



4th International Conference on Public Mental Health & Neurosciences



ABSTRACT BOOK

Venue :

**S. P. N. Doshi Women's College
B-303, Cama Lane, Ghatkopar West, Mumbai,
Maharashtra-400 086.**

Date : November 27-28, 2017



प्रधान मंत्री

Prime Minister

MESSAGE

I am glad to know that the 4th International Conference on Public Mental Health and Neurosciences (ICPMN) with broad theme Yoga is being organized in Mumbai on 27th-28th November, 2017.

Yoga offers a holistic perspective on health and life and helps us acquire the harmony between the soul, mind and body. It transcends the boundaries of language and communities and contributes towards peace and harmony. The therapeutic aspects of Yoga have also been recognized all over the world.

Best wishes for the success of the Conference.

(Narendra Modi)

New Delhi
23 November, 2017

Dr. Preenon Bagchi
Executive Secretary
Sarvasumana Association
#168 A, 1st Cross, 1st Block 3rd Phase
Banashankari 3rd Stage
Bengaluru- 560085

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SARVASUMANA ASSOCIATION, BENGALURU, INDIA

CO-ORGANIZERS

- (1) S.P.N. Doshi Women's College, Mumbai, India
- (2) Sanatana Yoga Vignana Kendra, Bengaluru, India
- (3) Padmashree Institute of Management & Sciences, Bengaluru, India
- (4) Vasishth Academy of Advanced Studies & Research, Bengaluru, India

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- (1) Indian Council of Medical Research
- (2) Medical Council of India

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Sarvasumanâ Association

Reg. No.: JNRS79-2014-15



सर्वसुमना

#168 A, 1st cross,
1st Block, 3rd Phase,
BSK 3rd stage,
Bangalore-560085

WELCOME

It is a heartening moment for us to organize this 4th International Conference on Public Mental Health (Yoga) & Neurosciences ICPMN (Yoga) – 2017. We welcome you all to this event having the innovative theme Extravaganza - Mind, health, yoga. We are highly thankful to SPN Doshi Women's College, Mumbai to provide us the venue & to co-organize this event. In a world that demands substantive clinical research evidence to support different approaches to health care, yoga is gaining attention.

Yoga challenges the “mores” of modern day life, providing us with a return to simply being, watching the world around us and an awareness of the impact of this world upon ourselves. In the prevailing Western economic system, should yoga ever become a therapy alleviating many of our illnesses, anxieties or distressing emotions, it will have a fight on its hands to become a dominant therapy. Unlike pharmaceutical medications, yoga cannot be packaged in a box or simply taken mindlessly, nor can it be marketed in huge batches to make enormous profit.

Research into yoga continues to reveal the health benefits it can have, supporting the case for its use in health care. Through randomized trials, reviews and other studies, we are learning more about the effect yoga can have on different aspects of our physical and mental health.

This conference is an annual inter-disciplinary event wherein yogic scientists & scholars will share the space & get an opportunity to collaborate with scholars working in various aspects of public health, mental health, health sciences, neurosciences and alternative therapies and establish a network and spread this awareness.

This two day conference will witness mental health, health sciences and yogic sciences speakers.

The cover page of the abstract book depicts the architecture of Kailashnath Temple at Aurangabad, Maharashtra.

I wish you all a very warm & memorable stay.

With regards
Padmashree Murthy
President

Vasishth Academy of Advanced Studies & Research



(An Authorized Research Centre of Career Point University, Kota in Yogic & Life Sciences)



From Chairman's Desk

It gives us immense pleasure to organize this 4th International Conference on Public Mental Health (Yoga) & Neurosciences ICPMN (Yoga) – 2017 at Mumbai. This event is co-sponsored by Padmashree Institute of Management & Sciences, Sanatana Yoga Vignana Kendra, Bengaluru, along with SPN Doshi Women's College, Mumbai.

Yoga is a mind and body practice with historical origins in ancient Indian philosophy. Like other meditative movement practices used for health purposes, various styles of yoga typically combine physical postures, breathing techniques, and meditation or relaxation. This fact sheet provides basic information about yoga, summarizes scientific research on effectiveness and safety, and suggests sources for additional information.

Research into yoga continues to reveal the health benefits it can have, supporting the case for its use in health care. Through randomized trials, reviews and other studies, we are learning more about the effect yoga can have on different aspects of our physical and mental health. Regular yoga practice can increase our awareness about how our body actually feels, with all its aches and pains, and help us restore balance.

Yoga isn't as simple as taking a pill, but mounting evidence suggests it's worth the investment of time and effort. Ultimately, in order to benefit from the positive health effects of yoga, we need to be mindful of the present: this moment, now. In such a non-stop world, that, surely, has to be a good thing.

Current research suggests that a carefully adapted set of yoga poses may reduce low-back pain and improve function. Other studies also suggest that practicing yoga (as well as other forms of regular exercise) might improve quality of life; reduce stress; lower heart rate and blood pressure; help relieve anxiety, depression, and insomnia; and improve overall physical fitness, strength, and flexibility. But some research suggests yoga may not improve asthma, and studies looking at yoga and arthritis have had mixed results.

Best wishes to the scientific committee for organizing this wonderful conference. I am sure the delegates would have a lot to take with them.

Dr. R. Somashekhar,
Chairman, ICPMN-2017

SHIVAJI UNIVERSITY, KOLHAPUR
DEPARTMENT OF ZOOLOGY

Reaccredited with 'A'Grade (CGPA.3.16)

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Message

It gives me an immense pleasure to participate in the fourth International Conference on Public Mental health and Neuroscience which is being organized by Sarvasumana at S.P.N. Doshi Women's College, Mumbai. I have witnessed past three International conferences of Sarvasumana; all the conferences were with a focused approach on Public Mental health and Neuroscience related issues. Each session of the past conferences provided new insight to manage stress and anxiety, a novel approach to look at the mental burdens and provided solutions to critically handle these issues. Taking into account the quality of sessions and the deliberations in the conference, Karnataka Medical Council has awarded four credits to each of the past three conferences. I feel this is a very unique feature and hallmark of its quality.

The theme of ICPMN 2017 is concerned with the burning issue i.e. mental health, Yoga and Neuroscience. This conference will provide a good opportunity for Yoga experts, psychologists, neuroscientists, academicians and research scholars working in the area of mental health and neurobiology to interact with each other. I am sure that, this interaction will help in fostering strong partnership and linkages with Yoga practitioners, psychologists, psychiatrists and neurobiologists. The ICPMN 2017 will provide the solutions to tackle mental stress that we face minute to minute in everyday life and help us to improve mental and physical well-being.

I thank all committee members of Sarvasumana, Principal of S.P.N. Doshi Women's College, Mumbai Dr. S. Kumudhavalli and the organizing secretary Dr. Asha Menon for organizing this International conference.

Dr.A.A.Deshmukh

Dr.Dharav Sunil Shah

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Special interest in: Prevention & treatment of addictions, OCD,
Depression, Anxiety disorders, Sexual disorders, Family therapy.

Date: 19/11/17

Attending the ICPMN conferences has always felt like experiencing a breeze of fresh air... The passion with which it is organised as well as the sincerity with which the delegates participate is a treat to experience. Am looking forward to experiencing it all again at the 4th International Conference on Public Mental Health and Neurosciences.

In this age of specialisation we all run a risk of developing tunnel vision. Hence conferences like ICPMN which bring together people from different specialities can prove to be a very enriching experience. A Yoga practitioner gets to know better the impact of Yoga on body, with the help of biotechnology. While the biotechnologist, gets to know a thing or two on how can one remain physically and mentally fit.

In this rapidly changing world everyone seems to be stressed... suicides & addictions are on the rise... All this makes it very important that we empower ourselves to take better care of our own mental health as well as that of people around us. Wishing that I, and everyone else attending ICPMN 2017, take home valuable insights that would enrich our personal lives as well as professional pursuits significantly.

Thanking you.

Dr.DharavSandhya Sunil Shah

www.fb.com/truthofalcoholandtobacco

YouTube: 'Poisons we love'

Seeking help is not a sign of weakness.

It shows that the person is open to growth and healing; and wants to actively solve his problems in the fastest & most effective way. Happy Healing ☺

**Sanatana Yoga Vignana Kendra**

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MESSAGE

It is a matter of great pride that our Yoga Kendra is co-organizing this International Conference on Public Mental Health (Yoga) & Neurosciences along with Sarvasumana Association at Mumbai.

Yoga is an ancient practice its practitioners have asserted its effect on balancing emotional, physical and spiritual health for decades, but only recently has there been a move to substantiate these claims through research. So far, the result has been definitive, significant evidence of the broad-ranging benefits of yoga, both as a treatment and as a preventative form of medicine and health care.

Through randomized trials, reviews and other studies, we are learning more about the effect yoga can have on different aspects of our physical and mental health. Yoga isn't as simple as taking a pill, but mounting evidence suggests it's worth the investment of time and effort. Ultimately, in order to benefit from the positive health effects of yoga, we need to be mindful of the present: this moment, now. In such a non-stop world, that, surely, has to be a good thing.

I extend my best wishes for the success of this event.

Thanking you

Rajesh.T.S M.Sc,M.Phil,YIC,(Ph.D)
Founder Director
www.Sanatanayogakendra.org

**Smt. P. N. Doshi Women's College of Arts
Kum. U. R. Shah Women's College of Commerce
Dr. (Smt.) Nanavati B. M. Women's College of Home Science (Ghatkopar)**



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I am happy that Sarvasumana Association, Bengaluru, India is organizing the 4th International Conference on Public Mental Health & Neurosciences with the theme Extravaganza- Mind, Health & Yoga on 27-28 November 2017. It is our proud privilege to co-organize this International Conference with you. The theme of the conference is very relevant to the realms of neurosciences. Increasing understanding of the brain and improved methods to study will enable scientists to develop treatments for neurodegenerative diseases and mental illnesses. Research could also lead to better understanding of how we learn, allowing us to optimize our intelligence. These developments are likely to provide significant benefits for society and have implications for a diverse range of public policy areas such as health, education, law, and security.

This international Conference will also provide a platform to researchers to discuss their research. In a modern, dynamic society like India, issues are many and therefore it is of great significance that this august gathering is going to deliberate upon several important topics related to Public Mental Health & Neurosciences. I am sure the Conference will be useful and informative for all.

I wish the 4th International Conference on Public Mental Health & Neurosciences a great success!

Dr. Asha Menon
In-Charge Principal

ICPMN 2017



PADMASHREE
INSTITUTE OF MANAGEMENT
AND SCIENCES

It is a matter of great pride that Padmashree Institute of Management & Sciences is a co-organizer to International Conference on “Public Mental Health (Yoga) & Neurosciences” along with Sarvasumana Association at Mumbai. In a world that demands substantive clinical research evidence to support different approaches to health care, yoga is gaining attention. Despite rapid advances in medical technology and continuing pharmaceutical research into using medication to relieve symptoms, in the past few years we have seen a significant growth in research addressing the impact of yoga on health and wellbeing.

Yoga challenges the “mores” of modern day life, providing us with a return to simply being, watching the world around us and an awareness of the impact of this world upon ourselves. In the prevailing Western economic system, should yoga ever become a therapy alleviating many of our illnesses, anxieties or distressing emotions, it will have a fight on its hands to become a dominant therapy. Unlike pharmaceutical medications, yoga cannot be packaged in a box or simply taken mindlessly, nor can it be marketed in huge batches to make enormous profit.

Instead, yoga offers something else: reconnecting with ourselves and learning to see ourselves, and our reactions to the world around us, from a different perspective. Research into yoga continues to reveal the health benefits it can have, supporting the case for its use in health care. Through randomized trials, reviews and other studies, we are learning more about the effect yoga can have on different aspects of our physical and mental health. Regular yoga practice can increase our awareness about how our body actually feels, with all its aches and pains, and help us restore balance.

Best wishes to the scientific committee for organizing this wonderful conference. I am sure the delegates would have a lot to take with them.

Dr. M. Anuradha,

Principal

Principal
Padmashree Institute of
Management & Sciences
Bangalore

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Recognised by UGC Under Section 2(f) and 12(B), Accredited by NAAC 'B' Grade

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KEY NOTE AND PLENARY TALKS

**JOINING HANDS TO CREATE AN ADDICTION FREE, HEALTHY, HAPPY &
POWERFUL SOCIETY.**

Dr.Dharav Shah.

Consultant Psychiatrist - Parivartan trust, National consultant - ADIC India.

- Alcohol has become the most common risk factor for death & disability in 15-49 yr olds, and tobacco is the second most common risk factor. And yet their use continues to be common. Infact, now companies are targeting even women and they have also started joining their male colleagues in equal numbers!
- Alcohol caused around 33,00,000 deaths in 2012; i.e. 1 death every 10 seconds! Besides liver cirrhosis, there are many other ways too in which alcohol kills us - heart attacks, strokes, accidents, cancers, murders, suicides, infectious diseases, etc. As per WHO, around 22% of all suicide deaths & 22% of deaths due to violence are due to alcohol!
- In men, most oral cancers, 78% lung cancers, 16% heart attacks, 10% paralytic strokes, 9% of TB deaths and 49% of deaths due to chronic obstructive pulmonary diseases are attributable to tobacco. Infact 50% of premature heart attacks in males (30-44yrs) are attributable to tobacco! 1 in 2 tobacco smokers get killed prematurely because of their love for this addictive poison. Around 10% of tobacco deaths occur in innocent passive smokers – family members & friends of smokers!

- Even before killing, alcohol and tobacco bringin a lot of painby leading to various disabling diseases. Mental disorders like depression, anxiety, etc. are also seen at a higher frequency in those who try to enjoy by using these addictions
- Alcohol increases desire to have sex; but gradually it impairs the performance when the person actually tries it ☹. Alcohol & tobacco are common causes of impotence (inability to have penile erection). On using them for few years, they decrease a person's stamina for physical effort & make him appear less attractive. A lot of money gets wasted - often leading the person into a vicious cycle of debt. Also his occupational performance keeps on deteriorating. Thus in every way, alcohol & tobacco make you less masculine, not more!
- There is now evidence that alcohol can be harmful to the heart even when taken in smaller quantities. American Heart Association warns -NOT to start drinking thinking that it will protect the heart. A meta-analysis of 222 studies estimated that in 2004 worldwide, light drinking was responsible for 34000 cancer deaths!
- With just one day of binge drinking you can kill self or some innocent person in an accident; or lose your reputation forever because of how you behave when intoxicated.

We are at a critical point in our cultural history. If we all don't act now, damage done will be difficult to reverse. We need to rebuild a strong social opinion against

the use of these addictive poisons, to protect our youth from falling in their trap. For that we need to:

- 1) Ensure that children have adequate knowledge about them before the age of 1st contact.
- 2) Recommend strongly to our near & dear ones to stay away from these addictive poisons. If addicted, refer for treatment. The most common reason why a person quits an addiction is an emotional request from a dear one 😊 Make your request today!
- 3) Promote healthier ways of recreation like Yoga, music, sports, meditation, etc.
- 4) Remove alcohol from our family & social get-togethers. Lead by example.
- 5) Write (on twitter, fb, etc.) to celebrities who do surrogate ads, to not misguide their fans

The evil in society is not so much because of violence of the bad; as it is because of the silence of the good! Collectively we can create an addiction free, healthy, happy and powerful society.

(For a detailed presentation on what can we do to halt the alcohol & tobacco epidemic –do check out on youtube ‘Poisons We Love’. Feedbacks are welcome on ondharavshah@gmail.com)

CIRCADIAN RHYTHM SLEEPS DISORDERS AND HEALTH

Dr. A.A. Deshmukh

Cellular stress response laboratory, Cell Biology Division,
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Circadian rhythm is an array of biological processes that roughly run in 24-hour cycle and modulated primarily by sunlight, darkness, and temperature. To govern these processes we have cellular clocks that are under the influence of the main circadian clock the suprachiasmatic nucleus (SCN). It receives photic input from the special photoreceptive cells of the retina through retinosuprachiasmatic tract and stimulate expression of various genes such as Clock, Per1, Per2, Per3, Cry1, Cry2, Cki, Rev-erb α etc. These photoreceptive cells of the retina are different from vision associated cells. mRNA and protein products of these genes work as molecular "gears" of the biological clock that oscillate in 24-hour rhythms. In addition, there are rhythmic oscillations of chromatin de-condensation and re-condensation during circadian rhythm, which alter gene expression.

Sleep is one of the major aspects of human circadian rhythm. Melatonin is a hormone secreted by the pineal gland in the brain that regulates the sleep. In addition, it is regulated by various molecular regulators such as Tumor Necrosis factor alpha (TNF α), prokineticin 2, and adenosine etc. The quality of sleep directly affects health and the quality of waking life. The brain generates two distinct types of sleeps 1) slow-wave sleep (SWS) or Non rapid eye movement (NREM) sleep, known as deep sleep, and 2) rapid eye movement (REM) sleep, also called as dreaming sleep. During the deep stages of NREM sleep, various repair processes of the body including regeneration of tissues, cell

division, strengthening of the immune system, etc. take place. The sleep is affected during aging and neurodegenerative diseases like dementia, Alzheimer's disease, Parkinson's disease and Huntington's disease. Advanced sleep phase disorder (ASPD) and Delayed sleep phase disorder (DSPD) affect quality of life significantly.

Altered life style, continuous exposure to radiations of computer screen and cell phones, late night working, addiction of coffee etc. affect the circadian rhythm significantly which ultimately deteriorate immune functions, cardiac functions, cognitive functions and *in toto* body physiology. Therefore, there is need to practice correction of altered circadian rhythm intentionally and with a focussed approach to live a quality life and face healthy aging.

Key words: Circadian rhythm, Sleep disorders, Suprachiasmatic nucleus, melatonin, adenosine

NUTRACEUTICALS IN MENTAL HEALTH

Anuradha, M* and S.Balasubramanya**

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**KBITS, Department of IT, BT and Science and Technology, Government of Karnataka, Bangalore.

The recent era is witnessing explosion of information about nutraceutical benefits in prevention and management of plethora of diseases and disorders. However, relatively the determinants of mental illness are quite complex and the high prevalence of mental ailments suggests that nutrition is as important to psychiatry as it is to cardiology, endocrinology and gastroenterology. The studies reveal and established a significant link between nutrition and mental health and nutraceuticals play a prominent role. Clinical studies and published articles in this emerging area also confirming the relationship between unhealthy dietary patterns and poorer mental health in children and adolescents. It is evident that many of these nutraceuticals have a clear link to brain health and these include valerian, Kava, Ginkgo, brahmi, rosemary, passion flower, omega-3 fatty acids, B vitamins, folate, choline, iron, zinc, magnesium, S-adenosyl methionine (S-AMe), vitamin D and amino acids. The article reviews some promising nutraceuticals and their benefits in management and prevention of brain ailments like Headache, Stress, Anxiety, Hypertension, Alzheimers and parkinson's diseases.

NEURODEGENERATION-PROTECTIVE AND REJUVENATING PROPERTIES OF HYDROCOTYL ASIATICA WITH EVALUATION OF ITS ESSENTIAL MICRO-NUTRIENT CONTENT.

Preenon Bagchi^{1,2}, Anuradha M¹ and Ajit Kar^{2,3}

¹Padmashree Institute of Management and Sciences, Bengaluru, India.

²Sarvasumana Association, Bengaluru, India

³Satsang Herbal Research Laboratory, Satsang, Deoghar, India.

Neurodegenerative diseases are characterized by progressive neuronal disorders and loss of neurons from specific regions of the brain. Though current research using synthetic chemical drugs is progressively going on to prevent, retard or reverse such neuro-degenerations, there is a tremendous scope to identify and study in this regard – isolating phytochemicals from herbal sources. In the present study ayurvedic ‘Medhya Rasayana’ herb Hydrocotyl asiatica (Mandukparni, Thankuni) has been selected. Different phytochemicals present in this herb are preliminary screened for the purpose using bioinformatic parameters (in-silico). Also essential micronutrient contents of the whole herb were determined using Atomic Absorption Spectrophotometer (AAS).

Keywords: Neuro-degeneration, Hydrocotyl asiatica, Bioinformatics, biogeochemistry, micronutrient contents

YOGA-MEDITATION-AROMA-THERAPY

Rajesh.T.S

Sanatana Yoga Vignana Kendra (affiliated to VYASA), Bengaluru, Karnataka, India, Email: trajeshsr@gmail.com

The word “yoga” essentially means, “that which brings you to reality”. Literally, it means “union.” Union means it brings you to the ultimate reality, where individual manifestations of life are surface bubbles in the process of creation. Right now, a coconut tree and a mango tree have popped up from the same earth. From the same earth, the human body and so many creatures have popped up. It is all the same earth.

Etymology of Yoga/origin

- ▶ THE WORD YOGA IS DERIVED FROM SANSKRIT ROOT WORD “YUJ” – means to JOIN



The method of meditation is an inward process that leads one to the fountain of life and light. This is the centre of consciousness, from where consciousness flows on various degrees and grades. A human being is a citizen of two worlds: the world within and the world without. to create a bridge between these two

requires human effort, but it is possible to live in the world and yet remain above it. So meditation is a method of knowing truth, that which is within every human being. Meditation is a simple technique that can be learned in a few minutes, but it is a very practical subject, and the benefits of meditation are immense.

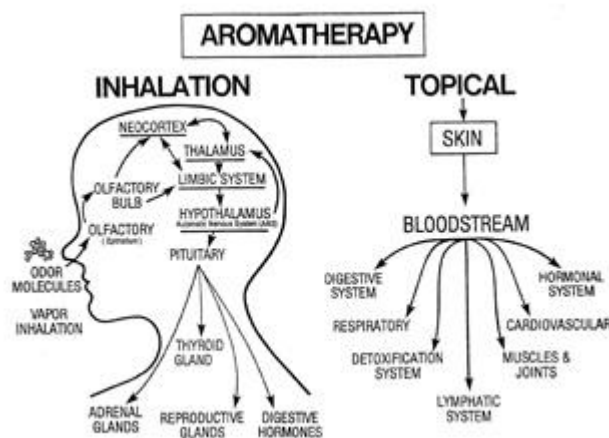
Proper use of essential oils during meditation can enhance the experience by grounding you and promoting a sense of calm. Essential oils like Vetiver, Sandalwood, Atlas Cedarwood, Palo Santo and Patchouli are considered grounding. Other oils like Clary Sage, Lavender and Roman Chamomile act as natural sedatives and can enhance the relaxed state of meditation. Oils like Helichrysum and Frankincense are said to enhance enlightenment and a spiritual connection with the divine



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Aromatherapy derived its name from the word aroma, which means fragrance or smell and therapy which means treatment. This therapy is natural way of healing a person's mind body and soul. Many ancient civilizations like Egypt, China, and India have used this as popular complementary and alternative therapy form at least 600 years. The mechanism of their action involves integration of essential oils into a biological signal of the receptor cells in the nose when inhaled. The signal is transmitted to limbic and hypothalamus parts of the brain via olfactory bulb. These signals cause brain to release neuro messengers like serotonin, endorphin etc. to link our nervous and other body systems assuring a desired change and to provide a feeling of relief. Serotonin,

endorphin, endorphin and noradrenalin are released from calming oil, euphoric and stimulating oil respectively to give expected effect on mind and body. Oils address the causes of disease at a cellular level. Oils properly applied always work toward the restoration of proper bodily functions. They do not undesirable side effects “Essential oils are especially valuable as antiseptics because their aggression toward microbial germs matched by their total harmlessness to tissue.



“You need awareness and sensitivity to get the full benefit of Yoga-meditation –aroma. They need a certain amount of feeling to be effective. It’s not for those who are looking for a quick fix.”

BUILDING STRENGTH TO EXPERIENCE WOMANHOOD-YOGA

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Having a child is the dream of every married woman. Educated woman being self confident, intelligent, financially independent chooses to continue with her career after marriage also. Meanwhile Lifestyle in urban area has made woman to work compulsory, to fulfil the requirements of family. House loan, Vehicle loan, medical insurance etc are the commitments to continue with career. Passion to work and feel of freedom encourages her to postpone pregnancy. Along with career many medical issues, sociological commitments, would stand as obstacles in the path of becoming mother. Competition at work place, keeping updated with the job profile, continuous improvement in the profession would create lots of pressure, affecting her health. Hormonal imbalances, irregular periods are the consequences of stress, unorganized sleeping patterns, imbalanced food habits. Stories of our puranas also give sufficient evidence to have children as an obligation towards the continuation of human race. Bearing a child in the womb, becoming a mother expects mental and physical stability, strength from a woman. As an alternative method of medication towards healthy life, yoga is being chosen by many women. Yoga inculcates a healthy life style, regulates healthy habits which improves physical and mental health of a woman. Womanhood is not only becoming a mother but also to love, care, support, command, and be strong, trusted, and responsible. Regular yoga practice could help her to enjoy the womanhood.

Key words: Career oriented, hormonal imbalance, irregular periods, life style, physical and mental health.

EVERYDAY MINDFULNESS: THE MINDFUL WAY TO WELL-BEING

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*“What is this life if, full of care; We have no time to stand and stare.
No time to stand beneath the boughs; And stare as long as sheep or cows.
No time to see, when woods we pass; Where squirrels hide their nuts in grass.
No time to see, in broad daylight; Streams full of stars, like skies at night.
No time to turn at Beauty's glance; And watch her feet, how they can dance.
No time to wait till her mouth can; Enrich that smile her eyes began.
A poor life this if, full of care; We have no time to stand and stare.”*

~ William Henry Davies

William Henry Davies very aptly highlights the plight of human existence- we have no time to stand and stare! Busyness has become the buzzword of the present day and way of living. The never ending to-do lists, project deadlines, commitments at home, responsibilities at work, technology overload, information overload, social media overload- the present day lifestyle demands keep us in continuous spin throughout the day, day after day. Like the spinning top that keeps spinning until it hits a wall or crashes on the floor, we keep spinning in this whirlwind of actions until we are hit by a psychological or physical problem. Moreover, this busyness in actions is just the tip of the iceberg, there being a large mass lying hidden beneath- this is the mass of busyness of our minds. There is a continuous chattering and commentary running in our

minds, right from the moment we get up to the moment we fall asleep. There's no time to experience what's happening now because we are busy thinking what needs to be done the next minute, or the next hour, or the next day and so on. Or else, we are busy regretting about what did happen or didn't happen yesterday.

A recent study¹ finds that people spend half their waking hours thinking about something other than what they are doing. Killingsworth and Gilbert¹ write, "A human mind is a wandering mind, and a wandering mind is an unhappy mind. The ability to think about what is not happening is a cognitive achievement that comes at an emotional cost." While dwelling in the past can lead to depression, worrying about the future can lead to anxiety disorders, not to mention a host of physical ailments from hypertension to diabetes, cancer to strokes, chronic pain to peptic ulcers, all having been correlated to stressful lifestyles. It is now well known and well established fact that most of our present day ailments are psychosomatic.

Is there anything that we can do in our everyday, day to day way of living that may reduce our vulnerability to diseases and enhance our wellness? The answer lies in practicing everyday mindfulness. Mindfulness is the awareness that emerges through paying attention on purpose, in the present moment, non-judgmentally to the unfolding of experience moment by moment².

How many times do we live the tragedies, the guilt, the sufferings and the regrets of the past in our minds again and again? How many times do we create

the fears and anxieties about the future on the screens of our minds again and again? May be several hundred times. Ironically what troubles us in the present, has actually nothing to do with the present. We borrow our sufferings from the past or future by not being in the present.

Mindfulness helps us in breaking ourselves free from our mind traps- our habitual ways of thinking and behaving. These are the traps of catastrophizing, tunnel thinking, jumping to conclusions, confirmation trap, confirmatory trap and the blame trap, to name a few. Being mindful helps us to be more attuned to our thoughts feelings and actions. This allows us to respond to situations instead of reacting to them. This difference between reacting and responding is very important from our well-being point of view. When we react, we oppose or resist what is happening around us. Resistance is what uses up a significant share of our physiological and mental resources, thus leaving us prone to diseases. On the other hand, when we respond, we behave in a way that is appropriate to the situation. Mindfulness opens up the possibilities to creative solutions.

Is mindfulness something that can be performed only by the saints and the seers, sitting in lotus positions on the Himalayan peaks? The answer is no. It can be practiced just here and now, by each one of us. When we are breathing with awareness, we are being mindful. Mindful eating, mindful tasting, mindful walking, mindful talking, mindful listening, mindful driving are some of the forms of mindfulness we can practice every day. A few simple ways of bringing mindfulness into our daily lives include:

- 1) **Moving from Automatic Pilot to Conscious Driver:** This is the first step towards mindfulness- becoming aware of our usual tendency to sleepwalk through life. When we are on the mode of automatic pilot, we may guzzle down our entire meal, without even having tasted a single bite! We miss out the joys of several little but important things in our lives if we continue to run on the automatic pilot mode. Moreover, this tendency to slip into automatic pilot mode becomes all the more dysfunctional when we run into that automatic gear of negative thoughts and mind traps. So, the first step is to recognize when we are on automatic pilot and bring our mind-body functioning into conscious awareness of the present moment. The easiest way to do so is by focussing all our senses in the present task or activity.
- 2) **Mindful Breathing:** It involves bringing our attention to our breath, wherever we feel it. There is not even any requirement to change the way we are breathing, or doing anything special with it. We just need to tune in to the sensations of breathing, not thinking about it, but being with it.
- 3) **Park Bench Exercise:** As we sit on a bench in a park, or stand in our balcony, we notice people as they pass by. We simply notice without thinking about what they are wearing, how they are walking, without judging how they are behaving or how they are not behaving. Gradually we extend the analogy to our thoughts. Just like the people in the park, we allow our thoughts to simply pass. We just notice them and let them go, without chasing them, without judging them. This simple exercise helps us to understand how our emotions, thoughts and feelings can simply be held in awareness, observed and allowed to pass.

- 4) **Uni-tasking:** As the Zen proverb goes, “When walking walk. When eating eat.” Doing too many activities at the same time actually interferes with our performance, which can be both physically and mentally exhausting. It is something like running too many programs on the computer. Ultimately the system stops responding, sometimes it just crashes losing all the previous work that was done. Doing one task at a time allows us to be more mindful and helps us to achieve more without overloading our resources.
- 5) **Spacing out Activities:** Planning activities back to back keeps us in spin. The more tightly packed our to-do list is, the more overwhelmed our mind is. Spacing out our activities allows us the liberty to slow down, and be engaged in our tasks more mindfully.

*So, let us pause, to stand and stare;
To breathe in the moment, for life is here.*

*Let us watch this beautiful spring;
And enjoy the music as the birds do sing.*

*Let us watch our children grow each day;
Be with them to guide their way.*

*Let us watch what we think and feel;
Without judgments, there be no painful deal.*

*Let us be here simply in this moment;
No traumas of the past, no future torment.*

*Let us accept and be mindfully aware;
Life is here, life is here, life is here...*

In the now!

**THEME: PUBLIC MENTAL
HEALTH**

A STUDY THE LEVEL OF ANXIETY AND ACADAMIC ACHIEVEMENT OF DEGREE COLLEGE STUDENT.

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The present study was done to know the level of anxiety and academic achievement among degree student the sample consist of 352 students , in which girls were 167 & boys 185, age group will be 18 - 22. The tools used are Taylor's manifest Anxiety scale (1953). the academic achievement of the student in their academic achievement scores of the students in unit test quarterly exam half yearly exam were taken, The aim of the study is to determine the effect of academic achievement performance and anxiety level of the degree college students. correlation ,regression analysis , one way ANOVAS were utilize the data independent variables of anxiety dependent variables of academic achievement. T-Test Gender difference in anxiety score of students. Test - retest with reliability co-efficient is found to be 0.81 the reliability of the 50 item scale was estimated to be 0.89 by spearman brown prophecy formula and the validity is 0.8, There is no significant difference according to the gender in anxiety scores , with almost similar means score of both girls (24.92) and boys (25.99) which would indicate the both gender seem to be having the same moderate level of anxiety.

Key words: Anxiety,ANOVA,academic achievement.

A STUDY ON INSOMNIA, DEPRESSION AND ANXIETY AMONG WORKING AND NON-WORKING MIDDLE AGED WOMEN

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Insomnia is characterized by an inability to sleep and / or to remain asleep for a reasonable period. As opposed to being a sleep disorder, insomnia is most often caused by sleep disorder, though they are not only causes. Other causes include, fear stress, anxiety, medication, herbs and caffeine. The present study based on insomnia related to anxiety and depression among working and non-working middle aged women. The study attempt to determine the relation of anxiety and depression in insomnic women. Data was collected based on purposive sampling from a total number of 80 middle aged working and non-working women through questionnaire method. For quantitative analysis of results descriptive and inferential statistics was used. The results shows a significant difference between working and non- working women in case of insomnia. This research has found insomnia is insignificantly related to anxiety but significantly related to depression, more in case of non-working women.

Key Words: Insomnia, Depression, Anxiety.

**PREVALENCE OF ANXIETY DISORDER AMONGST THE SECONDARY
SCHOOL CHILDREN IN THE URBAN CITY OF JOY – KOLKATA
METROPOLIS IN 2017**

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Education Develops an individual like a flower which distributes his fragrance all over the environment. Education instils in a child a sense of maturity, responsibility by bringing in the desired changes according to his or her needs and demands for ever changing society of which he or she is an integral part. Thus the general aim of education is to prepare an individual to lead the life successfully.

Education should enable one to overcome the problems and obstacles which he or she might face in the life. Education's aim and objectives are to change their dimensions and priorities according to the complexities and technological advantages of modern society. The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Parent's desire is that, their children climb the ladder of performance to as high a level as possible. This desire for high level of achievement put a lot pressure on students, teachers and school and in general, the educational system itself. In fact it appears as if whole system of education revolves around the academic achievement of the students, though various other outcomes are also expected from the system.

Generally anxiety can be either a trait anxiety or a state anxiety. A trait anxiety is a stable characteristic or trait of the person. A state anxiety is one

which is aroused by some temporary condition of the environment such as examination, accident, punishment etc. Academic anxiety is a kind of state anxiety which relates to the impending danger from the environments of the academic institutions including teachers, certain subjects like Mathematics, Science, Language etc.

Anxiety is a source of concern to the clinicians as it is co morbid with other mental disorders, particularly depression and learning disabilities, and it causes low self-esteem.

Methodology

The aim of this research was to evaluate the prevalence of anxiety disorder amongst secondary school children in the metropolitan city of Kolkata. A two-staged stratified sampling method was used to select the schools. Structured questionnaire based on Vanderbilt ADHD Diagnostic Teacher Rating Scale for anxiety and depression symptoms was used in evaluating the students. The questionnaires administered to the students were filled with the assistance of the researchers and the classroom teachers. Direct verbal interview was conducted for those noted to have symptoms of any of the various types of anxiety disorders and fears. Out of 285 students, 30 met the criteria for the diagnosis of anxiety/ depression disorder; prevalence was 10.52%, age range was 9-18 years. There were 12 males and 18 females giving a male: female ratio of 0.69:1. Majority 17 (57.14%) of the children lived with their parents, 9 (30.77%) of them lived with family relations and 4 (12.09%) of them were working as house helps to other families. The reasons given for being anxious were poor self image, fear of death, repeated physical and sexual abuses by

their care givers and other adults. Learning disability was the major associated comorbid disorder (18.68%). Generalized anxiety was the most common type of anxiety disorder identified (32.97%). Anxiety disorders are debilitating chronic conditions. When it affects school aged children it contributes significantly to poor academic performance.

Anxiety is one of the determinants of human behavior. It is most likely to arise internal response or behavior that conflict with the satisfaction of other needs or motives. The concept of anxiety is utilized for explaining many psychological problems and has become a useful construct in the field of psychology.

In the developing country like India one sees the prevalence of economic discrepancy in the society. Some are rich and some are poor, they have different life styles according to their income. All the parents want to provide better educational facilities to the children. Parents who can not afford expensive private school education for their children, send them to government school which is comparatively cheap. Most of the private schools in India is perceived to be superior in terms of infrastructure than government schools. This difference affects some personality traits of the children like self concept, academic achievement and academic anxiety. This thinking of researcher motivated her for present investigation.

One of the most important factor in a life of child is the academic achievement. It is more important to understand the factors that influence the achievement of children. The abilities of students, types of school, and their locality , parent's encouragement of students' interaction are the main factors. It is surprising that in India, much attention is given on academic achievement of

the children rather than on their academic anxiety, which must be reduced for the growth of academic success and establishing sound mental health of the pupil.

Therefore, the investigator felt that an urgent need for such study due to their practical and immediate application. With this in view, the investigator undertook this study.

Sample

Total n = 285 students , Male = 180, Female = 105 were taken from 5 schools in Kolkata city.

Age group = 9 years to 18 years.

Tools

Socio-demographic information schedule.s

Vanderbilt ADHD Diagnostic Teacher Rating Scale for anxiety and depression.

Direct Verbal Interview.

Result

There were 285 students who were studied and 30 of them met the criteria for the diagnosis of anxiety/ depression disorder, giving a prevalence of 10.52%.

Conclusion

It is known that anxiety disorders, if left unidentified and untreated, may persist and lead to adult psychological problems, and may be a risk factor in the

development of co- morbid child psychopathology, such as mood disorders and behavioral problems. Furthermore, anxiety has been associated with general social problems such as negative self-image, dependency on adults in social situations, comparatively poor problem-solving skills, unpopularity and low rates of interaction with peers.

Educational implications out of the study -

1. The study will be helpful in orienting counselling and guidance programmes in secondary schools to improve academic performance by lowering academic anxiety.
2. Parents can be guided to encourage and appreciate that their view helps their child to get motivated and to perform well in academics and face less anxiety.
3. This study may be helpful for the teachers, parents, educationists, and counsellors and people concerned with the field of education to know the extent of academic anxiety among students. Necessary actions may be taken up to reduce the extent of academic anxiety.
4. Replication of the study with a large sample considering age, socio-economic level, others variables such as mental health, emotional maturity etc in different population would be fruitful.
5. The practical implications of the current study shall as well enable the academic institutions to instil amongst their students to accept and appreciate their own individual differences and as well enable them to hone on their strengths, work on their weaknesses and develop themselves to their fullest

potential. It should as well state implications for family counselling for students with differential needs.

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JOB ANXIETY, JOB SATISFACTION AND ORGANIZATIONAL COMMITMENT: A COMPARATIVE ANALYSIS OF EACH AMONGST THE LAWYERS AND BANKERS IN THE CITY OF KOLKATA.

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The present day workforce is marked by extreme diversity and managing such diversified workforce stands as an enormous challenge for the managers. The conditions become further more critical due to the increased competition in the global market which is an inevitable aftermath of Liberalisation , Privatisation and Globalization. As a result of which the MNCs , TNCs and the National Corporations are becoming more fierce than ever in terms of managing their manpower. Coupled up with these extrinsic competitive forces, the implementation of certain macroeconomic plans by the government further creates its impact upon the job market across all the sectors and professions , which in turn impinges upon the level of job anxiety , job satisfaction and organizational commitment levels of the employees working in it. However , there are other variables as well which are seen to be affected as well such as Organisational Culture , Corporate Morality , Organisational Socialization , Occupational Stress and the like. The present study aims at determining the *job anxiety , job satisfaction and organizational commitment* of the employees belonging to the three professions namely the corporate lawyers (legal sector) , the bankers (the banking sector) and the professors (the academic sector) irrespective of hailing from private or government sector.

Organisations have also been keen to highlight the business case for improving employee psychological health, emphasising sickness absence, employee turnover and presenteeism (being at work, but working at less than full capacity) as mechanisms through which psychological health may influence firm performance which are all outcomes of job anxiety and job satisfaction. It is, however, surprising that virtually none of the evidence used to support these arguments is written by economists. Broadly speaking, the methodology underlying this evidence relies on estimating work time 'lost' as a result of psychological ill-health using responses from employees and multiplying it by an estimate of the value of work, often measured using hourly wage rates to convert to an aggregate economic or monetary cost (see, for example, Stewart *et al.*, 2003 and Goetzel *et al.*, 2004).

In organizational behavior and industrial and organizational psychology, **organizational commitment** is the individual's psychological attachment to the organization. The basis behind many of these studies was to find ways to improve how workers feel about their jobs so that these workers would become more committed to their organizations. Thus, the reduced level of each of the three above mentioned variables i.e Job Anxiety , Job Satisfaction and organizational commitment each of it impacts an incumbents job performance. And where absenteeism stands to be of paramount importance in terms of mounting the Hr costs, even the stay of that individual with the specific organisation is as well determined by the prevailing level experienced of each of these three variables. Thus , the present study seeks to be of immense significance.

Methodology

The aim of the present research is to determine and contrast the levels of anxiety, job satisfaction and organizational commitment between the professions of lawyers and the bankers irrespective of the private or the government sector. The sampling plan followed is Stratified Random Sampling Plan. Standardized questionnaire was used to study each of the variables mentioned.

Sample

Total Sample Size $n = 200$.

were included in the sample.

Professions – A. Lawyers.

B. Bankers.

Lawyers (Corporate Lawyers) –

Male – 50.

Female – 50.

Bankers (Business Development

Managers) –

Male – 50.

Female – 50.

Inclusion Criteria –

Lawyers : Only the ones in the role of Corporate Lawyers were taken into consideration.

Bankers : Only the ones in the role of business development managers

Tools :

1. Job Anxiety Scale (J.A.S.) by Dr. A. K. Shrivastava - This scale assesses the level of anxiety pertaining to the various constituent of the job life. (i) Job security, (ii) recognition and fair evaluation, (iii) human relation at work, (iv) rewards and punishment, (v) self-esteem and status of the job, (vi) future prospects, (vii) capacity and confidence to shoulder job responsibilities, have been included in this scale.

2. Job Satisfaction Questionnaire by Dr. B.C. Muthayya - This scale is intended to measure the extent of job dissatisfaction among the administrative personnel engaged in the different job sectors. The item covers three broad aspects--(i) personnel, e.g., security; (ii) interpersonal, e.g., interaction with superior; (iii) job, e.g., pay.

Organizational Commitment Questionnaire by R.T. Mowday, R.M. Steers, and L.W. Porter - This questionnaire consists of statements that represent possible feelings that individuals might have about the company or organization for which they work. It indicates the degree of one's agreement or disagreement.

Inferences

It has been observed that the Job Anxiety Level has been found to be higher amongst the corporate lawyers than the bankers. In case of job satisfaction bankers have been found to lie higher marginally in comparison to the lawyers. However , in case of organizational commitment the bankers seems to be relatively less committed in comparison to the lawyers.

Conclusion

With regard to the obtained findings it may be ascertained that the lawyers as professionals are more prone to experience anxiety. The job anxiety if unchecked may lead to detrimental work outcomes hence, has to be checked. In case of job satisfaction the bankers are relatively more satisfied than the lawyers with respect to their job but are less committed to their organization. Hence , managing the above three stated variables may not only reduce attrition thereby reducing its contribution to turnover costs but as well will lead to organizational effectiveness.

THE CHALLENGES OF PUBLIC MENTAL HEALTH SERVICES IN INDIA: A CASE STUDY OF CHAMARAJNAGAR DISTRICT, KARNATAKA

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Background: In India, there is a lack of understanding of challenges of Public Mental Health Services (PMHSs). The present study aims to enhance knowledge and understand the challenges of Public Mental Health Services in India from a service providers' point of view and public health perspective. **Objectives:** To study the Public Mental Health Services in India with special reference to Chamarajnagar District in Karnataka. To understand the providers' experiences, perception and attitude related to PMHSs. To document the perceived challenges of PMHSs by the mental health service providers' in India. **Methods:** Semi-structured in-depth interviews were conducted and participant observation method was used with the purposefully selected mental health service providers by quota sampling method. The data from participant observations, documents, and in-depth interviews were subjected to both qualitative and quantitative analysis by adapting the thematic analysis and triangulation method. **Results:** The research study found that, 90 per cent of the professionals were not adequately trained and inadequate manpower to handle even ten per cent of the mental illness cases properly. The drug supply was not on time and regular as the present study reveals. The paramedical staffs like ANMs, ASHAs, AWWs had positive attitude towards psychiatric patients, whereas, trained medical staff have slightly negative attitude towards psychiatric patients. Therefore, it is clear that the training was not effective to change the negative attitude of the medical mental health service providers into positive attitude towards the psychiatric patients. Appointing a well trained, young and enthusiastic and leadership oriented mental health professional, as a programme officer was one of the major perceived and experienced challenges in the district in particular and in general in India. **Conclusions:** This study highlights the significant contribution to enhance

knowledge and understand the challenges of PMHSs in India. The study illustrated the factors influencing the PMHSs and its implementation. The findings of this study have important implications for practice, education and policymaking.

Keywords: Challenges of Public Mental Health Services, Perception, Attitude.

ICPMN 2017

SUBMISSIVENESS AND ITS INFLUENCE ON MENTAL HEALTH AMONG MARRIED COUPLES

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Background: Relationships motivate every human being to live life satisfactorily. For every individual it is important to behave, act and think in a way that would help maintain their relationships. At the same time, while concentrating on the relationships, people sometimes tend to leave out their individual factors. There are many factors that would create an imbalance in such relationships. Submissiveness is found to be one such factor. It is strange to see how people may go extreme boundaries to maintain their relationships but what they do forget is about them. **Objective:** The present study focuses on to study the influence of submissiveness on mental health among married couples. **Method:** The sample consisted of 300 individuals (150 couples). The data were collected using the psychological tools viz. SB Inventory and Mental Health Scale. The data collected were analysed using the statistical techniques viz. t test and Regression. **Results:** The results from the study show that submissiveness was found to be seen more among the females than the males and more among non-working than working individuals. **Conclusions:** The results of the study conclude that submissiveness negatively affects the individual's mental health among the married couples.

Keywords: Submissiveness, Mental Health, Married Couple, Relationship.

COMPARATIVE ASSESSMENT OF MOTIVATION BETWEEN TREATMENT-NAÏVE AND OTHER PATIENTS IN ALCOHOL DEPENDENCE

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Background: Alcohol is one of the major drug of abuse in India. Life term risk involved in the development of alcohol dependence in Indian men is around 10-15%. Motivation is one of the prime steps towards changing the life style or behavior, which plays a major role in the recovery from alcohol related problems. There exists a variation in the degree of motivation among people who participate or seek treatment for alcohol related problems. Therefore, the need to assess level of motivation in alcohol dependence treatment-naïve and other patients is of a greater significance which can shed light on the importance of motivation in de-addiction management. **Aim:** To assess the level of motivation in treatment naïve alcohol dependence patients [group-1] and in ADS patients getting professional treatment for second or subsequent time (includes patients who have relapsed) [group-2] and to compare the levels of motivation among these two groups. **Methodology:** A consecutive sample of 100 patients meeting inclusion and exclusion criteria admitted in family/de-addiction ward were included in the study. Details of Socio-demographic status were enquired into. URICA scale was administered to assess the level of motivation in both the groups, once the patient had completed detoxification treatment and was clinically out of delirium. **Results:** The assessment of motivation showed a mean URICA score of 8.24 and 8.11 in group 1 and group 2 respectively; with a P value of 0.497 using T-test. There was a difference in level of motivation among treatment naïve and other ADS patients though not statistically significant. **Conclusion:** The study indirectly implies the role of motivation as one of the important factors in relapse and provides us with an area for enforcing better treatment towards relapse prevention. Hence motivation enhancement should be given utmost importance while considering treatment for de-addiction, even from the first contact with the professional

Keywords : Alcohol dependence syndrome, Motivation, URICA scale

**THEME: AYUSH, BIOTECHNOLOGY
AND NEUROSCIENCE**

ICPMN 2017

IMPACT OF MINDFULNESS PROGRAM ON ANXIETY IN SENIOR SECONDARY STUDENTS

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Anxiety is becoming a serious and prevalent problem among the present day students. The problem becomes more profound during crucial stages of career like the senior secondary stage. Continued anxiety may lead the students into unhealthy ways of coping which then become other symptoms like alcohol and drug use, dissociation responses, eating disorders and other unhealthy behaviours designed to avoid anxiety. The implications of anxiety on psychological health of young students call for an investigation into effective intervention techniques. The ways in which anxiety is treated are varied and the use of alternative therapies is gaining momentum. Among the alternative therapies, mindfulness is proving to have a positive effect on health and psychological well-being. The present study was designed to evaluate the impact of mindfulness based intervention in reducing anxiety among senior secondary students. To determine the effectiveness of this intervention, a randomised pre-test and post-test control group design was used. A total of 77 senior secondary students referred for anxiety counselling were evaluated using Spielberger's State Trait Anxiety Inventory (STAI). They were then divided into experimental and control groups randomly. The experimental group (N=39) participated in two weekly mindfulness classes of 45 minutes duration for 6 weeks. The control group (N=38) was assigned to a waiting list. After 6 weeks, the mean scores of the two groups were compared using ANOVA and t-test. The post-test scores of students who participated in mindfulness program showed significant decrease in state anxiety as well as trait anxiety. The study suggests that mindfulness can be considered as a complementary or alternative therapy in the treatment of anxiety problems among students.

Keywords: Alternative therapy, anxiety, complementary therapy, mindfulness, stress, students

MEDITATION: A WAY TO ENHANCING EMOTIONAL INTELLIGENCE AND PSYCHOLOGICAL WELL-BEING

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The present experimental research measures the effect of Meditation (verbal chanting of 'OM') on Emotional Intelligence and Psychological Well-being among female university students. The sample consisted of 65 subjects in the age range of 18 to 24 years through purposive sampling technique. The daily practice time of Meditation session was 30 minutes for one month. Pre- Post data was recorded before and after intervention of Meditation session by using single group pre-post research design. Emotional Intelligence was measured by Emotional Intelligence Scale constructed by Hyde, Pethe and Dhar (2001). Psychological Well-being was measured by 'P.G.I. Wellbeing Scale' by Moudgil, Verma, Kaur and Pal (1986). Five more items taken from the life satisfaction test constructed by Diener et al (1985) were added along with the items of P.G.I. Wellbeing Scale by the researcher herself to improve the validity of the scale. Pre- Post data was compared with the help of Wilcoxon Signed Rank Test. Results showed that mean score of emotional intelligence for pretest is 125.80 and for posttest is 134.26. Similarly, for psychological well-being mean score of pretest is 12.35 and for posttest is 13.13. Obtained Z value for emotional intelligence is 4.50 that is significant at 0.01 level and for psychological wellbeing Z value is 1.94 that is not significant even at 0.05 level. Results revealed that there is a significant effect of meditation on emotional intelligence but no significant effect was found on psychological well-being. Religious faith, spiritual practices, volunteer work, praying, meditation, singing devotional songs, reading inspirational books, attending religious services strengthen the positive aspects of human personality, which is important for mental health as well as physical health. Spiritual exercises enhance the hidden qualities of men.

Keywords: Meditation, Emotional Intelligence, Psychological Wellbeing.

EFFECTIVENESS OF VIPASSANA MEDITATION ON GENERAL HEALTH

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Present study was conducted with the purpose to study the effects of vipassana meditation on general health of subjects. It was hypothesized that vipassana meditation would have significant effect on the general health and its dimensions. The general health of subjects included somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. Initially 36 subjects were contacted and among them 20 participated in final sample. Among these 20 subjects, no. of female participants is 9 and no. of participated male is 11. For control group, 20 subjects were randomly selected. All subjects were in the age range of 30-38. General Health of the subjects was measured with the help of General Health Questionnaire-28 (Goldberg, 1978). *t*-test was applied to test the significance difference between pre and post scores of both the groups. It was found in result that Practice of vipassana meditation is effective in reducing somatic symptoms, anxiety, insomnia, social dysfunction and depression. It improves the overall general health of the subjects.

Key words: vipasana, meditation, *t*-test, anxiety, insomnia, dipression.

AN ASSESSMENT OF IN -VITRO ANTI-OXIDANT POTENTIAL OF PHYTOCHEMICALS PRESENT IN SOME SELECTED INDIAN MEDICINAL PLANTS BY DPPH ASSAY.

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The aim of the study was to evaluate the antioxidant activity of leaf extracts of five plant species selected on the basis of their reported ethnobotanical uses. The Alkaloid and flavonoids fraction of plant extracts was analysed against L-ascorbic acid by DPPH assay. The potential of L- ascorbic acid to scavenge DPPH (1,1-diphenyl-2-picrylhydrazyl) radical become almost stable after 70 or 80 %. The fractions showed dose dependent free radical scavenging property. The alkaloids and flavonoids fraction of *Abutilon indicum*, leaf extract were found to 75.99% (ethanol), 79.16% (methanol), 75.04% (aqueous) and 77.02 %, 81.07 %, 47.54% ,respectively. The *Adathodavisca* leaf extracts were found to be 75.17 %, 81.07%, 71.32% and 79.16%, 85.10%, 44.32 %, *Daturastronium* 73.21%, 82.86 %, 70.27 % and 70.43 %, 75.46 %, 41.17 % respective *Lantana camara* fraction showed 70.22 %, 80.92 %, 70.50 % and 68.47% 80.90%, 37.72 % activities and *Tridaxprocumbens* 72.07 % ,79.34 %, 68.80 % and 62.27 % 62.67 %, 33.02 %. On comparative basis flavonoids leaf extracts of *Adhatodavisca* and *Daturastronium* fractions exhibit amazing antioxidant properties that support their traditional use as strong antioxidant.

Key words: Medicinal plants, Antioxidant activity, DPPH assay, ascorbic acid.

EFFECT OF BACKGROUND MUSIC INTERVENTION WITH DIKSHITAR'S NOTTUSWARAS ON COGNITION, COMMUNICATION AND SOCIAL-EMOTIONAL LEARNING IN PRESCHOOL CHILDREN

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Introduction: The period from birth to six years is a critical period for child development. This is the period where there is an acceleration in brain development that in turn helps in the development of social-emotional learning, communication skills and cognitive abilities. In the West, there is an increasing focus on using music especially western classical music for enhancing child development and for developmental disorders in the preschool age. Music therapy or Raga Chikitsa has been used since very ancient times. Listening to music has always been considered soothing and healing, whether it is Indian music or Classical western music or Folk Music. There are studies on music therapy with Indian classical music for children with developmental disorders and the use of Indian classical music as a background intervention but there are nowell documented studies similar to the use of music in preschools in the West, with the use of Indian classical music in preschool children in India. This research study was undertaken to help address this gap. **Objective:** The main objective of this research study was to see if background music intervention with Dikshitar's Nottuswaras could help enhance overall development, intellectual development, cognitive abilities, communication skills and social-emotional learning in preschool children. **Design & Method:** In the present study, a quasi-experimental pre-post intervention study design was used. This involved an experimental and observational study. 45 preschool children in the age group of 3-5 years from a rural school in India were selected for the study. Thirty children were part of the concurrent experimental group and 15 children formed the historical control. The children in the experimental group were exposed to background music intervention with Dikshitar's Nottuswaras for a period of 16 weeks

during non-classroom hours. Dikshitar's Nottuswaras are Carnatic music compositions adapted from English tunes by Muthuswami Dikshitar, a renowned Saint musician and composer in the 18th century. The children in the experimental group were assessed at baseline and after the intervention with the Vineland Social Maturity Scale(VSMS) by Bharath Raj, The Development Screening Test (DST) by Bharath Raj and a development indicator checklist (PREDICT) developed by this researcher to determine the level of cognitive development, social-emotional learning and speech language and communication skills. The pretest and posttest assessment of children in the historical control group was done with the VSMS and the DST. **Results:** There was a statistically significant improvement in overall development, cognitive skills, communication skills and social-emotional development in children in the experimental group who were exposed to the background music intervention as compared to the historical control group. These improvements were also corroborated by the findings of the qualitative observation study where the children showed subjective improvements in classroom behaviours, school performance, social skills, concentration, empathy skills and better peer relationships. **Conclusion:** The positive results of the background music intervention with Dikshitar's Nottuswaras on the overall development and learning trajectories of preschool children help highlight the need for the introduction of classical music especially Indian classical music either through passive listening or active teaching at a very young age both in the school and at home.

PRAYOGA: A MIND-BODY MEDICINE PROGRAM BASED ON PATANJALI RISHI'S ASHTANGA YOGA: A BRIEF CLINICAL STUDY OF ITS APPLICATION IN CHRONIC DISTRESS DUE TO CHRONIC PAIN

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Introduction: PRAYOGA is a Mind-Body Medicine (MBM) program developed by the author and being used in his clinical practice for several years. It is an acronym for 'Proactive Remedial Yoga' and 'Progressive Reconditioning Algorithm to Yield Optimum Gain in Action'. It is also used to indicate that it is based on Patanjali Rishi's Ashtanga Yoga. "*Prayoga*" is a Sanskrit term which means 'practice' or 'application'. It also means 'research' or 'experiment'. PRAYOGA is used here as a practical and proactive means of personal learning, practice and self-exploration based on Patanjali Rishi's Ashtanga Yoga to progressively recondition one's mind-body system by applying scientifically proven mind-body medicine techniques to regain confidence, build resilience and achieve greater health and wellbeing. Mind-Body Medicine (MBM) is a recent area of clinical medicine that applies to interactions between the body, behavioural factors, emotions, cognitive processes, social factors and spirituality and the ways in which they affect health and wellbeing. There is an emphasis on self-knowledge and self-care and are considered as important capacities that can be enhanced through specific processes and practices. The PRAYOGA program is well grounded in the evidence-base of mind-body medicine. It provides the knowledge and skills based on the premise that conscious and mindful awareness, physical and mental efforts and practices can train the mind and body and so change the brain through positive neuroplasticity, influencing the psycho-neuro-immuno-endocrine system complex to be activated and sustained through a virtuous cycle of healing and restoring homeostasis in the mind-body system. The evidence-based basis of the PRAYOGA program in contemporary Mind-Body Medicine (MBM) is reviewed. The program curriculum is briefly described.

Chronic pain produces chronic distress. Distress is a neuropsychological phenomenon with brain mechanisms and psychological processes underlying the suffering. Chronic pain and sustained stress are interlinked complex conditions that require multimodal approaches to management. PRAYOGA is a Mind-Body Medicine program that has clinically shown in the author's practice to be an effective therapeutic intervention in chronic pain conditions.

Objectives: 1. To present PRAYOGA as a novel amalgamation of evidence-based Mind-Body Medicine interventions in sync with the principles and practice of Patanjali Rishi's Ashtanga Yoga. 2. To demonstrate the clinical effectiveness of PRAYOGA in managing distress arising in patients with chronic pain conditions. **Design and Method:** A mixed quantitative and qualitative method was used with an open study design. PRAYOGA program was used as a Mind-Body Medicine based therapeutic intervention. Pre and post-therapy distress were recorded with a modified visual analog scale. **Results:** All patients with distress due to chronic pain conditions who participated in the the PRAYOGA program showed improvements in their report of subjective distress. **Conclusion:** PRAYOGA is an effective therapeutic intervention in chronic pain. The program is a novel therapy that has tried to extrapolate evidence-based clinical therapeutic concepts and practices established in contemporary mind-body medical psychotherapy onto the principle and practice of Ashtanga Yoga of Patanjali Rishi for practical clinical application in the cultural context of yoga as a lived tradition from ancient times, an invaluable heritage of India and a gift of the Indian civilization to the world.

Key Words: Patanjali, Ashtanga Yoga, Yoga Sutra, Mind-Body Medicine, Chronic Pain

CONCEPT OF MIND IN VEDANTA AND AYURVEDA IN CONTEXT TO MODERN SCIENCE

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What is Mind? What is its origin? What is its location? What are its functions? What is the significance of Mind? What are the causes after mind disorders? How state of mind can be regulated by Yoga? These are all questions which are going to be dealt with in this research paper. This research paper aims to throw a light on the concept of mind in Vedanta and Ayurveda in context to modern science.

Vedanta philosophy basically gives illustration on existence and functioning of mind. The synthesis of five koshas in Vedanta philosophy is the key to know the origin of mind. In Bhagvadgita and Samkhyakarika mind is considered as one organ. The modern science also considers mind as part of nervous system i.e. limbic system. Ayurveda thinks of mind as a quantum entity which finds its instantaneous location at the organ which is functional in union with external objects.

In today's scenario life is becoming stressful and mind is most affected by the stress. In response to affected mental health, the physical health is also being affected. So understanding mind and its functioning is of utmost important in order to overcome stress and physical irregularities of health. This paper aims to develop that basic understanding about mind and it's functioning in order to live a sound and healthy life.

Keywords: Mind, Vedanta, Ayurveda, Lymbic System, Stress

MILD HEAT STRESS REDUCES THE RATE OF LIPOFUSCINOGENESIS IN THE BRAIN OF *DROSOPHILA MELANOGASTER*.

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Free radicals are highly reactive oxygen species generated during metabolic processes. They can cause damage to any biomolecule and cell organelle. These damaged structures are given to lysosomes where they are degraded and building blocks are recycled. During the course of ageing lysosomal system becomes less efficient and unable to handle all damaged structures. This results in accumulation of damaged molecules in the cells, particularly in post mitotic cells like neurons. Accumulated damaged molecules are rich source of free radicals. As the time required for degradation of damaged structures increases, they undergo many changes and cross-linking and finally form non-degradable, auto-fluorescent structures called lipofuscin granules. Many workers have demonstrated positive correlation between age and lipofuscinogenesis. Various laboratories have demonstrated that, repeated mild heat stress (HS) allow cells to initiate adaptive mechanisms, enhances cellular defence and increase cell's efficiency to fight against oxidative and other cellular stresses. In present investigation effect of mild heat stress was studied on lipofuscinogenesis in brain of *Drosophila melanogaster* during ageing. The wild strain of flies was cultured on maize medium in BOD incubator at 21°C. The flies of experimental groups were subjected to heat stress at 37°C for half an hour daily for seven days prior to lipofuscin study. After 24 hours of the last heat stress the flies were sacrificed, brain was dissected and lipofuscin was studied histochemically by Zeihl Neelson's carbol fuscine method. The flies were sacrificed on Day 7, 14, 21, 28, 35, 42, 49 and 56 days. Age wise increase in lipofuscinogenesis was observed in control as well as in experimental groups. HS was found to be beneficial in reducing the rate of accumulation of lipofuscin granules in experimental group, indicating the beneficial

effects of mild heat stress in increasing the efficiency of neurons in handling cellular waste and maintain healthy state.

Key words: Free radicals, *Drosophila melanogaster*, lipofuscin granules

ICPMN 2017

YOGA IN DEMENTIA PREVENTION AND TREATMENT

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Dementia is a condition where there is decline in mental abilities or cognitive functions like memory, reasoning, language, planning, recognizing, or identifying, severe enough to affect daily activities. Death of brain cells usually in the hippocampus is the underlying condition in dementia and is usually associated with old age. Most disorders associated with dementia are progressive - inducing a gradual decline in functioning, degenerative – steadily worsening over time and irreversible. The most common cause is Alzheimer's characterized by unexplained loss of nerve cells. Loss of nerve tissue may also be caused due to impaired blood flow to the brain known as vascular dementia.

There is no cure discovered yet for dementia. Treatment is usually administered as a combination of medication, psychotherapy and environmental modifications. Due to the decline in mental ability, dementia causes stress, anxiety and depression. Also, the body and immune system tends to weaken as the disease progresses. It is in this light that practicing yoga, pranayama and meditation can improve and help to alleviate the symptoms. Practice of certain asanas aimed at increasing blood flow to the brain may help repair neural connections. Yoga and meditation engage different parts of the brain and stimulate brain activity. Regular practice of yoga beginning at an early age can help to prevent brain cell damage which could otherwise lead to dementia. Yoga is proven to effectively reduce symptoms related to stress and hypertension also known to cause dementia.

Thus, incorporating yoga and meditation into daily routine strengthens the brain and helps to prevent dementia. People already affected will benefit from practicing yoga and meditation as they not only provide relief from the related stress and anxiety but are also helpful in boosting memory, cognition and other brain faculties affected by dementia. Yoga and meditation, with almost no side effects, is an effective way to help treat dementia which has affected an estimated 47 million people worldwide.

Key words: Dementia, Yoga, Pranayama

THEME: YOGA

ICPMN 2017

CHRONIC LOW BACK PAIN – WE HAVE WORKED HARD TO CREATE THIS YOGA APPLICATION – A LONG TERM INVESTMENT INTO YOUR WELLNESS

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The title, Chronic Low Back Pain (CLBP), may not raise enough eyebrows, not because it is something unknown but because it has been accepted as a way of life ranging from among the school kids to the office goers, to even the recreational athletes. In fact, all have come to accept de-habilitating lower back pain as a way of life. CLBP is associated not only with pain, but also with increased disability, psychological symptoms, and reduced quality of life. There are various treatment options for CLBP, but no single therapy stands out as being as effective as Yoga with its versatility. In fact, in the past 10 years, yoga interventions have been studied deeply as a CLBP treatment approach.

In satirical terms, we have worked hard in creating this condition. Increased comfort is eventually leading to decreased wellness. As a result, discomfort is dwelling with us day and night. Needless to mention, even the slightest physical discomfort has the power to hold our mind on to it, thereby sub-optimizing our performance no matter what. Then guess the quality of performance when something becomes so chronic in nature.

Yoga, in its entirety, has a life transforming effect. But that might seem like a daunting task to many, given the hustle bustle of our fast paced life. The best news – following even a tiny part of the ocean, called Yoga, can have profound impact on your wellbeing. Being watchful about your postural alignment alone can put an end to 'Chronic Low Back Pain'. Adding few more minutes of practice can almost eliminate it from your life. In summary, an elementary endeavor of just correcting one's postural alignment can do wonders for eliminating lower back pain. And then, further regular practice will vanish this affliction from our being.

Key words: low back pain, yoga, CLBP.

Discover Yoga Discover Yourself

SCIENCE AND SPIRITUALITY OF DISEASES AND POTENTIAL OF RAJYOG AS MEDICINE

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In the past few decades, there has been increasing interest in the field of yoga for curing various diseases. However, some important questions related to yoga and health remains unattended– What is the root cause of any disease? Is it merely biochemical alterations in cells which are currently being researched and treated by medical field? What is the in-depth mechanism behind disease curing by means of yoga or medical intervention? Until now we are focused on superficial aspects of causes of diseases and its treatment. Thus, the aim of this paper is to focus attention on deeper aspects of health and yoga i.e. to understand and cure seed of body tree rather than curing individual parts. We know that energy cannot be seen with the human eye, which is why attempts to measure invisible phenomena scientifically has been challenging, but thanks to the ground breaking effort of dedicated scientists, the concept of non-material science is gaining ground in the main stream. This refers to the idea that the physical material reality we perceive with our senses isn't the only reality that's available for us to study in a modern day scientific manner. As it is rightly said by great scientist Nikola Tesla that- the day science begins to study non-physical phenomena, it will make more progress in one decade than in all the previous centuries of its existence. Every organ requires specific energy to function and this energy is provided by the associated chakras. Disturbances in the subtle energy of the chakras translate into physical manifestation and symptoms. Moreover, it has been demonstrated that human aura (which is made up of the energy field of all chakras) is an indicator of an individual's health and has the potential to accurately predict the future

health. We know very well that through yoga, the energy of our body gets balanced which brings about health to an individual. The knowledge gained up till now is that this energy balance is governed by chakras, however, the vital information regarding the primary source that provides energies to various chakras and thus to every cell of the body is still unclear. This paper focuses on this primary source i.e. the Consciousness Quantum Spiritual Energy (CQSE), which is known as soul, life force, being, its location and novel sacred geometrical structure, its operating mechanism, the information it carries regarding health, a role it plays in curing of diseases on performing yoga. CQSE is very subtle spiritual quantum gravity which creates consciousness and is located in the brain between hypothalamus and pituitary gland. The geometry of CQSE is represented by 'Pentagonal Star' with angles of 18,36,72,108 degrees and 16A ether energy points that includes conscious mind, subconscious mind (intellect), unconscious mind (impressions), virtues and powers. CQSE operates human body through its control circuit via brain and power circuit via the subtle light body. Based on the information in the unconscious mind, CQSE gives the program to DNA via morphogenetic field to build organs of the body. The master technique by which energy is provided to CQSE and thus to our chakras is the highest form of yoga, termed as 'Rajyog'. Rajameans (King) and Yoga means (Communication). Rajyog is communication between the self and the Supreme Being (God). In this technique, by communion with the Supreme being, the 16 a ether ic energy points are charged that are responsible for holistic health. Rajyog transcends the mind beyond the body and creates lasting peaceful experiences. Scientific research studies involving AURA mapping and EEG scanning have been carried out which has validated the functioning of CQSE and the potential of Rajyog to provide holistic health.

Keywords: Health, Diseases, CQSE, Rajyog, Chakra, Aura

ENHANCING LEARNING SKILLS IN TEENAGERS WITH THE PRACTISE OF YOGA AS TAUGHT BY B. K. S. IYENGAR.

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Those knowledgeable in the field of yoga would heartily agree that yoga is the best personality development program. And which other age can be better for the healthy development than the teens? Around the time when a child enters the early thirteenth year many physical, physiological changes are experienced due to the change in the hormonal releases in the body. That is why Teenage is said to be the age of stresses and strain, the age of turbulence. Yoga is considered a mind- body program. Exercising the body by practising the yogasana is good to keep the body healthy and keep off dullness. Of course! But do you know that practise of yogasana goes beyond the physical health? What about the mind? Does it develop mind control? Yes, of course! But is that it?

Yoga is much more than that. It is wholistic and multifaceted. Maharishi muni Patanjali who wrote the treatise on yoga named the yoga sutras in 20000BC has primarily mentioned that yoga is 'anushasan'. It is a code of conduct; instructions for a disciplined life. One might think...Oh, no! Then this is definitely not going to work with the teens! They are the enemies of discipline!!

But wait! Patanjali further says, yoga is also 'anushthana'.....it is about dedicated and devoted practise. Ashtanga yoga is what is recommended by the Maharishi Patanjali. The tenets of yoga include Yama, Niyama, asana, pranayama, pratyahara, dharna, dhyana, samadhi ie., the eight disciplines. Guruji Yogacharya B. K S. IYENGAR has divided the eight in three segments

1. Bhiranga sadhana, ie., the external disciplines of Yama, Niyama 2. The Antaranga Sadhana ie., the internal disciplines of Asana, Pranayama, Pratyahara 3. Antaratman Sadhana of Dharna, Dhyana, Samadhi. He emphasised that for children and teenagers the first two segments must be taught and practised. The third one would then follow with

maturity. Learning the skills of ahimsa, satya, asteya, brahmacharya, aparigraha helps develop ethical discipline in the student. Learning the skills of saucha, santosha, tapas, swadhyana, ishwara pranidhana helps develop social discipline in the student.

The Antaranga sadhana of asana, pranayama, pratyahara is a practical discipline. The practise of these three, the 'triam' involves the skilful use of body, breath and mind. Gururji B. k. S. Iyengar termed yoga as a 'perceptive' science. Just as the jnanaindriyas, the organs of perception, are skilled to perceive the universe outside of the body, with the help of the mind, the yoga practitioner learns to perceive the universe within. In the practise of yogasanas, the organs of action are used as props to draw the mind inwards to the inner sensations, developing the refined skill of alignment and balance, which is 'samatvam'. By such practises of various yogasanas and pranayama with the inner perceptivity which is pratyahara, the student develops 'dhairya', stability. It is this stable mind and body which can then be capable of great skills, whether they be physical, verbal, mental, intellectual, social, moral and ethical.

We need to see how the practise of yogasana and pranayama can help develop the above mentioned skills. For that let us go into the structure of a yogasana.

Asanas are structured positions which work towards bringing about the balance in the tattvas, the elements of earth, water, fire, air and space in the body. They work towards balancing the 5 kosha, 5 prana, 7 dhaatu, 3 dosh and 3 guna within the embodiment. In the language of contemporary science we can say that they work towards creating chemical balance in the human systems.....the central nervous system, the autonomous nervous system, the endocrine system, the circulatory system, the cardiac system, the muscular system, the skeletal system. We all know today that every change that occurs in our embodiment is actually a chemical change. It is by way of causing these transformations that the above mentioned sets of skills may be developed in the individual. This skill development is not limited only adolescents but works for everyone who chooses to follow the discipline. However, given the typical nature of turbulent growing- up changes in adolescence, we can focus on its usefulness there. By illustrating some asanas, we can see

how this can work. Some examples are:-Tadasana, Suryanamaskara, Trikonasana, Sirsasana, Sarvangasana, Viparita dandasana, Urdhava dhanurasana, Janu sirsasana, Shavasana, Ujjaii & Viloma pranayama. There can only be few tasks as important as ensuring the health of the future generations. As has been said, child is the father of man. It is our supreme responsibility to introduce and share the deeply intrinsic science to the current and future generations.

Key words: Patanjali, anushtana, anushasan

ICPMN 2017

A PROSPECTIVE, SINGLE ARM, INTERVENTIONAL STUDY TO EVALUATE THE EFFECTS OF NIRMAL KRIYA AND 6-STEP NIRMAL DHYAN ON NEUROCARDIAC PHYSIOLOGY AND QUALITY OF LIFE

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Background: Evidence suggests that yogic practices are beneficial in relieving psychological disorders like depression, stress, melancholia and are also useful in improving respiratory and cardiovascular functioning. Kriya Yoga, a type of yoga, involves sequential breathing practices followed by meditation. Few studies have systematically studied the short- and long-term physiological effects of Kriya Yoga on respiratory and cardiovascular systems. We conducted a prospective, single-arm study to evaluate the short and long-term effects of Kriya Yoga on neuro-cardiac physiology and quality of life. Here we are presenting the results of the study on Anxiety, Depression and Quality of Life calculated using Hospital Anxiety and Depression Scale (HADS) and World Health Organization Quality of Life-Brief version (WHO QOL-BREF) scores respectively. **Methods:** A prospective, single arm study was conducted in 53 adult healthy participants to evaluate potential effects of Kriya Yoga (intervention) practiced for 48 days on neurocardiac and quality of life outcomes. The intervention involved 49 Healing Breaths Nirmal Kriya followed by 6-step Nirmal Dhyana (meditation). Primary objective was to evaluate change in coherence of heart rate variability (HRV) in participants pre- and post-intervention. Secondary objectives included evaluation of short- and long-term effects of the intervention on cortical function (cingulate, pre-frontal and insular areas) using standardized low resolution brain electromagnetic tomography (sLORETA) and long-term effects on quality of life (QoL) using WHO QOL-BREF scores and on anxiety and depression using HADS. **Results:** There was no statistically significant short-term or long-term effect of the intervention on HRV in the total population of 53 participants. A post-hoc analysis carried out for subjects

practicing the intervention for >40 days (n=46) showed better improvement than total population in mean accumulated coherence of HRV at Day 48 pre-intervention as compared to Day 1 pre-intervention. In a subset of 32 participants with high compliance, statistically significant reduction was seen for the theta band frequency at Broadman area 23 (cingulate gyrus, limbic area) on Day 48 pre-intervention compared with Day 1 pre-intervention (p=0.046) and on Day 48, 60-minutes post-intervention as compared with Day 1, 60-minutes post-intervention (p=0.026). Results from the evaluation of HADS (n=46) on Day 1 pre-intervention and 60 minutes post-intervention on Day 48 showed statistically significant reduction in anxiety score (mean difference = -1.5 [95% CI: -2.3, -0.7]) and depression score (mean difference = -1.2 [95% CI: -1.9, -0.5]). The WHOQoL-BREF scores showed improvement in physical health (mean difference= 4.1 [95% CI: 0.4, 7.7]), psychological (mean difference= 6.4 [95% CI: 2.6, 10.2]), social relationship (mean difference= 3.0 [95% CI:-0.2, 6.1]), and environment (mean difference= 4.0 [95% CI: 1.5, 6.5]) domains. No intervention-related adverse event was reported. **Conclusions:** The positive significant changes in HADS and WHOQoL-BREF scores observed in healthy volunteers suggest that the intervention can be potentially developed as a non-invasive, non-pharmacological tool against psychological disorders in clinical settings along with becoming a part of lifestyle. Further investigations may be needed to assess potential applications of 49 Healing Breaths Nirmal Kriya and 6-step Nirmal Dhyān in patients with stress, anxiety and chronic psychological disorders.

Study registration: This study is registered under the Clinical Trials Registry of India. The registration number is CTRI/2015/04/005700.

OVERCOMING DEPRESSION WITH IYENGAR YOGA

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According to a WHO report published earlier in this decade, India has the highest rate of major mental depression in the world. It afflicts people of all ages and various socio-economic backgrounds and in many cases leads to the ultimate step of suicide. Efforts are being taken at the national level to make people realize that depression is a 'disease' like any other disease and one need not live with it but can seek medical advice - counseling and medications. There is no doubt that they give relief but what is required is an internal transformation so that the 'change' is more permanent. The problem with yoga though is that the individual needs to be motivated to practice and poor motivation to do anything is one of the symptoms of depression.

Yogacharya BKS Iyengar, a legend in his lifetime had a very innovative approach wherein he utilized many household items such as chairs, bolsters, pillows, belts and many other items to facilitate one to practice the various asanas. It is therefore possible for one to practice the asanas with ease and stay in each of them for a long period of time; this in turn brings about a transformation in the practitioner. Practice in this manner has a dual role to play – it motivates the practitioner and at the same time alters the emotional state of the practitioner.

Of the eight aspects of ashtanga yoga, the first two, yama and niyama, show the way in which life has to be led; however, depressed individuals tend to stray from the yamas and niyamas. At such times, it is easier to talk about the do's and don'ts to people but very difficult to implement. If they had a 'control' over their mind themselves then they would not be depressed. Therefore, what is needed is there is a transformation in the practitioner so that the mental and emotional state changes. The next two aspects, asanas and pranayama, bring about this transformation.

In this presentation, we will show which asanas, the way and the sequence in which these have to be done to tackle depression; provide the scientific evidence on the efficacy of

“Iyengar Yoga” in treating individuals with depression and the potential physiological mechanisms by which the practice of asanas and pranayama works. The manner in which the asana is done is important. If it is not done with precision and accuracy then the effect is not going to be there. And, that would also be exemplified.

Key words: Iyengar yoga, astanga yoga, counseling

ICPMN 2017

EFFECT OF YOGIC EXCERRSISES WITH THE INTERVENTION OF NEUTRACEUTICALS IN IMPROVING THE GENERAL HEALTH–A STUDY

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Nowadays, obesity is the worrying factor due to sedentary lifestyle and bad eating habits. According to WHO health statistics 2012 the prevalence of hypertension in India was 23.1% in men and 22.6% in women. It was considered directly responsible for 7.5million deaths in 2004, about 12.8percent of the total of all global deaths. For many of the diseases like hypertension, diabetes etc no single cause has been recognized in last 30years there are many risk factors that have been clearly defined. These include smoking, high cholesterol and triglycerides, decreased high density lipoproteins (HDL), high fibrinogen, hypertension, sedentary life style and obesity, diabetes mellitus and stress. Dietary and lifestyle practices are directly related to obesity, the most important cause in imbalance between the energy intake and output. It is determined by measuring body weight and fat, but BMI (Body Mass Index) is one of the best methods to calculate obesity. Sun salutations and yoga postures (asanas) which helps to reduce weight (standing, sitting, lying down postures) were taught to participants of different age groups and sex. Daily 45 min. to 1 hour for five days in a week was practiced. In addition an Indian spice Cuminum cyminum water extract was made to consume daily before the practice session. Follow up was done groups after every month. After 3months all the parameters were rechecked i.e. weight, Body Mass Index (BMI), and Pulmonary functions (PF). Because of breathing and other exercises contribute to the catabolic process in our body and we get health benefits from them due to burning a lot of fat, resulting in the reduction of BMI. Decrease in the BRPM and increase in the LC was also observed which resulted in the improvement of blood circulation and General health.

Key Words: Breath rate per minute (BRPM), Lungs Capacity (LC), BMI, Obesity