in (Caraka Su. IV.36). Now, modern scientists are also realizing the effect the of mental stales on bodily realms and vice-versa (Benson, 1970; Ornish ex 1991). Yoga, with its techniques to control and tap the dynamics of mind, can enrich, handsomely, the studies on mind-body interactions it The Yogic concepts like Triguna, Karmaphala, Citttibhumis and PanchaKosa not only indicate deeper implications of mento-spiritual dynamics with in one's personality make-up but also show the way one should proceed to develop and transcend one's grosser and subtler aspects of personality co Experts in psycho-analysis, Gestalt and Cognitive-behavioral approaches ca may work hand-in-hand with yoga experts for better results in therapy as yoga has philosophical, as well as, psycho-neuro-endocrinal 2 approaches and can influence one's value systems on one hand and see light one's psychophysiology on the other, if scientific reports have any dictation. The Yogic understanding, that consciousness and mind are separate entities and not synonymous terms, can solve the etymological difficulties concerning i) the

bipolar concept of consciousness and the unconscious ii) mind-body interactions iii) continuity of one's existence and the concept of 'self-sameness' iv) Moral responsibility in interpersonal relationships and the like The Yogic view-point subscribes more to the transcendental nature of the consciousness while Western approach views the consciousness as phenomenal. Certain remarkable similarities between Yoga and psychoanalysis are as follows: Both the sciences attempt to free the individual from nervous and defensive automatism that renders him slave of impulse and emotions, as in case of a compulsive criminal, a drug addict, kleptomaniac or any person showing obsessive thinking and complied actions. Both the sciences have the thesis that the problems of t humanity are caused due to the ignorance and the way to its remedy through knowing one's inner being. However, unlike psychoanalysis Yoga alone proposes both Transcendental Consciousness (ie. Atman Self) and Phenomena Consciousness (i.e. mind, brain and the dynamics) as inherent parts of human personality. Moreover, Yoga ha a varied range of practices to correct, preserve and strengthen one' psychosomatic assets apart from the practicably sound metaphysic reasoning pertaining to the meaning and the purpose of human life and living. Analytical therapy seem to be only a preliminary form of Yoga, as its objectives of disentanglement from aberrant emotions, attainment of socially desirable Mento-emotional health, anxiety management. Reality perception and a greater satisfaction in social adjustment are considered to form, only a preparatory background for the higher yogic pursuits of Pratyahara, Dharana and Samadhi. A perfect psycho-physiological harmony, a total freedom from the bondage of all the inborn and the 'acquired' reactivity's, culminating into Gunatita (beyond all attributes) state of Svarupavastha is alone held in the supreme esteem in Yoga. The para-sensual and absolute joy at this stage is said to have a healing effect for the mind-body complex. This joy is considered as a self-regulating agent in yoga (B.GII:64) No wonder, Yoga is an advanced science of antiquity while psycho-analysis has only a brief history behind its growth and development. Use of the subtle suggestion found in Yoga in the form of meaningful

contents of Mantras and the tangible techniques of Tapa, Swadhyava and Iswarapranidhana may enrich the technology of suggestion in psychoanalysis, particularly, while tu inducing the analysand into a mento-emotional relaxation.) The Yogic concept of Kaivalya goes far beyond the analyst's conception of free psyche. Down-to-earth approach of Yoga in attaining Samadhi can attract the scientists to conduct research into observable effects of one's pursuit of Samadhi at different stages of its attainment. A Yoga expert is like a trainer rather than a moralist. He would not say, "Abstain from alcohol because it is bad, observe continence because incontinence is immoral and sinful". He has a terse premise that if you follow such and such practices you will evidence such and such results. According to Patanjala Yoga Sutra, for instance, a rigorous observance of certain codes of conduct (Yamas and Niyamas) and a diligent Abhyasa (practi of certain yoga techniques (Asana, Pranayama. Bandha a Mudra are considered as are considered as almost indispensab to successfully treading the path of Internal (Dharana, Dhya and Samadhi) Yoga which otherwise might prove to be quite cumbersome and an impractical affair.Orla Further, the yoga expert may prescribe certain mental practice as mentioned in P.Y.S.(I: 33. II: 3) to break the fixities a automatism at the physical level, as well as, certain mento-spirit exercises (different types of Kriya Yoga) to free the mind for conscious and unconscious impulsions, reactivity's a conditionings. He may, ultimately, prescribe the subtler s regulating psycho-physiological methods such as certa meditational practices to free oneself almost completely from dictates of mind and thus make oneself amenable to the dicta of Will and intuition". Swami Visnu Tirtha (1974) speaks of W power, "Will for action brings the requisite knowledge and W for knowledge gives the necessary impetus for work, because W is the creative energy in its potential state".In any therapy, the patient's participation in his own treatment process is known to enhance his self-esteem, self-confidence, feeling of self-worth and his capability of adjustments at all levels. Yoga, also defined as a "Conscious Evolution', provides abundantly such an opportunity Even the patients of cancer and AIDS,

who are broken internally, may be helped with circumscribed meditational techniques. It is a responsibility of modern psychology to integrate such practices into its therapeutic process. Yoga may also, thus, be equipped with more reliable methods of communicating its essence and principles to the common man in his own common language if psychological counseling is employed judiciously.

1.8 Yogic perspective of mind (chitta)\ intelligence (buddhi):

According to Mandukya Upanisad, during the Jagrat (waking) state the Purusha gets the experience of the external world with its gross objects in the Citta.' In the dream state though there are no relation with the external world there is only its knowledge and experience. In the same way, during the dreamless state, neither there is wish for the external object and its cognition, nor there is the experience of this state in the dream. In the Turiya state, the state of Citta is completely different from these three states. Neither there is the knowledge of the external world and the internal world nor of the both. The Purusha feels itself identical with Brahman losing once for all its feeling of duality. This state is transcendental state and thus in describable which is experienced during the realization of self.

The suggestive "let go" element in Progressive relaxation and Autogenic training will be much more effective if the subject comprehends the distinction between the empirical self (Physical state, concrete thought, emotions and sensations) and the eternal Self (Creative thought, intuition and Will) as indicated in Yoga Darsana. Therefore, research into these concepts will enrich both the sciences, particularly in the area of personality. Yoga Darsana provides means and ways for developing Intuition and Will as evidenced in the description of Siddhis and Vibhutis as mentioned in Patanjala Yoga Sutra. Therefore, further exploration in these areas will give an impetus to the research in the inner realm of human personality. In modern psychological studies, self-expression, self-identity and self-actualization have been found to

be contributive to the development of Creativity and Intelligence. Therefore, the research into the yogic processes of Samyam (as dealt with in Patanjali Yoga Sutra, giving an expression to the power of will, ag may reveal multifarious possibilities to man for his personality development, through an enhanced creativity in his life related endeavors. Nature and constitution of mind and personality are the area where the co-operation between the two sciences is earnest called for. It may enable modern psychology to discover paradigms to study human personality. Modern psychology should make itself receptive in trying Yogic paradigms, involving theory like Triguna. Cittabhumis and PanchaKosa. The description of these and the concepts of Mind, Self or Annan, show a surprising agreement amongst almost all the Indian thinkers of different time and environmental regions.

CHAPTER-2

2. ANCIENT LITERATURE:

2.1 Asanas for IQ & Self-expresive creativity form Patanjali yoga-sutra:

स्थिरसुखमासनम्॥४६॥

Sthirasukhamāsanam|| 2-46|| p.y.s

Sthira: steady; sukham: comfortable; āsanam: posture

Meaning: The posture should be steady and at ease. Asana is often used to refer to yoga poses, although in this context it solely refers to a meditative stance. It is also advisable to perform the asanas that create an equilibrium of homeostasis in the body.

प्रयत्नशैथिल्यानन्तसमापत्तिभ्याम्॥४७॥

Prayatnaśaithilyānantasamāpattibhyām||2-47|| p.y.s

Relaxation (śaithilya) of effort (prayatna) and absorption --samāpatti-(samāpattibhyām) in the infinite "in the infinite space around"-- (ananta) (Āsana or Posture is perfected)

Meaning: One must overcome tension and effort in order to become, steady, and at ease in the asana they have chosen for meditation. Therefore, the effort should be relaxed, and the asana should be perfectly relaxed. The thoughts must therefore concentrate on Ananta. Ananta is Sanskrit for unending. Additionally, it refers to the sneak on which Lord Vishnu is seated in the milky ocean. As a result, although ananta is a sign for a serpent, in this sutra the serpent represents the kundalini shakti. Any other technique for focusing on the kundalini should be used, or the student should focus on the snake force in the mooladhara chakra. The phrase "moderation" or "relaxing of effort" implies that you shouldn't exert any power or struggle. The posture must be effortlessly relaxed and without any muscular or nervous tension.

2.2 Asanas for IQ & self-expressive creativity from Hatha yoga pradipika

हठस्य परथमाङ्गत्वादासनं पूर्वमुछ्यते |

कुर्यात्तदासनं सथैर्यमारोग्यं छाङ्ग-लाघवम || १७ ||

haṭhasya prathamāngghatvādāsanaṃ pūrvamuchyate

kuryāttadāsanaṃ sthairyamāroghyaṃ chānggha-lāghavam || c-1,v17||HYP

Meaning: Asana practice leads to increased steadiness. There is less possibility of disease developing since prana travels freely. When prana stagnates anyplace in the body, it creates ideal conditions for bacteria to thrive, much as stagnant water is a breeding ground for many kinds of organisms. Prana should flow like swiftly moving water. The body also becomes flexible when prana is allowed to flow freely. Blockages and a buildup of toxins are the causes of the body's stiffness. Toxins are expelled from the body when prana starts to flow, allowing you to bend and stretch comfortably without needing to perform strenuous warming-up activities. The body will move on its own when the prana reserve is developed to a higher extent. You can discover yourself in an unplanned situation.

2.3 Explain virkhshasana form Gharanda Samhita:

अथ वृक्षासनम् ।

धामोरुमूलदेशे च याम्यं पादं निधाय तु ।

तिष्ठेत्तु वृक्षवद्भौ वृक्षासनमिदं विदुः ॥ ३६|| G.S

Meaning: The Tree-posture means that you stand on one leg (usually your left) while bending your right leg and placing your right foot on the root of your left thigh.

2.4 Buddhi \ intelligence form bhagvad-gita :

इन्द्रियाणि पराण्याहुरिन्द्रियेभ्य: परं मन: |

मनसस्तु परा बुद्धिर्यो बुद्धे: परतस्तु स: || 3-42||BG

indriyāṇi parāṇyāhur indriyebhyaḥ paraṁ manaḥ

manasas tu parā buddhir yo buddheḥ paratas tu saḥ

Meaning: The mind is superior to the senses, and the senses are superior to the gross body. Beyond the mind is the intellect, and even beyond the intellectual ability is the soul.

व्यवसायात्मिका बुद्धिरेकेह कुरुनन्दन |

बहुशाखा ह्यनन्ताश्च बुद्धयोऽव्यवसायिनाम् || 2-41||BG

vyavasāyātmikā buddhir ekeha kuru-nandana

bahu-śhākhā hyanantāśh cha buddhayo ’vyavasāyināṁ

Meaning: Buddhi is the practice of separating the mind from the results of one's deeds by firmly believing that all labor is done for the pleasure of God. Such a determined brain cultivates a single-minded focus on the objective and travels the path like an arrow shot from a bow. In later phases of sdhana, this commitment grows so powerful that nothing can stop the sdhaka from continuing on the path. He or she believes, "Even if there are a billion obstacles in my way, even if the entire world condemns me, even if I have to give my life, I will still not give up my sdhana." However, folks with multifaceted intellects find their thoughts racing in several directions. They are not able to develop the focus of mind that is vital footfall to the path to Divinity.

प्रसादे सर्वदुःखानां हानिरस्योपजायते |

प्रसन्नचेतसो ह्याशु बुद्धिः पर्यवतिष्ठते || 2-65||BG

prasāde sarva-duḥkhānāṁ hānir asyopajāyate

prasanna-chetaso hyāśhu buddhiḥ paryavatiṣhṭhate

Meaning: The end-of-sorrows tranquility is a gift of divine grace, and it quickly grounds the brain of such a calm person in God.

श्रुतिविप्रतिपन्ना ते यदा स्थास्यति निश्चला |

समाधावचला बुद्धिस्तदा योगमवाप्स्यसि || 2-53||BG

śhruti-vipratipannā te yadā sthāsyati niśhchalā

samādhāv-achalā buddhis tadā yogam avāpsyasi.

Meaning: You will achieve the state of perfect yoga once your brain stops being attracted by the cautious Vedic passages and remains steadfastly focused on divine consciousness.

क्रोधाद्भवति सम्मोहः सम्मोहात्स्मृतिविभ्रमः |

स्मृतिभ्रंशाद् बुद्धिनाशो बुद्धिनाशात्प्रणश्यति ||2- 63||BG

krodhād bhavati sammohaḥ sammohāt smṛiti-vibhramaḥ

smṛiti-bhranśhād buddhi-nāśho buddhi-nāśhāt praṇaśhyati

Meaning: Anger impairs judgment, which causes memory to become confused. Memory confusion leads to intellectual destruction, and intellectual destruction leads to ruin.

3. SCINTIFIC LITERATURE:

1. As per study by vishvanatha pise, balaram pradhan et,al.2018 improvement in static balance , agility , reaction time , with yogasana and pranayama for 12 weeks , in the present study focus only on balancing asanas with standing asanas it gives a clarification about psycho-motor function**.**

2. According to a 2019 study by Mara del Carmen Pérez-Fuentes, Mara del Mar Molero Jurado, et al., self-expression is developed for acquiring identity and self-efficacy through the positive effect of peers, which promotes feelings of empowerment and self-affirmation through constructive tasks that reinforce self-esteem and emotional intelligence. The current study focuses only on self-expressive creativity and IQ development through the standing balancing asanas.

3. Previous study concentrated on raise of follow of intelligence over period of time and they also explain factuality of environment structure .so, in may expected in the present study but conformed after these results. This technical review for present study because our aim is not focused in brain imaginary- techniques but we tried with subjected base on Intelligence ,creativity, self-esteem, self-confidence, duration of holding time of asanas. (Luca Rinaldi1,2,* and Annette Karmiloff-Smith 2017)

4. Based on research by Kerstin Konrad, Ph.D., RN,* Peter J. Uhlhaas, PhD, and Christine Firk, PhD, 2013 Due to the adolescent brain's high level of plasticity, environmental factors can have a particularly profound impact on cortical circuitry. This allows for the possibility of intellectual and emotional growth, but it also lets potentially negative influences in. The focus of the current study is on the development of IQ and self-expressive creativity through standing balancing asanas.

CHAPTER – 3

4. METHODOLOGY:

4.1 Aim : To improve self-expressive creativity and IQ in adolescents Balancing asanas.

4.2 Hypothesis

Positive hypothesis (Hp) balancing asanas may improve self-expressive creativity and IQ in adolescents.

Null hypothesis (Ho) balancing asanas may or may not improve self-expressive creativity and IQ in adolescents.

Negative hypothesis (Hn) balancing asanas may not improve self-expressive creativity and IQ in adolescents.

4.3Study design: Pre-Post study.

4.4 Sampling method:

The study population total of 15 adolescents (12-17 YR.) Convenient sampling,

Place: Sishutritha school Santineketan**.**

Class- 6-8 girls and boys

4.5 Parameters: The following instruments were used: Rosenberg Self-Esteem Scale (RSE), the Creativity personality test (25).

Scientist name- Rosenberg Self-Esteem Scale (RSE)Author Morris Rosenberg the Creativity personality test (25) Sperry

Year of intervention- Rosenberg Self-Esteem Scale (RSE)-1965

The Creativity personality test (25)- 1960

4.6 scoring method: The RSE is a Guttman scale with complicated scoring methods. Low self-esteem responses are scored as "disagree" or "strongly disagree" on items 1, 3, 4, 7, 10, and "strongly agree" or "agree" on items 2, 5, 6, 8, 9. Correct responses to items 3, 7, 9, and 4 and 5 are considered single items. The scale can also be scored by totaling individual 4 point items after reverse-scoring negatively worded items.

Reliability: RSE shows excellent internal consistency and stability with a.92 reproducibility coefficient.

Validity: RSE correlates significantly with self-esteem, Coppersmith Inventory, depression, anxiety, and predicts depression and anxiety.

A high score of 90-125 indicates a high degree of creativity, indicating an active right brain. Creative individuals may have tried various pursuits throughout their lives and may have already achieved success in creative environments. High scores suggest that those who have not yet experimented with creative pursuits should follow their intuition and pursue them.

However, those with an average score of 65-89 may lack the time or confidence to try new creative pursuits. To become more creative, individuals should develop more confidence and be more relaxed about intellectual risks.

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A score within the higher range indicates creative success and potential undeveloped talents. A score below 65 indicates a lower than average level of creative talents, possibly due to a preference for set principles and traditional conventions. Creativity and intellect are separate brain functions, and it's possible to be highly intellectual in some fields but not creative in others. Training oneself to bring out latent creative talents can broaden horizons and reveal previously unknown creative talents.

4.7 Intervention: Yoga routine practice time 45 mints for 21 days. (D. 01.10.2021 – 28.12.2021) 15 mints warm-up.5 mints 5 round sun-salutation.30 mints 5 balancing asanas- Ekapada paranamasana, garudasana, saral-natarajasana, EkaPadasana ,utthita hasta padangusthasana.5 mints yogic breathing practice.5 mints dhyana & om chanting\ mantra chanting.

4.8 Practice Chart :-

1.	Opening prayer	“OmSahanavavatu

		Sahanaubhunaktu Sahaviryamkaravavahai Tejasvinavadhitamastu Mavidvisavahai Om Shantih, Shantih, Shantih.”
2.	Sukshma vyama	I. Smarana Sakti Vikasaka, II. Medha Sakti Vikasaka III. Netra Shakti Vikasaka IV. Karna Shakti Vikasaka. V. Warm-Up-Loosing Practice
3.	Sun-salutation	5 times with breathing
4.	Asanas`	I. Ekapada Pranamasana II. Garudasana III. Saral Natarajasana IV. Eka Padasana V. Utthita Hasta Padangusthasana
5.	Pranayama	I. Natural Breathing II. Abdominal Breathing III. Thoracic Breathing IV. Clavicular Breathing V. Yogic Breathing

6.	Mudra	Jnana and chin mudras
7.	Dhyana	10 mints dhyana practice
8.	Closing prayer	Om chanting A-3 times U-3 time M-3 times Aum-3 times

4.9 Descriptions of Balancing Asanas in yogic view point:

Asanas name	Sanskrit name	English name	Chakra	Internal organ benefits
1.Ekapadapranamasana	**एकपदापरनामा आसन**	**One-legged prayer pose**	**Ajna/anahata chakra**	**This pose helps to balance the nerve system. Additionally, it tones the muscles of the foot, ankle, and leg.**
2. Garudasana	**गरुड़ासन**	**eagle pose**	**mooladhara chakra**	**Garudasana improves concentration, strengthens**

				It is beneficial for the upper back, the muscles, and the joints of the shoulders, arms, and legs.
3. Saral Natarajasana	**सरल नटराजासन**	**preparatory Lord Shiva's pose**	**Anahata or manipura**	**It beneficial for develop a sense of balance and coordination and improves concentration**
4. Eka Padasana	**एका पदासना**	**one foot pose**	**swadhisthana or manipura chakra.**	**Practicing this pose will help you to improve your concentration, balance, and muscle control.**
5.UtthitaHasta Padangusthasana	**उठा हुआ हाथ पैर की अंगुली सीट**	**raised hand to big toe pose**	**mooladhara or swadhisthana chakra**	**coordination of the neurological and muscle systems, which enhances concentration. While stretching the hamstrings, which benefits the knee and ankle joints, the hips and leg muscles become stronger and tonified.**

CHAPTER - 4

5.1 RESULTS : The data enter into excel sheet. The data is tabulated and made into graphs for better understanding by using mean values. Percentage change also given in tables for more understanding .table are shown in three major divisions. Table-1: demographic data, Table-2: general parameters, Table-3: specific parameters. General parameters are sub divided into three parts. Tablel-2.1: physical body. Table-2.2: respiratory. Table-2.3 cardio-vascular. Specific parameters are shown in two separate divisions. Table-3.1 creative personality test (CPT).Table-3.2 Rosenberg self-esteem scale (RSE). Graphs shown after every table. Abbreviations are given below every table and graph.

After noticing the results the positive hypothesis was proved and failed in null hypothesis (Hp) and negative hypothesis (Ho) .so, the alternative hypothesis (Hn) is " is there difference between IQ & self-expressive creative between whom gender differences ".

CHAPTER – 5

6. DISCUSSIONS:

Physical body parameter:

The BMI parameter became neutral from 18.445±2.44 to 18.445±2.44 with 0% of changes.

Respiratory parameters:

The respiratory rate data shows improvement from 17.4±4.74 to 14.5±2.27 with -16.6% of changes. And the less standard deviation indicates the less scatter-ness in the data.

The IBRT data shows improvement from 32±10.47 to 34.2±9.47 with 6.8% of changes. And the less standard deviation indicates the data become closer to the mean value.

The EBRT data shows improvement from 24.4±7.66 to 25.1±7.20 with 2.8 % of changes. And the less standard deviation indicate the data become closer to the mean value.

The PEFR data remains neutral from 331.5±62.45 to 331.5±65.88 with 0% of changes. But the less standard deviation shows the data become closer to the mean value.

Cardiovascular parameter:

The pulse rate data shows improvement from 55.37±11.90 to 66.2±10.26 with 19.7 % of changes. And the less scatter-ness of standard deviation shows the pulse rate data become more one pointed.

The Pulse Oximeter data shows improvement from 96.6±1.83 to 97.6±1.26 with 1 % of changes. And the less standard deviation shows the oxygen saturation data become more closer mean value.

The SBP data shows improvement from 123±6.74 to 120±0 with -2.4% changes. And the less scatter-ness indicate the data are very much closer to mean.

The DBP data shows improvement from 82±4.21 to 80±0 with -2.4 % changes. And the zero-standard deviation of post data refers that the data become very much closer to mean value.

Specific parameters:

The RAC data shows significant improvements from 13.6±3.43 to 18.2±2.74 with 33.8 % of changes. Also the standard deviation shows less scatter-ness in the post data.

The CPT data shows significant improvements from 90.8±12 to 102.1±7.90 with 1.24% of changes. So the standard deviation shows more one-pointiness among the post data.

The Static balance data shows significant improvement from 2.1±0.73 to 0.6±0.69 with -71.4% of changes. And the less standard deviation shows the less scatter-ness among the post data. **7. LIMITATIONS:**

The psychological parameters may have shown different changes instead of the actual changes in the brain cortex.

This study is majorly based on the self-inspection module. So the participant may give the bias data in the questionnaires.

The intervention time may be cause less and actual impact on IQ, self-expressive creativity and static balance.

The non-homogeny participant in age may have a different outcome which I ignore in this study.

8. STRENTGHTS:

There have few research papers about the effect on IQ, self-expressive creativity and static balance with yogic perspectives, but in my study the yogic protocol is different. So, we can surely say that there has a positive impact with. My study opens up farther study with the support of machinery (EEG, ECG, and Muscle MR) data for IQ, self-expressive creativity and static balance, which will be more reliable. We can explore the extension method of IQ, self-expressive creativity and static balance with the yoga as a way of life.

9. CONCLUSION: There are simultaneous signals in numerous areas of the cerebral cortex, thalamus, limbic system, reticular formation of the brain stem, and psychomotor abilities after just twenty-six days of practice. The fundamental ideas are almost entirely focused on the lower brain centers; the idea of pain is probably a good one to focus on because electrical stimulation of the human cortex typically only causes mild pain, whereas stimulation of specific regions of

the hypothalamus, amygdala, and mesencephalon can result in excruciating pain that is alleviated by these yogic techniques. By limiting the extra curriculum of the brain with yogic practices, the visual capacity, speech recognition as an IQ indicator, self-expressive creativity, and static balance are improved.

CHAPTER – 6

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12. Annexure:

12.1 RSE Questionnaires

Revised date (4 October 2006)

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RSE

Please record the appropriate answer for each item, depending on whether you Strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree
2 = Agree
3 = Disagree
4 = Strongly disagree

_____ 1. On the whole, I am satisfied with myself.
_____ 2. At times I think I am no good at all.
_____ 3. I feel that I have a number of good qualities.
_____ 4. I am able to do things as well as most other people.
_____ 5. I feel Ido not have much to be proud of.
_____ 6. I certainly feel useless at times.
_____ 7. I feel that I'm a person of worth.
_____ 8. I wish I could have more respect for myself.
_____ 9. All in all, I am inclined to think that I am a failure.
_____ 10. I take a positive attitude toward myself.

12.2 CPT questionnaires:

Test 4.0 Creativity personality test

In each of the following, choose from a scale of 1–5 which of these statements you most agree with or is most applicable to yourself. Choose just one of the numbers 1–5 in each of the 25 statements. Choose 5 for most agree/most applicable option, down to 1 for least agree/least applicable:

1 I find it very difficult to concentrate on just one subject or project for a long period without breaking off to do other things.

5 4 3 2 1

2 I am more of a visionary, rather than someone who is down to earth and businesslike.

5 4 3 2 1

3 I often have the urge to try out a new hobby, such as painting or playing a musical instrument.

5 4 3 2 1

4 I am not afraid to voice unpopular opinions.

5 4 3 2 1

5 I like to retire into my own thoughts uninterrupted for a thinking session.

5 4 3 2 1

6 I would describe myself as more disordered than methodical.

5 4 3 2 1

7 The greatest teacher of all is experience.

5 4 3 2 1

8 I am more sensitive than the average person when it comes to environmental issues.

5 4 3 2 1

9 I have more of an interest and/or curiosity in modern art than a 'dismissing it as rubbish' attitude.

5 4 3 2 1

9 I have more of an interest and/or curiosity in modern art than a 'dismissing it as rubbish' attitude.

5 4 3 2 1

10 I often have the urge to take things apart to see how they work.

5 4 3 2 1

11 I have a very overactive mind, to the extent that I sometimes find it difficult to get to sleep at night.

5 4 3 2 1

12 I enjoy being unconventional.

5 4 3 2 1

13 I am more of an intuitive person than an intellectual.

5 4 3 2 1

14 When attending a talk or lecture, I often find myself drifting off and thinking of other things.

5 4 3 2 1

15 I sometimes get very frustrated with myself if I cannot do something as well as I would like to.

5 4 3 2 1

16 I prefer solitude and scenery to lively social gatherings.

5 4 3 2 1

17 I often find myself irritated by petty rules and regulations.

5 4 3 2 1

18 I have a very lively imagination.

5 4 3 2 1

19 I am often very impatient to learn new things.

5 4 3 2 1

20 I more than occasionally have dreams that I am unable to explain.

5 4 3 2 1

5 4 3 2 1

17 I often find myself irritated by petty rules and regulations.

5 4 3 2 1

18 I have a very lively imagination.

5 4 3 2 1

19 I am often very impatient to learn new things.

5 4 3 2 1

20 I more than occasionally have dreams that I am unable to explain.

5 4 3 2 1

21 I am very independent minded.

5 4 3 2 1

Creativity

22 Anytime I get a flash of inspiration or a new idea, my mind cannot rest until I have tried to put it into practice.

5 4 3 2 1

23 I enjoy spending time on my own.

5 4 3 2 1

24 I revel in being different to others.

5 4 3 2 1

25 When hanging onto the phone, with a pencil in my hand and a piece of paper in front of me, the probability is that I will start to doodle.

5 4 3 2 1