

International Conference on Public Mental Health & Neurosciences, December 14-15, 2016, Bengaluru, India.

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Sarvasumana Association, Bengaluru, India

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- (1) Sanatana Yoga Vignana Kendra, Bengaluru, India
- (2) Padmashree Institute of Management & Sciences, Bengaluru, India
- (3) Padmashree School of Public Health, Bengaluru, India
- (4) Vasishth Academy of Advanced Studies & Research, Bengaluru, India
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Welcome

We would like to welcome you to the 3rd International conference on Public Mental Health and Neuroscience, ICPMN 2016 having the innovative theme "Nano to mega booms of Mental Health & Medicine".

In this conference we are providing our participants an ample wealth of knowledge from science to creation. We have various scientific sessions like Public Health, Mental Health, Medicine, Neuroscience, Ethno-medicine & Neurosciences including a special session on creative articles & handwriting analysis.

Plenary sessions will witness Psychologists, Psychiatrists, Biotechnologists, Bioinformatician, Neuroscientists. We have Oral and Poster presentation on Public mental health and neuroscience, will give platform to budding researchers to share their ideas with likeminded people. Also, we have a special session on Creative articles.

Bengaluru is a city of gardens. Delegates who have come from outside Banglore could explore some of the historical places, attractive gardens, National park, art galleries and science museum. The cover page of our abstract book depicts an ancient well-engineered temple, Gavigangadareswara temple in Bengaluru.

I wish you all a very warmth stay.

Padmashree Murthy
President



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Dear friends,

We as Indians have the greatest opportunity in the immediate future in the history of medicine. Sixty years of research has made us clearly understand that answer for NCDs lies in life style change and the problem will never be solved through drugs and chemicals we prescribe. We need to change the mind set of researchers and the sufferers. Where is this knowledge base? Our Rishividya!! Whole world is looking towards the east for mind management techniques of yoga which have been handed over to us through 5000 years of research. Let us wake up, understand, experience and carry out research to establish the scientific validity of the traditional knowledge of holistic living systematized by ayurveda and yoga masters of this land. To date yoga and ayurveda are well recognized for their complimentary role for promotion of positive health to prevent and/ or treat NCDs. But as a patriotic medical community, let us strive towards making integrative medicine as the primary medicine within our nation just like china has done it for traditional Chinese medicine.

With love

RNagarethne

Dr Nagarathna Raghuram MD,FRCP, DSc (Hons) Medical Director, S-VYASA Yoga University

Chief of Madhumeha Niyantrita Bharata Abhiyaan

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Ernest Rossi, Ph.D and Kathryn Rossi, Ph.D.

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10 November 2016

Dear Preenon Bagchi and esteemed members of the Sarvasumanā Association,

We are very pleased to be engaged with the 2016 3rd International Conference on Public Mental Health and Neurosciences in Bangalore, India. Together we can integrate the newest developments of science to rekindle hope in our ever-expanding worldview.

We look forward to presenting:

The Theory and Practice of Mind/Body Yoga: The 4-Stage Creative Cycle, Gene Expression, Brain Growth and New Consciousness

The history, theory, research and practice of Mind/Body Yoga is reviewed and updated with current research integrating ancient practices of India with the new fundamentals of physics, biology and the quantum psychology of consciousness and cognition. With a few slides and a brief talk we will learn how Mind/Body Yoga can facilitate the profound relationships between the our natural 4-Stage Creative Cycle while awake, sleeping and dreaming to turn on activity-dependent gene expression, brain plasticity and healing. The entire audience will experience a very gentle form of Mind/Body Yoga that can be practiced by everyone to optimize their personal program of Self-Care and Good Health in their everyday life.

Kathryn Jane Rossi, Ph. D. Ernest L. Dossi, Ph.D

Editorial IEEE-LSTC



30November 2016

The IEEE Life Science Technical Community (LSTC) is pleased to co-sponsor The 3rd International Conference on Public Mental Health and Neurosciences (ICPMN 2016) to be held in Bengaluru, India, 14-15 December 2016.

IEEE LSTC is becoming one of the top associations who tighten connections across IEEE societies working all together on life science and bioengineering applications. It comes with a newsletter and webpage to spread the words and inform all people working in these fields about the energy spend to coordinate the activities, avoid multiplication and increase contributions related to these emerging fields, and where one can discover the latest technologies related to life sciences. In addition to serving IEEE members, the LSTC has succeeded in establishing great stature disseminating advances at the intersection between the IEEE societies and non-IEEE members.

Among the priority of LSTC is to support scientific events and activities that are focusing in the scope of the Life Sciences. We are committed to serve members and to coordinate common demonstrations. We are launching the first edition of our own international annual conference (IEEE Life Sciences Conference, lsc.ieee.org) to be held in December 2017 in Sydney, Australia focusing in Personalized Healthcare and Wearables. Please join us at this inaugural conference.

We appreciate Dr. P. Bagchi inviting us to co-sponsor ICPMN 2016 and please continue your good work. We invite all of attendees to visit the websites of LSTC (http://lifesciences.ieee.org) and the Life Sciences Letters journal (http://lifesciences.ieee.org/life-sciences-letters/) for the latest information, including links to great search sites, upcoming events, and our contact information.

Mohamad Sawan, Ph.D., LSTC Conference committee's Chair Professor and Canada Research Chair Polystim Neurotechnologies Laboratory, EE Dept. Polytechnique Montréal. Montréal, Québec, Canada, H3T1J4



It is indeed heartening to note that Sarvasumana Association in collaboration with Padmashree Institute of Management & Sciences is organizing 3rd International Conference on Public Mental Health and Neurosciences -2016 at Jain University, Bengaluru. This conference provides a common platform for a productive interaction between academia and industry. Neuroscience is a growing field of research with exciting opportunities. It is the cross-disciplinary science of the present age. The application of public health & Medicine in Biotechnology in specific needs to pay more attention in the developing country like India. Events of such kind will prove an ideal platform for the exchange and interaction of ideas in the pertinent field. The magnitude of public mental illness in the community is substantial. Proportionately, the numbers of biotechnologists are related infrastructure is minimal. Hence there is a growing demand of biotechnologists in India. Clearly, there is a need to increase the awareness of biotechnology in public health and this conference provides an excellent platform for the same. This conference is very timely in this regard and I wish the organizers all the best for the success of the event.

DR. ANURADHA. M

(PRINCIPAL)

Principal
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PSPH/MPH/65/11/126

Date:

03/12/2016

To The Organizing Secretary International Conference on Public Mental Health and Neurosciences 2016

It gives immense pleasure to write this message for the conference. I am glad that the Sarvasumana Association is organizing the International conference on Public Mental health Neurosciences on 14th and 15th Dec 2016. I hope this conference would provide an opportunity and a platform for the young professionals to present their research findings and as well learn a lot from experts in the in the field of public health, mental health, biotechnology.

I have gone through the scientific program list and could see some of very interesting topics and academic content. I am sure the discussions and deliberations in the conference will be very informative and educative. It would add to existing scientific knowledge base and also be an initial step forward for path breaking research in future.

I wish the conference a great success.

PRINCIPAL

PADMASHREE SCHOOL OF PUBLIC HEALTH

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It is a matter of great pride that our college is co-organizing this International Conference On Public Mental Health and Neurosciences along with Sarvasumana Association on December 14-15, 2016.

In today's world emotional well-being of an individual is of utmost importance. Mental health is a state of well-being in which a person understands his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community.

Good mental health provides a feeling of well-being and gives us strength to face any odds. There cannot be health "without mental health." Mental health and physical health are fundamentally correlated whichever way you look at it. They influence each other such that deterioration of one leads to the deterioration of the other and improvement of one improves the other.

This international Conference will dwell on various aspects related to Mental Health and Neurosciences which has consequences on the society at large.

I extend my best wishes for the success of this international conference.

Dr.S. Kumudhavalli

Principal

UNIVERSITY OF KALYANI

Department of Biochemistry & Biophysics

Dr. Angshuman Bagchi Assistant Professor of Biochemistry and Coordinator of BIF



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MESSAGE

I am immensely delighted to know that SARVASUMANA ASSOCIATION is again going to organize an International Workshop. This time they have broadened the scope of the workshop and included BIOINFORMATICS.

I wish them all the success.

Coordinator
Bioinformatics Infrastructure Facility
Department of Biochemistry & Biophysics
University of Kalyani

CONTENTS

Title & Authors KEY NOTE AND PLENARY TALKS

- STOP DIABETES MOVEMENT. Dr. Nagarathna Raghuram
- II MANAGE STRESS, BE HEALTHY. Dr.C.R.Chandrashekar
- III STRUCTURAL BIOINFORMATIC STUDY OF SULFUR COMPOUND METABOLIZING SOX OPERON. Dr. Angshuman Bagchi
- IV PSYCHOLOGICAL FIRST AID. Dr Shashidhar Bilagi
- V HEALTH IN HANDWRITING A SCIENTIFIC ANALYSIS. Dr. Noothan Rao
- VI ETHNOMEDICINE IN INDIA. Dr. T.Pullaiah
- WII BIOTECHNOLOGICAL STRATEGIES FOR THE PRODUCTION OF PLANT ANTICANCER COMPOUNDS. Dr. M. Anuradha
- VIII CREATING A MUTUALLY EMPOWERING AND HAPPY MARITAL LIFE. Dr. Dharay Shah
- IX ROLE OF AUTOPHAGY IN NEURONAL HEALTH, Dr. A. A. Deshmukh
- X THEORY OF ANXIETY DISORDER. Dr Lokesh Babu,
- XI TQ-NLC: A PROMISING CANDIDATE FOR MANAGEMENT OF ALZHEIMER'S DISEASE?. Dr. Latifah Saiful Yazan

Theme-1: MEDICINE AND PUBLIC HEALTH

- PREVALENCE OF PARASITIC INFESTATION AND MALNUTRITION
 AMONG PRESCHOOL CHILDREN OF A PANCHAYATH REGION IN
 NORTH KERALA.A Riya Thomas, A shima Thomas, Dr Savitha P, Dr Arun
 mohan
 - PERCEPTION OF HAPPINESS AMONG EARLY UNDER PRIVILEGED
- 2 ADOLESCENT GIRLS. Dr. Asha Menon
 - CORRELATION BETWEEN ENHANCING STRESSES AND TRENDS OF SELF
- 3 MEDICATION AMONG YOUNG FEMALES IN CHANDIGARH. Meenu Wats, Rakesh K Wats, Maansi and Aanchal Wats
 - EFFECT OF DURATION OF DIABETES ON COGNITIVE FUNCTION IN NON-
- INSULIN DEPENDENT DIABETICS. Dr Mythri G , Dr Manjunath ML , Dr Girish Babu M
- ENHANCING SOCIAL RESPONSIBILITY OF PREADOLESCENT GIRLSIN MUMBAI. Shobha Bharat,
 - AN UNEXPECTED CAUSE OF BULBAR MYASTHENIA- CASE REPORT.Dr
- 6 Asif Salim, Dr Sharik Mustafa

- QUALITY OF LIFE INDEX (QLI) IN CHRONIC KIDNEY DISEASE
 PATIENTS- A STUDY AMONG PATIENTS ADMITTED TO A TERTIARY
 CARE CENTRE IN MANGALORE. Rashmi D.S., Manjunath J., Safeekh A T
 - A RARE CASE OF A CAVITATORY LESION MIMICKING TUBERCULOSIS.
- 8 Anuroop venkatesh P

14

- COMPARISON OF KNOWLEDGE, ATTITUDE, PRACTICES AMONG THE DIFFERENT AGE GROUP OF MOUNTAINOUS AREA OF LADAKH. Sakshi Sharma, MV Padma
- MELIOIDOSISAN OVERLOOKED AND UNDERREPORTEDDIAGNOSTIC 10 DILEMMA. Shuaib Ahmed M.A
- STUDY OF PSYCHIATRIC PROBLEMS AMONG CHILDREN WITH POOR ACADEMIC PERFORMANCE. Dr.Jitendra Mugali*& Dr. S. S Chate
- STUDY OF SPECIFIC LEARNING DISORDER IN CHILDREN WITH POOR
 ACADEMIC PERFORMERS.Dr.Jitendra Mugali * , Dr. Nitin O. P, Dr.
 Mallikarjun A Pattanashetti

Theme-2 BIOTECHNOLOGY, ETHNOMEDICINE, BIOINFORMATICS, NEUROSCIENCE & BIOMEDICAL SCIENCE

TRADITIONAL MEDICINE AND MENTAL ILLNESS IN INDIA. Sangeetha and Dr. Lakshmana G

BIOINFORMATIC INSIGHT INTO THE FUNCTIONALITY OF LASR PROTEIN FROM PSEUDOMONAS AERUGINOSA THE CAUSATIVE AGENT OF NEURONAL NECROSIS. Nilkanta Chowdhury and Angshuman Bagchi

ZINC NEUROTOXICITY INFLICTS MITOCHONDRIAL DYSFUNCTION IN
THE BRAIN OF CLARIAS BATRACHUS L.: IMPLICATION IN FISH DEATH.
Arpan Kumar Maitil, Nimai Chandra Saha and Goutam Paul

PHARMACOPHORE SCREENING AND DOCKING STUDIES WITH SOME CNS
ACTING PHYTOCOMPOUNDS FROM SELECTED AYURVEDIC MEDICINAL PLANTS.

Preenon Bagchi, Sukesh K and Ajit Kar

18 YOGA AS PREVENTIVE AND TREATMENT FOR CARDIOVASCULAR DIEASE- A Review. Rajesh.T.S and Chaitra Rajesh

- SCHNEIDER'S FIRST RANK SYMPTOMS IN PATIENTS WITH BIPOLAR
 AFFECTIVE DISORDERS AND SCHIZOPHRENIA A CLINICAL STUDY.
 Parameshwara N.M., P. John Mathai, Joylin Jovita Mascascarenhas
- SYNTHETIC BRAIN FUNCTIONAL NETWORK MODELLING USING REVERSE ENGINEERING- A SURVEY. Somya Agarwal, Dr. Ritu Tiwari

Theme-3 MENTAL HEALTH

- 22 EFFECT OF MINDFUL PARENTING ON SELF- ESTEEM IN CHILDREN. Sharmili.C, Sanjana M.
- 23 EFFICACY OF COUNSELLING IN REDUCING STRESS AMONG ENGINEERING STUDENTS, Dr. RITA R. BHATTACHARJEE
- MENTAL HEALTH SERVICES IN NAMIBIA: CHALLENGES AND PROSPECTS. Poonam Dhaka, Annastasia N Musese, T N Kaxuxuena, Kudzai Bakare, Manfred Janik
- 25 MENTAL HEALTH ASSESSMENT OF CHRONIC KIDNEY DISEASE PATIENTS ON HEMODIALYSIS. Venugopal K. J., Manjunath J.
- 26 A STUDY ON MENTAL HEALTH AMONG RURAL WOMEN. Simi Paul, Lakshmana G
- TRUST, GRATITUDE, AND HAPPINESS AMONG YOUNG ADULTS. Ankitha and Mustafa Nadeem Kirmani
- A STUDY OF FREQUENCY AND SPECTRUM OF PSYCHIATRIC COMORBIDITY IN MALE PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME. Dr Aruna B Rao, Dr Siddharth Shetty, Dr P John Mathai
- 29 EFFECT OF HEALTH ON TAKING EXAMINATION IN HIGH SCHOOL STUDENTS. G.S.Shylashree

- 30 A STUDY ON THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS ON GENERAL HEALTH AMONG POLICE OFFICERS WORKING IN BENGALURU. Sayantani Sinha
- PSYCHOLOGICAL WELL BEING AMONG THE ADOLESCENTS WHO HAVE EXPERIENCED AND WHO HAVE NOT EXPERIENCED SEXUAL ABUSE. Navya Shree G.C& M.Y. Manjula
- 32 MANAGEMENT OF ADOLESCENT EXCESSIVE GAMING: A CASE STUDY . AshfakAhamed PC

Theme-4 CREATIVE ARTICLES

- THE CONTEXT OF SPATIAL BEHAVIOUR AND EXPERIENCE. Dr. Jhuma Mukherjee
- 34 EXISTING & NOVEL METHODS OF WATER HARVESTING. Dr. Preenon Bagchi
- 35 INTEGRATING VIRTUAL REALITY AND SOLUTION-FOCUSED BRIEF THERAPY: A CONCEPT. Mageshprasath Nagarajan and Sreehari Ravindranath
- 36 THIS INDEED IS LIFE, Dr. Asish Kr. Sinha

KEYNOTE & PLENARY TALKS



STOP DIABETES MOVEMENT

DR.NAGARATHNA RAGHURAM SVYASA university, Bengaluru

Madhumeha Mukta Bharat (MMB) is one of the important mission initiatives of VYASA Bengaluru, Technical support by S-VYASA Yoga University Supported by Arogya Bharati and Indian Yoga Association to spread awareness about diabetes and preventing diabetes among the Indians across the country for the well-being of the nation, using ancient holistic approach by Yoga. It is an ambitious movement to prevent India becoming "Diabetes capital of the World". Madhumeha Mukta Bharat Yoga Saptaha organised for a week, from June 21-27.

A total of 56,352 participants were taught the SDM module by the cooperation of all organizations by using the CDs and booklets. Laboratory tests sponsored by Ministry of Health and Family Welfare, Govt. of India, was conducted on 23,260 participants from 19 states (FBS, HbA1C and Lipid Profile). After completion of yoga Saptaha camps all India review meeting was held in Delhi on 12th and 13th July 2015 with all states coordinators to give detailed activity report of Yoga Saptaha and future follow-up action plan for one year. It was found that average HbA1C of diabetic population was 7.14 ± 1.98; Of these 61% were taking oral hypoglycemic drugs and about 8% were taking insulin. Total cholesterol was > 201 mg% in 28.5% subjects. Triglycerides was > 150 mg % in 44% subjects; 51% had LDL>100mg%; 41% had HDL<40 mg%. . Subjects who were taking other than allopathic medications included Ayurveda(11%), homeopathy (3%), local herbal medicines (9%) also observed that 36% of the diabetics had eye problems; Leg pain was a complaint by 27% of diabetics; 0.8% of diabetics had non healing ulcers in their legs; Cardiac problems were reported in 7% of the diabetics; of these 13% had bypass surgery. Renal complications were seen in 2.58% of diabetics and 1% had history of stroke at the time of presentation.

Several camps were conducted during the period Feb 2015- Jan 2016 by SVYASA MSc students who took the data and analyzed the results of 10 day's camp using the same module on 1544 T2DM subjects, which showed consistent reduction in FBS levels. Then, another follow up meeting was conducted in October 2015 for phase 2 where in addition 2600 T2DM subjects were followed up after three to four months and their blood analysis showed that average HbA1C reduced down to $6.67 \pm 1.76\%$ from 7.14 ± 1.98 %. Phase 3 follow up meeting has been taken and data is being currently—analyzed. Graphs below depict the results.

MANAGE STRESS, BE HEALTHY.

Dr.C.R.CHANDRASHEKAR

Samadhana Counselling Centre, Bengaluru, India

Stress is an unpleasant feeling of the body and mind, when we think that dealing with a person, problem, an issue or situation is beyond our coping skills. Under stress there are changes in the body and mind which disturb our normal and routine functioning.

- ➤ Heart rate increases.
- ➤ Respiration/breathing is difficult.
- > Excess sweating.
- Aches and pains in some part or whole body.
- ➤ Disturbance of food intake, sleep, sexual function and bowel bladder movements.
- ➤ Negative thinking and emotions.
- ➤ Poor attention, concentration and memory.
- > Problem solving, decision making become difficult.
- ➤ Interest, zeal and motivation get affected.
- ➤ Anger irritability, aggression.
- Suicidal ideas and attempts.

Continuous and severe stress may lead to physical diseases like high BP, Diabetes, Asthma, Thyroid disease. Menstrual cycle, irregularities, acidity and ulcer, sexual dysfunctions, sterility etc...Anxiety, Depression, somatization disorder and other mental disorders.

Cause of stress may be internal/external.

Internal causes:-

- Poor coping skills / inferiority feelings.
- **Frustration.**
- ❖ Dis-satisfaction.
- **❖** Worries.

External Factors:

- o A difficult person.
- o A difficult problem.
- Hostile and un-comfortable place.

- o A difficult issue.
- o Non supportive environment.

Stress increases when there is less of,

✓ Love - Trust - Guidance – Resources - Knowledge and skills.

Stress increases when there is excess of,

✓ Pressure – Expectation – Criticism – Work load – Conflicts and confusion.

Stress multiplies when there are negative events like death – separation, loss, insults, threat to life and property.

STRESS > ILL HEALTH > STRESS: A vicious circle.

Management of stress,

- **♣** Positive Attitude and Thinking.
- **♣** Get help and support from people. Look around for such people.
- 4 Simple living with minimum needs, expectations, realistic goals.
- ♣ Be happy and contented with what you get and achieve. Reduce the speed.
- Relax by music, art, sports, nature, and travel, prayers, socialization.
- **↓** If necessary, consult a doctor, a psychiatrist or a counsellor.

STRUCTURAL BIOINFORMATIC STUDY OF SULFUR COMPOUND METABOLIZING SOX OPERON

Dr. Angshuman Bagchi

University of Kalyani, West Bengal

Biological oxidation of reduced inorganic sulfur compounds mediated by prokaryotes of the domain archea and bacteria is abundant in soil and water, and is the major reaction in volcanic and other extreme environments. Sulfur has wide ranges of oxidation states that vary from -2 to +6. The electrons derived from the reactions are used by the microbes for energy transformation of the respiratory chain and for carbon dioxide reduction. Though a considerable progress in genetics of sulfur lithotrophy is noted, the detailed mechanisms of these reactions are still poorly understood. In the present perspective, the main aim of my study has been to propose the structural basis of the molecular mechanism of sulfur oxidation biochemistry with the help of modern day structural bioinformatic techniques, which can be used to mimic the cellular environment in silico.

My study encompasses the microorganisms, which possess a sulfur compound metabolizing operon called sox operon. It consists of a multiple gene cluster made up of genes called soxSRT and soxVWXYZABCD, which are transcribed divergently. In the present context, I used comparative modeling to build the three-dimensional structures of the sox proteins encoded by the genes of the operon. Proteins SoxV & SoxW, SoxC & SoxD and SoxX & SoxA interact among themselves. After model building the modeled structures of the aforementioned proteins were subjected to molecular docking analyses. The docked protein complexes were analyzed and short contacts were removed and were further analyzed by molecular dynamics simulations. Finally the structural aspects of the complexes were estimated on the basis of the thermodynamic parameters.

The protein SoxR is a dimeric transcriptional regulator. So, a dimeric model of SoxR was built and docked onto the promoter DNA. The SoxR-DNA complex thus built was further analyzed to predict the probable structural aspects of the interactions.

There are two other proteins SigE and ORF1. SigE is a sigma factor and ORF1 is an anti ECF sigma factor. The models of these proteins were built by comparative modeling method. The model of SigE was docked onto its promoter DNA. The structural aspects of the modeled complex were analyzed. ORF1 interacts with SigE and helps to remove it from the DNA. Docking of the model

of ORF1 on that of SigE was then done and the complex was analyzed further to identify the mode of interactions. ORF1, when binds to sulfur anions like sulfate, does not interact with SigE. In order to predict the biochemical basis of the interaction, the coordinates of sulfate ion were docked onto ORF1 and the biochemical basis of the interaction was analyzed further.

These studies on *sox* operon helped us to predict a plausible mechanism of sulfur biochemistry.

PSYCHOLOGICAL FIRST AID

Dr Shashidhar Bilagi

Consultant Psychiatrist

Surges in demand for professional mental health services occasioned by disasters represent a major public health challenge.

Psychological First Aid (PFA) consists of a systematic set of helping actions aimed at reducing initial post-trauma distress and supporting short- and long-term adaptive functioning. Designed as an initial component of a comprehensive disaster/trauma response, PFA is constructed around eight core actions: contact and engagement, safety and comfort, stabilization, information gathering, practical assistance, connection with social supports, information on coping support, and linkage with collaborative services. PFA for children and adolescents focuses on these same core actions, with modifications to make them developmentally appropriate.

It includes basic common sense principles to promote normal recovery. These are actions to help people feel safe and calm, connected to others, hopeful, and empowered to help themselves, with access to physical resources, and emotional and social support. It helps survivors to meet current needs; it promotes flexible coping and encourages adjustment. It is called "first aid" because it is the first thing that helpers might think to offer disaster-affected people, and it commonly occurs in the first days, weeks, and months after a disaster or other emergencies.

Formal evaluation of the effectiveness of PFA is needed and it is hoped that development of a PFA Field Operations Guide will facilitate such evaluation.

HEALTH IN HANDWRITING – A SCIENTIFIC ANALYSIS

By Dr. Noothan Rao

"Right Strokes with Right Thoughts" - A Research Center For Holistic Healing

Handwriting is the keyhole to our subconscious mind. We can discover our true personality; identify our strengths, weaknesses and also health issues through our subconscious communication — our handwriting which is aptly called as brain writing.

The act of writing is the movement - a series of gestures involving rhythm, speed, pressure, direction, etc. Handwriting itself captures and holds on paper the slightest motor pulse of the writer with many contributing factors which enter into it.

Handwriting traces disturbances in neuro-muscular coordination, and the way strokes flow out of writing instrument gives away a great deal about the health condition. The warnings can come through our handwriting much before our body starts exhibiting visible symptoms of a particular ailment.

Our handwriting gives clue to our health conditions - Physical, Mental, Neurological, Psychological, Psychosomatic, Hormonal & growth issues. Here one can identify/understand the root cause of any ailment and accordingly treatment can be given.

By changing our handwriting in a scientific way we can change our personality, thinking patterns and cure many ailments from the root and we can live a healthy life. Every day writing certain patterns, affirmations in a healthy handwriting can actually help us to lead a healthy life.

This is called as graphotherapy. We are sending right signals to our brain to change the way it is been working by writing proper strokes. Graphotherapy combines the principles of neurology & psychology of handwriting analysis to create a powerful & effective method for changing our life.

Graphotherapy works like both pranayama (concentration) in yoga & acupressure therapy. When we hold the pen it presses our thumb where the acupressure point of brain, pituitary gland and pineal gland is situated. Studying with writing is always good as it activates our brain.

In olden days also people used to write God's name crores of time or writing letters, songs, or other documents etc. If you observe such people, (like writers, poets) they were very healthy and lived for long time. For illiterate people drawing rangoli, knitting, making wick and turning beads of japmala/tasbeeh/rosary helped in the same way.

Graphotherapy has provided promising responses in children with autistic challenges, ADS, ADHD, stammering. It works well with all the psychosomatic diseases. It also helps to come out of any kind of addictions, phobias, trauma, blocks, fears and guilt. This therapy does wonders in identifying & curbing the suicide tendency.

ETHNOMEDICINE IN INDIA

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The Indian subcontinent has about 427 tribal communities (Singh, 1993) with about 62–65 million people (Vinodkumar, 2007), although others speak of 4635 well-defined groups under 532 tribes (of which 72 are primitive including 36 hunter-gatherer tribes). The great ethnic human diversity of India is due to its position at the tri-junction of the African, the northern Eurasian and Oriental realms, as well as to its great variety of environmental regimes. Tribals constitute 8.14% of the total population of India, numbering 84.51 million (as per 2001 census) and cover about 15% of the country's area. Currently about 540 scheduled tribal communities exist. In terms of geographical distribution about 55% of tribals live in Central India, 28% in west, 12% in north-east India, 4% in South India and 1% elsewhere. The strength of these communities varies from 31 people of Jarwa tribe to over 7 million Gonds. Thus, the Gonds form a very big tribal community, whereas the small communities comprising less than 1000 people include the Andamanese, Onge, Oraon, Munda, Mina, Khond and Saora.

The tribal communities have a tremendous depth of knowledge regarding the use of natural medicinal resources, including plants. The tribals, in India alone, use over 7,500 to 9,000 species of plants as medicines and nutraceuticals. An All India coordinated project carried out during 1982-1998 reported that tribals in India are using 10,000 plant species of which 8000 wild plant species used for medicinal purposes. One of the plants that were brought to light during the Arogyapacha Ethnobotanical studies is (Trichopus zeylanicus travancoricus) used by the Kani tribes of Kerala which has been commercialized as antifatigue dink. Another such plant used by the tribals in South India is antiobesity plant Caralluma adscendens var. attenuata. Similarly Decalepis hamiltonii roots are used as for preparing medicinl cool drink called Nannari by the tribals in Peninsular India. There are many such plants used by various tribes of India. Ethnomedicinal uses of various plants used by tribal of India will be discussed in the presentation.

BIOTECHNOLOGICAL STRATEGIES FOR THE PRODUCTION OF PLANT ANTICANCER COMPOUNDS

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India is one among the 12 mega bio diversity hotspots globally and home to a variety of important medicinal and aromatic plant species. From times immemorial the utilization of MAPs was done largely for local subsistence and also an integral part of traditional medicine system across the, world. Even today 80% of the world population's primary health care needs are taken care by herbs. As per WHO the value of global herbal industry is expected to reach USD 7 trillion by 2050. The immense potentiality of plants as anticancer compounds is unassailable. The top prescription anticancer compounds are either isolated from plants or semi synthesized from plant sources. The phytoceutical industry is under mammoth pressure for procuring high value compounds from the plant sources. The main reason is the low percentage of the active principles present in the plants. Most of the anticancer plants are trees, grown in extreme climatic conditions, non-cultivable, endemic, endangered, threatened and posing a big problem for the cancer treatment sector. Biotechnology offers valuable tools for producing these anticancer compounds in multitudinous ways. The presentation deals with problems, challenges and biotechnological strategies for the production of low volume high value phtyoceuticals. The need for application of latest biotechnology tools, methodologies, and prospects are discussed with a case study of camptothecins. There is an emphasis on amalgamation of conventional and applied field such as optimization of cultivation protocols, plant tissue culture methods, cell cultures, genetic tranformations and yield enhancement studies. The oral presentation also reviews a comprehensive status of camptothecin production by various methods and means.

CREATING A MUTUALLY EMPOWERING AND HAPPY MARITAL LIFE

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The quality of marital relationship determines in a big way how happy the person is; as well as how functional is he able to be in his personal and professional life. Also, it influences the emotional status of their children in a big way. If parents are constantly quarrelling - their children are known to have high levels of anxiety, insecurity and poor academic performance. Hence it is essential that we put in adequate thought and effort into our marriage. Some common issues which need consideration are:

- 1) Balancing our values: There is a lot of good in our current beliefs; but they are one-sided. Yes forgiveness, love, sacrifice, caring, patience, etc. are essential for any marriage to succeed. But along with them, we also need to teach our youth the ideals of maintaining one's dignity at all costs, not to tolerate injustice, self reliance, principal of equality, self-confidence, etc. There are no absolute do's and don'ts. Depending on the specifics of the situation we have to decide which principle ought to be followed. Eg. Yes there has to be one decision maker for any unit to function smoothly. But should he take into consideration the likes/dislikes and views of the other partner before deciding or not? Regarding individual issuesshouldn't both the partners give each other the freedom to make choices about their individual lives, even if the other disagrees with it? In fact a truly vibrant and mutually enriching marriage is possible only where there is equality. As Khalil Gibran said 'the Oak and the Cyprus cannot grow in each other's shade'.
 - 2) Don't start marriage on an unequal footing: When you agree to give dowry, you are essentially requesting the other person to please marry you and oblige. In fact, the custom of dowry has made a female child a financial liability leading to large scale female foeticide in our country. Hence, for creating an equal marriage and for ending the evil practice of female foeticide, each educated girl must vow that she will not make her parents pay a penalty for giving birth to her; and after marriage the couple will regard it to be their responsibility to take care of both sets of parents equally.
 - 3) If you start with wrong raw materials; can't expect to get a product of desired quality: if we marry looking at the photograph and the degree, who

else can be blamed for an incompatible marriage? Before looking out for a partner, it's important to reflect on some important issues like: what are your dreams and goals in life, what other social issues you feel for and would like to support, what lifestyle you would like to have, etc.

- 4) How you play your cards is as important as what cards you get:more than whom you marry, what is important is how the two people interact in marriage and deal with its challenges. And for that it is important to read up a bit on the topic or to attend some pre-marital counselling/workshop
- 5) Pay attention to practicalities of daily life; romance can wait: conflicts about who will do which daily chore often become the origin of marital discord. In today's age when both partners are working, an open discussion on fair distribution of house-hold responsibilities has become all the more important. If both are in full-time job, it is often advisable to keep a domestic helper.
- 6) Housewives can also definitely have a mutually empowering marriage: If both partners work full-time, they often feel themselves stretched in having to manage the house and social affairs as well. The idea of a housewife is wonderful and the roles she plays are very essential for the family's welfare. But the problem occurs when people, including the housewife, do not value those roles. When the housewife does not get equal financial independence, freedom to make choices, etc.- problem arises. Otherwise, both of them stand to gain and are able to get more out of life!Besides attending to family needs, many housewives contribute significantly to some social cause which they feel for. Their marriage empowers them to pursue their dreams of social contribution...
- 7) Accepting mistakes brings peace: As we are humans we all commit mistakes. Those who regard it normal and learn from them keep growing. But if the ego doesn't let a person own up his/ her mistakes, he keeps repeating the same mistake repeatedly. Most people are able to forgive their partner's mistakes. But if it remains a persistent phenomenon, then its difficult to let go and the relationship un-necessarily turns bitter.
- 8) What you focus on will become your reality: Those who keep ruminating over the few mistakes which the partner has done, keep finding more and more reasons to feel upset about the relationship. Those who focus on the positives, keep finding more and more of that.
- 9) Regular thank you letters: Usually the mind has a tendency to remember the hurts more. Thanking your partner regularly will help you remain aware

of the various ways in which the marriage has enriched your life; and also make your partner feel that the efforts he/she has put in have been well acknowledged. This is bound to motivate both of you to keep adding in more joy in each other's lives ©

10) Acknowledge that a healthy sexual life is important for a happy marital life: Because of the taboo regarding sexuality, there are a lot of misconception and negative attitudes regarding it in our society. This often results in sexual problem. A common response to that is ignore it as unimportant. This keeps on building frustration in the marriage resulting in fights over trivial issues and various somatoform illnesses, without anyone knowing what is the cause behind all that. Sexual disorders are easily solvable and hence approach a marital/ sex therapist for the same at the earliest if required. Also, in modern age, partners end up staying away from each other for prolonged periods for job reasons. But this frustrates sexual as well as various other needs of companionship. Hence high priority should be given to staying together.

Before ending, would like to state the most important principle that I tell to people who come for marital therapy - so far as the partners are focused on where the other needs to change, improvement is unlikely. Then they get focused on exploring where did they themselves go wrong un-intentionally and on correcting that, the relationship changes dramatically. Just believe that marriage is not meant to be a compromise. Believe that its meant to be one of the most comforting, joyous and empowering part of one's life; and start working towards creating that. Best wishes ©

ROLE OF AUTOPHAGY IN NEURONAL HEALTH

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Neurons are terminally differentiated cells. Therefore, unlike the other dividing cells; neurons cannot undergo rejuvenation. Over the period of time, neurons become vulnerable to deposition of cytoplasmic inclusions such as lipofuscin granules, neurofibrillary tangles that interfere with cellular functioning. Cells constantly require building blocks such as amino acids, lipids, carbohydrates and nucleotides. In addition to nutrient uptake, cells fulfill this demand by recycling of macromolecules including proteins and worn out cell organelles by the process called as autophagy.

Decreased autophagy in the neurons during aging leads to accumulation of intracellular protein aggregates and damaged cell organelles such as oxidatively damaged mitochondria. This is observed in the neurons of patients suffering from Alzheimer's disease (AD), Parkinson's disease (PD), Amyotrophic Lateral Sclerosis (ALS), etc. Uncontrolled accumulation of cellular debris ultimately results in cell death.

In the last two decades more than a dozen of genes were identified that are involved in regulation of autophagy. In many of the neurodegenerative diseases these genes are downregulated. Unfortunately, till today there are no medicines that can activate the autophagy. However, autophagy can be intrinsically triggered by starvation. Autophagy is an evolutionarily conserved phenomenon for efficient recycling and utilization of cellular components. Therefore, intermittent fasting may lead to stimulation of autophagy.

In our lab, we have studied the effect of 40% dietary restriction on Swiss albino mice. The dietary restriction was commenced from the age of three months up to 24 months of age. The ultrastructural details revealed highly significant decrease in the intracellular accumulation of lipofuscin granules and cytoplasmic inclusions in the neurons from diet restricted group than the ad libitum fed group. Therefore, intermittent fasting may lead to stimulation of autophagy. And help to keep the neurons healthy.

Key words: Autophagy, Ageing neuron, cytoplasmic inclusions, lipofuscin granules, neurodegeneration

THEORY OF ANXIETY DISORDER

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Anxiety disorders, with a prevalence of 15-20% in the Indian population is highest among common mental disorders. The etiology, prognosis and psychosocial dysfunction caused by the disorder is determined largely by the socio-cultural backgrounds of individuals. The spectrum of anxiety disorders makes it a complex, difficult to diagnose one specific syndrome and thus often seen to have other comorbid diagnosis. The prevalence calls for comprehensive psychosocial and pharmacological interventions with multidisciplinary focus to facilitate recovery.

TQ-NLC: A PROMISING CANDIDATE FOR MANAGEMENT OF ALZHEIMER'S DISEASE?

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Alzheimer's disease (AD) is a neurodegenerative disease with progressive and irreversible damage to thought, memory and language. Worldwide, nearly 47.5 million people are believed to be living with dementia and every year, there are 7.7 million new cases of dementia, which out of this population, 60-70% are AD. The presence of senile plaque in several regions of the brain is the main hallmark of AD. Current treatments such as the use of acetylcholinerase inhibitors (AChEI) and NMDA receptor inhibitor antagonist are only symptomatic in nature to counterbalance the neurotransmitter disturbance of AD and do not arrest the disease progression or supply meaningful remission. Thus, the needs of new therapy that offer neuroprotective properties are in demand. Thymoquinone (TQ), a naturally occurring quinine (2-isopropyl-5methylbenzo-1,4-quinone), has various pharmacological properties including neuroprotection, antioxidant, anti-inflammatory and anti-cancer. It is the predominant active lipophilic component (30%-48%) that contributes to majority of the biological activities of Nigella sativa seed oil. Even though TQ has tremendous potential as a therapeutic compound, the effectiveness and oral bioavailability are limited by its lipophilicity and poor solubility in water. TQ has been administered via intraperitoneal route but the preclinical and clinical use are limited by high discomfort, costly and sterility issues. Even though delivery of TQ via oral is valuable, it is restricted by the solubility-related poor oral bioavailability. In order to overcome the limitations, thymoquinoneloaded nanostructured lipid carrier (TQ-NLC) has been formulated and synthesized by the high pressure homogenization method. TQ-NLC was found stable for more than 2 years of storage. It has high encapsulation efficiency of 98.96%. The mean particle size of TQ-NLC was 33.39 ± 0.094 nm with a narrow polydispersity index (PDI) lower than 0.25 and the zeta potential of more than -30 mV.

The mathematical modelling and regression analysis revealed that the release of TQ from NLC was in a zero-order manner with non-Fickian (anomalous) release mechanism indicating sustained release. Based on the simulated gastric (SGF) and intestinal fluid (SIF) analysis, it is postulated that TQ is protected by NLC from digestion and degradation by pepsin when it is passing through the low pH condition in the stomach until it reaches the small intestine. In the small intestine, TQ will then be released from NLC and solubilised in mixed micelles that consist of bile salts and lipid degradation products such as fatty acids and glycerol to enable large amount of TQ to solubilise in the medium of small

intestine, and transporting TQ to the epithelium cells where absorption occurs. Hence, high bioavailability and bioaccessibility can be accomplished. Based on the acute toxicity study, TQNLC was found to be less toxic compared to the original compound, TQ, to indicate that encapsulation of TQ with the lipid carrier (NLC) provides a degree of protection against toxic effect. TQ-NLC exhibited better neuroprotective properties towards hydrogen peroxide-induced oxidative stress in human SH-SY5Y neuroblastoma cells compared to TQ. On that note, TQ-NLC is believed to be a promising candidate for management of AD and other neurodegenerative diseases.

Keywords: thymoquinone-loaded nanostructured lipid carrier (TQ-NLC); sustained release; high bioavailability; neuroprotective properties, Alzheimer's disease

Theme-1 MEDICINE & PUBLIC HEALTH

PREVALENCE OF PARASITIC INFESTATION AND MALNUTRITION AMONG PRESCHOOL CHILDREN OF A PANCHAYATH REGION IN NORTH KERALA.

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OBJECTIVE

To determine the common parasitic infestation among preschool children. To determine the level of malnutrition & anemia along with their association with parasitic infestation, among these children. Setting: Anganwadi centers under the integrated child development scheme (ICDS) in, kerala. Design: Crosssectional survey. Methods: 14 of 31 Anganwadis in Chemancherry Panchayath were selected located along the coast, all of which were included. Out of 145 children we could enroll 120 between ages of 1.5 to 3.5. 58 (48.33% boys, 51.67% girls) Results: out of these thirty one (25.83%) stool samples revealed parasitic infestation. Majority of which was Tinea (20 samples, 65% of total infestations), followed by Ascaris (9 samples, 29% of total infestations) and Hookworm (2 samples, 6% of total infestations). Distribution of infestation among boys and girls was almost equal with 14 (24.1%) boys and 17 (27.4%) girls being infested. There was no statistically significant association between gender and intestinal parasitosis (by Chi-square p = 0.168). Anthropometry: Majority (more than 75%) of the children were adequately nourished. The proportion of children who were under-weight, stunted and wasted (underweight for height) was 21.7%, 13.3% and 23.3% respectively. The proportion of children, who were severely under-weight, severely stunted and severely wasted was 4.2%, 1.7% and 2.5% respectively. **Hemoglobin**: The mean hemoglobin g/dl (SE 0.09). Hemoglobin <10 g/dl was found in 21 children(17.5%) There was no statistically significant difference in means of height, weight or hemoglobin levels between the children with infestation and without infestation. Conclusion: Although, intestinal parasitosis is lower than other similar regions in the country, it still is high, given the higher Health standard of Kerala State. The prevalent type of parasite isolated is the kind that is also transmitted by consumption of uncooked/improperly cooked meat and not necessarily due to poor sanitation and hygiene.

Apprehension regarding safety of Albendazole distributed by MDA is widespread.

Nutritional status of the pre-school children in this region is comparable to the State level which is among the best in the country.

PERCEPTION OF HAPPINESS AMONG EARLY UNDER PRIVILEGED ADOLESCENT GIRLS

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Introduction

Happiness has been a topic of interest for many centuries. Subjective well-being (SWB) refers to how people experience the quality of their lives and includes both emotional reactions and cognitive judgments (Diener, 1984). To be happy is one of the major goals of human beings. Happiness might not only be a goal of life but also a means for reaching other goals. Research has also proved that happiness stimulates new ideas and happy people persist longer at a task that is not very enjoyable in itself. The present study explores whether there is a difference between before and after interventions related to happiness.

Objectives

- 1. To compare subjective happiness before and after intervention.
- 2. To suggest activities to enhance happiness in pre-adolescent under privileged girls.

Hypothesis

There will be significant difference between before and after scores of subjective happiness.

Methodology:

Purposive sampling technique was used to collect data. 88 early adolescent under privileged girls from semi English medium school participated in this study. Subjective Happiness Scale (SHS) Lyubomirsky, S. & Lepper, H. S. (1999) was used which is a 4 item scale of global subjective happiness. Before the start of the project individual Subjective Happiness questionnaire was administered to the subjects. Activities for happiness were taken every week for 6 weeks with the subjects. The subjects were asked to keep doing the activities every day and maintain a journal. After 6 months individual Subjective Happiness questionnaire was again administered to the subjects to find the difference in subjective happiness scores.

Results and Discussions

Mean score before intervention is 16.36 and after intervention is 22.05. To test significance of difference between mean scores paired T-test is applied. It was found that the difference between mean scores before and after intervention is 5.69. Calculated p-value for T-test is 0.005. It is less than standard p-value. Therefore T-test is rejected. Conclusion is there is significant difference in mean scores. Mean score after intervention is significantly greater than mean score before intervention. This paper discusses activities for happiness.

CORRELATION BETWEEN ENHANCING STRESSES AND TRENDS OF SELF MEDICATION AMONG YOUNG FEMALES IN CHANDIGARH

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INTRODUCTION

Chandigarh, UT, is an educational hub having all types of professional and non professional educational institutions. The city and its two satellite cities host three universities, more than two dozens of colleges and large number of other training institutions. The gush of students from all its adjoining states, far off states and other countries has made them to stay in all possible places like institutional hostels, paying guest accommodations, rented flats, working people hostels, own and relative's houses. The city has witnessed an exponential growth of young female both as students and early age employees in the last decade, majority of them being first generation migrants from their native places. This fair sex young population is subjected to varied kinds of distresses which get manifested in the forms of stress related health issues showing a direct correlation with the rising trends of self medication among them.

OBJECTIVES-

To check the existence and extent of stresses among 3 groups (UG, PG students and young working females

- 1. To check the stressors among these 3 groups
- 2. To find the most common drugs, used by them for self medication
- 3. To study the extent(tenure and dosage) of drug usage
- 4. To study the correlation between type and extent of stress to the type of drug usage
- 5. To formulate some suggestive measure to minimise their stresses hence habit of self medication

METHODOLGY

The present study is the outcome of personal interactions, group interactions and collection of data from questionnaires from 150 young females comprising

undergraduate, postgraduate students and young employees. The data was collected by getting their due consent and the purpose with an assurance of not disclosing their identity.

RESULTS

The study has revealed that the young professionals or employees are subject to a maximum distress (< 65%) followed by Final year PG (< 45%) and first year and final year UG (< 25 & 35%). The same has been found to have a correlation with their tendencies of self medication (Prof.> PG> UG). The common medicines of self medication were primarily for analgesics > antipyretics> some of antibiotics> weight reduction formulations> derma applicants> anti anxiety pills etc.

CONCLUSIONS

Both the trends of self medication and stress levels are found in alarming percentage. Working young females are found to be the most affected group due to multidirectional and multifaceted pressures. Most of the common stressors are found societal, family and personal. Such a mentally, physically and emotionally ill female population is a matter of serious concern to the society and nation as a whole in the times to come. Present study also purposes some suggestive measures to minimise this societal and personal stressors.

EFFECT OF DURATION OF DIABETES ON COGNITIVE FUNCTION IN NON-INSULIN DEPENDENT DIABETICS

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BACKGROUND

The increase in diabetes among the elderly is of concern because in addition to the wide range of traditional diabetes complications, evidence has been growing that diabetes is associated with increased risk of cognitive decline.

AIMS AND OBJECTIVES

To find out if there is any association between cognitive function and duration of diabetes.

MATERIALS AND METHODS

The study was carried out in 200 individuals aged between 40-65 years consisting of 100 diagnosed cases of Non Insulin Dependent Diabetes Mellitus and 100 non-diabetics from OPD of Mc Gann Hospital, Shivamogga. Rye's Auditory Verbal Learning Test, Verbal Fluency Test and Visual Reproduction Test to assess short-term memory, Working Digit Span Test and Validation Span Test were used to assess working memory. Statistical analysis was done using SPSS 21.

RESULTS

Memory test scores of non insulin diabetics were significantly reduced (p<0.001) when compared to the memory scores of age and gender matched non-diabetics. Duration of diabetes was found to have a negative correlation with memory scores for all 5 tests: AVLT (r=-0.849 & p<0.001), VFT (r=-0.927, p<0.001), VRT (r=-0.816, p<0.001), WDST (r=-0.829, p<0.001) and VST (r=-0.955, p<0.001). Subjects with diabetes for >10 years showed greatest cognitive decline.

CONCLUSION

The decreased memory status in diabetic patients may be due to many factors like hyperglycemia, hypoglycemia, vascular disease, insulin resistance, amyloid

deposition and also some of the factors combine to produce additive effects like, type of diabetes, co-morbidities, age of onset, duration of the disease and type of therapy. These observed effects of duration of diabetes on memory status are of potential clinical importance because even mild cognitive impairment could interfere with day today activities.



ENHANCING SOCIAL RESPONSIBILITY OF PREADOLESCENT GIRLSIN MUMBAI

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INTRODUCTION

The key to children's success both in school and in the larger world when they grow up is being responsible. When children learn to take responsibility for their actions and their commitments, they are able to complete their work, people around them begin to have faith in them and depend on them to get things done. These children are seen as trustworthy and dependable, they are willing to take on new responsibilities and they are often self-starters. Preadolescent students' attitudes of social responsibility are the core element in the process of social intergroup mediation (Michelsen, Zaff & Hair, 2002; Schulz, Ainley, Fraillon, Kerr & Losito, 2010) and a modulating aspect in the teaching-learning processes (Fernández-Río, Méndez-Giménez, Cecchini, & González,2012). Such behaviors are important ingredients to success in school and in life. Hence this study was taken up to find out levels of responsibility amongst preadolescent girls. A module was designed to enhance social responsibility amongst girls.

This study focuses on the analysis of the differences observed in students' levels of responsibility before introducing modules to enhance responsibility and after attending sessions to enhance responsibility.

AIM

To find out the levels of responsibility in preadolescent girls and compare pretest and post test scores after introducing a module to enhance social responsibility.

OBJECTIVES:

- 1. To find out the levels of responsibility amongst preadolescent girls
- 2. To compare the pretest and post test scores of responsibility amongst preadolescents

3. To find out the influence of ordinal position on levels of responsibility in preadolescent girls

METHODOLOGY

Sample: 66 Girls belonging to lower socioeconomic strata studying in eighth grade in a Guajarati medium School in Mumbai was taken up for the study. Purposive Sampling design was used.

Tool Used: Assessment Scale of Social responsibility attitudes of primary school pupils (EARSA-P, Monsalvo, 2012b).

Data Analysis: The data was analyzed with the help of T-test to compare the results.

RESULTS & DISCUSSION

The results of the pretest indicated that girls had low to moderate levels of responsibility. A module was designed to enhance abilities of taking responsibility. Post test results showed a significant difference in the pretest and post test scores after introducing the module on responsibility.

This paper will discuss various activities in the module to enhance skills of taking responsibility amongst preadolescent girls.

AN UNEXPECTED CAUSEOFBULBAR MYASTHENIA- CASE REPORT

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The patient under study had presented with complaints of drooping of eyes since 2 weeks, and progressive dysphagia, more to liquids than solids, of 1 week duration, with history of significant weight loss, loss of appetite and progressive fatiguability through the day. Serum Acetyl Choline Receptor Antibodies was 7.09nmol/L, which was strongly suggestive of myasthenia gravis. Patient was initiated on plasmapheresis for the same, with significant improvement in symptoms. A Contrast-enhanced CT of Thorax and Abdomen revealed an intrathoracic lesion in the right lower paravertebral region. A biopsy of the lesion revealed features suggestive of Non-Hodgkin's Lymphoma B-cell type. R-CHOP regimen was initiated (6 cycles), with an improvement in his bulbar symptoms.

Non-Hodgkin's lymphoma with an autoimmune disease presentation, as a paraneoplastic syndrome is a very rare, though known, entity. A retrospective study in 2014 showed an incidence of 0.35% of NHL in diagnosed Autoimmune diseases (3096 NHL cases out of 878161 Auto-immune diseases). Another case report depicted development of CNS Lymphoma after chronic Azathioprine usage in myasthenia gravis.

A diagnosis of Myasthenia gravis with late-onset presentation in life must always warrant a suspicion of malignancy. However, such a diagnosis requires a high index of suspicion.

QUALITY OF LIFE INDEX (QLI) IN CHRONIC KIDNEY DISEASE PATIENTS- A STUDY AMONG PATIENTS ADMITTED TO A TERTIARY CARE CENTRE IN MANGALORE

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BACKGROUND

Chronic kidney disease is a problem of epidemic proportion in India owing to increasing diabetes burden, hypertension and growing elderly population. Incidence rate of ESRD in India is nearly 229 per million population (pmp). Because of scarce resources, only 10% of the patients receive any renal replacement therapy. Management is therefore by regular sittings of dialysis. Dialysis is usually indicated at GFR <15ml/min or when clinically indicated. WHO Quality of Life (WHOQoL-BREF) is a tool that explains the impact of disease or injury on various aspects of life (physical, psychological, social, and environmental). QOL is of relevance as it can be used to ascertain the effect of chronic disease on a patient's mental health. Various supportive care measures and psychological interventions can be initiated in the affected individuals. Hence this study was carried out to describe overall quality of life among patients diagnosed with CKD and to compare quality of life among non-dialysis and dialysis patients.

METHODS

This was a prospective study carried out on 100 patients with CKD admitted to Father Muller Medical College Hospital. A preformed questionnaire regarding demographic details and details regarding preexisting non communicable diseases and the WHOQoL-BREF questionnaire to elicit Quality of Life were used for data collection. Data collected was tabulated and analyzed using SPSS software Version 15.0. Baseline characteristics were assessed using Chi Square and Fisher's Exact test for categorical data and unpaired t-test for continuous variables. Significance was determined at p<0.05.

RESULTS

55% of the study subjects were males and 45% females. Mean age of the study subjects was 51 ± 3.51 years. The most common cause of kidney disease was either diabetes mellitus (48%) or hypertension (31%). Among the patients in the dialysis group (53%) mean age was 46.23 years. All patients with chronic

kidney disease reported reduced quality of life regardless of kidney disease severity. However, the QOL scores in non-dialysis patients in all the four domains were significantly higher (p<0.05) than that of the dialysis patients.

CONCLUSION

Chronic kidney disease has a negative impact on psychological health and general well being and quality of life. CKD patients on dialysis are further affected compared to non dialysis patients.

Keywords: Chronic Kidney disease, disability, WHO-QoL-BREF, Quality of life

A RARE CASE OF A CAVITATORY LESION MIMICKING TUBERCULOSIS

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INTRODUCTION

Melioidosis is caused by *Burkholderia pseudomallei*, a saprophyte found in soil and water especially in paddy fields. Infection is by inoculation or inhalation, leading to bacteraemia, which is followed by the formation of abscesses in the lungs, liver and spleen. The disease is most common in South India, East Asia and northern Australia, and carries a significant mortality.

CASE REPORT

A 55 year old female with no known co morbid conditions presented with history of high grade fever since 20 days, cough with moderate amount of mucoid, non foul smelling expectoration since 20 days along with generalized and decreased appetite with no history of any night sweats, hemoptysis. There was no past history of any tuberculosis nor was there any contact in the family. On admission the patient was conscious, oriented, other than tachycardia and temperature of 101 F other vitals were stable. Respiratory system examination was unremarkable other than fine crepitations in the left interscapular area. Her routine laboratory profile was, hemoglobin-10.3gm/dl, total counts were 7800, neutrophils 51%, lymphocytes 45%, eosinophils 4% however her ESR was 108. RFT, Electrolytes and LFT were normal. Her random blood glucose was 228 mg/dl and her glycosylated hemoglobin was 12. Her urine routine and smear or malarial parasite were negative. Her chest radiograph revealed let upper zone cavitatory with multiple small septations. In view of strong clinical suspicion of tuberculosis sputum for AFB was sent and she was empirically started on cetriaxone after taking blood for cultures. Her sputum came negative for AFB and the patient continued to have spikes of fever over the next two days. On the third day her blood culture report came positive for Burkholderia pseudomallei. She was started on injection meropenem along with doxycycline. After 5 days her fever subsided and was feeling better however meropenem was given for a total of 2 weeks and the patient was later discharged with oral Cotrimoxazole which was to be taken for 12 weeks.

DISCUSSION

B. pseudomallei is a Gram negative, motile bacillus isolated from soil and surface water. The disease is acquired by inoculation through abraded skin, inhalation or ingestion. Melioidosis, caused by Burkholderia pseudomallei, has a wide spectrum of presentations with acute and chronic form, localised form to systemic disease and asymptomatic to septicaemic illness. Chest X-ray resembles that of acute caseous tuberculosis such as in this patient but the characteristic feature in x ray is presence of multiple small septations due to multiple small abscess that are formed in the cavity. The patients may also have multiple small abscesses underlying the skin while disseminated disease can also involve; liver, spleen, joints and even present as meningoencephalitis or subdural empyema in rare cases. One more peculiar thing in this case was that the patient was not a known diabetic and only diagnosed on this admission. Patients who have diabetes, alcoholism, malignancy, chronic kidney and lung diseases and have low immunity are at risk of getting this.

CONCLUSION

This case report emphasizes the need to keep Meliodosis as one of the differential diagnosis of a consolidation or a cavitatory lesion especially in the south Indian population and patient who have decreased immunity and are at risk.

COMPARISON OF KNOWLEDGE, ATTITUDE, PRACTICES AMONG THE DIFFERENT AGE GROUP OF MOUNTAINOUS AREA OF LADAKH

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BACKGROUND

Stroke is the third cause of death worldwide after cancers and cardiovascular disease. Rising incidence of stroke and higher mortality among Indian population needs focused attention for prevention and early management.

AIM

To assess the knowledge, attitude and practice towards Stroke among different age groups.

METHODS

KAP study was conducted in the Ladakh using epidemiological surveys, questionnaires regarding the diseases, behavioral responses, stigmas and beliefs were asked to school children, teachers, community paramedical staff, medical personnel and general public in district.

RESULTS

1100 subjects were recruited in the study and were divided into three groups according to their ages i.e. group A <20years¹ (n=682) group B 21 to 45 Years² (n=341), group C >45 Years³ (n=77). M:F 2:3.The responses were recorded as yes, no, don't know but in this we have calculated only yes responses. There was significant difference seen between the knowledge, attitude, practices among different age group (as shown Table 1). In group C only 27.2% subjects were aware of "stroke - as a disease of brain" and about 90.9% of population thought that "stroke is a hereditary".

CONCLUSION

The results concluded lack of awareness among all the age groups but in elderly group level of knowledge was very poor and had presumably rampant negative attitude, myths and misconceptions about stroke. Further KAP studies are recommended among different age groups for betterment in the awareness of stroke.

ABSTRACTS

S.no.	Question (only yes response calculated)	Group A <20) young(%)	Group B 21- 45 middle age(%)	Group C >45 Elderly(%)
	Total no. of subjects (1100)	<mark>682</mark>	<mark>341</mark>	<mark>77</mark>
1	Do you know about stroke?	55.4	78.5	57.1
2	Stroke is a disease of	31.8	62.4	27.2
3	Do you know anyone who has stroke?	34.60410557	38.12316716	44.15584416
4	Do you think people die from stroke?	51.17302053	67.44868035	90.90909091
5	Do you think people with stroke are dangerous/crazy?	52.78592375	85.92375367	88.31168831
6	Stroke is contagious disease	14.22	25.8	84.41558442
7	Do you think that stroke can affect anyone at any age?	33.72434018	70.38123167	76.62337662
8	Do you think stroke is a hereditary / genetic predisposition disease?	28.59237537	87.97653959	90.9091
9	A person can recover from stroke	59.23753666	79.17888563	53.24675325
10	Stroke can come back again	39.44281525	74.19354839	64.93506494
11	Stroke can be prevented	32.69794721	58.65102639	64.93506494
12	Stroke can get worse	52.34604106	73.31378299	97.4025974
13	Do you think that stroke can occur without any cause or without the presence of risk factors?	29.3255132	38.12316716	92.20779221
14	Do you think that person with stroke needs emergency care?	70.6744868	88.85630499	51.94805195
15	People who had stroke should do job after recovery	35.92375367	58.06451613	38.96103896
16	Do you think a person should not marry once he/she had stroke?	15.68914956	46.62756598	77.92207792
17	Do you think stroke is due to evil spirits	21.70087977	59.82404692	76.62337662

MELIOIDOSISAN OVERLOOKED AND UNDER REPORTED DIAGNOSTIC DILEMMA

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INTRODUCTION

Melioidosis is an emerging infection in India. It is caused by the gram negative bacterium *Burkholderia pseudomallei*. Infection is by inoculation or inhalation, leading to bacteraemia, which is followed by theformation of abscesses in the lungs, liver and spleen. The disease can affect any organ in the body except heart valves. The disease is most prevalent in south-east Asia and Australia. Chronic melioidosis may have a similar presentation like tuberculosis.

CASE REPORT

A 46 year old male, who is a chronic alcoholic and smoker and a known diabetic on treatment came with high grade fever since 14 days, cough with moderate amount of mucoid, non-foul smelling expectoration since 14 days. There was past history of old right knee tubercular arthritis for which he underwent complete treatment. On admission the patient was conscious and oriented, other than tachycardia and temperature of 100° F other vitals were stable. Respiratory system examination showed bilateral finecrepitations and rhonchi. His routine laboratory profile was, hemoglobin-12.9gm/dl, total counts were 9000, neutrophils 85%, lymphocytes 13%, eosinophils 2% however his ESR was 70. RFT, Electrolytes and LFT were normal. His random blood glucose was 231 mg/dl and her glycosylated hemoglobin was >13%. Urine routine and smear for malarial parasite were negative. His chest radiograph revealed bilateral fluffy shadows. Sputum AFB and sputum culture came negative. Patient continued to have spikes of fever. CECT Thorax showed multiple micro abscess in the lung, spleen and liver. Blood culture report came positive for Burkholderiapseudomallei. He was started on injection meropenem along with ceftazidime. After 4 days fever subsided. Sugars were controlled with insulin and patient was symptomatically better. Meropenem was given for a total of 2 weeks and the patient was later discharged with oral Cotrimoxazole and Doxycycline which were to be taken for 12 weeks.

DISCUSSION

Melioidosis, also known as Whitmore's disease, is an infectious disease in humans and other animals caused by gram negative bacterium B. pseudomallei. It is normally found in the surface water and land soil. It has a wide spectrum of presentations with acute and chronic form, localised form to systemic disease and asymptomatic to septicaemic illness. Chest X-ray resembles that of acute caseous tuberculosis. The patients may also have multiple small abscesses underlying the skin while disseminated disease can also involve liver, spleen, joints and even present as meningoencephalitis or subdural empyema in rare cases. Risk factors include diabetes mellitus, thalassemia, kidney disease, occupation (farmers), and cystic fibrosis.

CONCLUSION

Melioidosis should always be considered as one of the differential diagnosis in patients who have decreased immunity in the south Indian population. Better awareness, both among clinicians and microbiologists, along with improved diagnostic methods for early diagnosis and hence early treatment will significantly reduce the morbidity and mortality associated with the disease.

STUDY OF PSYCHIATRIC PROBLEMS AMONG CHILDREN WITH POOR ACADEMIC PERFORMANCE

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OBJECTIVE

To study the nature and prevalence of psychiatric problems among children with poor academic performance.

MATERIAL AND METHODS

Total of 1480 children studying in 3 CBSE schools, aged between 6 and 12 years were screened. 312 children were found to be performing poor in academics. After simple randomization and further screening procedure 115 children were included in the study. Each child was assessed by interviewing with MINI-KID Questionnaire, CBCL, NIMHANS index for SpLD and using ICD-10 DCR final psychiatric diagnosis was made. Statistical analysis was done using Epi Info 7 software.

RESULTS

The prevalence of poor academic performers was found to be 21.08%. The prevalence of psychiatric problems among children with poor academic performance was found to be 54.78%. Majority of participants were found to have emotional disorders (Anxiety disorder) with prevalence rate of 21.74% followed by Borderline intellectual disability of 13.04%, Specific Learning Disorder of 11.30%, Conduct Disorder of 6.09%, Hyperkinetic disorder of 6.09%, Sleep disorder of 4.35%, Mood disorder (only depressive disorder) of 2.61% and Sustance abuse of 1.74%...

CONCLUSION

Psychiatric problems in school going children leads to poor performance in academics and school drop outs. Prevalence of psychiatric problems were more in boys. Emotional disorder (Anxiety disorder) was found to be the most common type of psychiatric problems The severity of behavioural disturbances according to mean CBCL score was more in boys than girls. All the children with difficult temperament had psychiatric problems. Most of the children with poor academic performance belonged to slow to warm temperament group.

STUDY OF SPECIFIC LEARNING DISORDER IN CHILDREN WITH POOR ACADEMIC PERFORMERS.

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OBJECTIVES:

- 1. To study the nature and prevalence of specific learning disorder in children with poor academic performance.
- 2. To study the associated Psychiatric problems among children with poor academic performance were presenting with specific learning disorder.

MATERIAL AND METHODS

Total of 1480 children studying in 3 CBSE schools, aged between 6 and 12 years were screened. 312 children were found to be performing poor in academics. After simple randomization and further screening procedure 115 children were included in the study. Each child was assessed by interviewing with NIMHANS BATTERY OF SpLD. Statistical analysis was done using Epi Info 7 software.

RESULTS:

The prevalence of poor academic performers was found to be 21.08%. The prevalence of specific learning disorder among children with poor academic performance was found to be 11.30%. Majority of poor academic performers have Specific reading disorder accounts to be 4.35% and Specific disorder arithmetical skills accounts to be 2.61%, Specific spelling disorder accounts to be 2.61%. and Mixed disorders of scholastic skills accounts to be 1.74%.

CONCLUSION:

Specific learning disorder in school going children leads to poor performance in academics and school drop outs. Finding out the children with SpLD and early intervention helps to prevent school dropouts.

Theme-2

BIOTECHNOLOGY, ETHNOMEDICINE, BIOINFORMATICS, NEUROSCIENCE & BIOMEDICAL SCIENCE

TRADITIONAL MEDICINE AND MENTAL ILLNESS IN INDIA

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Traditional medicine: Traditional medicine is the sum of knowledge, skills, beliefs, practices which is based on the theories and indigenous experiences of different culture used to maintain health and to prevent diagnosis, improve and treat physical and mental illness (WHO, 2000).

In the present paper an attempt was made to describe history and various methods of traditional medicines used for Mental illness and its effectiveness through literature review.

METHODOLOGY

The authors searched research data bases such as Ebsco, Pschinfo, Google Scholar, etc. We have got around 100 article on traditional medicine from which 50 article were chosen based on history and concept of various traditional medicine, traditional medicine treatment techniques for mental illness and its effectiveness.

RESULTS

Traditional healing method has the history from Vedic period. The knowledge of traditional medicine came from earlier settlers and modern medical knowledge resulted from trial and error and exchanging ideas from various communities and regions. It has become the system of medicine which called as Ayurveda and various herbs were using for the treatment of diseases. In ancient time, mental disorder was known as non-medical disease which caused by some invisible elements in many cultures. There are various traditional medicines which are used as alternate medicine for mental illness such as Kerala Ayurveda or oil massage therapy(for tension, Mud therapy for insomnia and for other mental disorders, Magical therapies (Jagar) especially for mental and psychiatric disorders, herbal therapies, Yoga and Talam (herbal paste) for insomnia (LalitTiwari, Infinity Foundation).

CONCLUSION

To heal mental disorders people were seeking help from temples, churches, dargasand local deities which includes gurus, tantric, priests and faith healers where used prayers and rituals such as exorcism, extraction of disease objects,

counter magic, talisman, sacred ash. Hence in this article author described various methods of traditional medicines which are used for mental illness and also reviewed secondary research articles to identify its effectiveness.



BIOINFORMATIC INSIGHT INTO THE FUNCTIONALITY OF LASR PROTEIN FROM *PSEUDOMONAS AERUGINOSA* THE CAUSATIVE AGENT OF NEURONAL NECROSIS

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OBJECTIVE

The organism *Pseudomonas aeruginosa* produces HCN from the *hcnABC* operon. HCN produced by this organism is known to be responsible for neuronal necrosis. Neuronal necrosis is a kind of non-apoptotic cell death. The regulation of the *hcnABC* operon is controlled by the complex interplay of different factors. LasR protein is one of the most important regulatory factors. The genetics of the pathogenicity of *Pseudomonas aeruginosa* is somewhat well documented but the molecular details of the process is still obscure. Thus, we plan to analyze the structural biochemistry of LasR protein in the regulations of gene expression using computational approaches.

METHODOLOGY

We used comparative modeling technique to build the three dimensional structure of the LasR protein. LasR acts as a dimer and it functions with the help of a ligand. We therefore built the dimeric model of the LasR protein-ligand complex with the help of molecular docking simulations. We docked the entire complex with DNA and subjected the complex to molecular dynamics simulations. The molecular dynamics environment is known to mimic the intracellular conditions. Thus, to analyze the protein dynamics in cellular environments, molecular dynamics simulations were performed.

RESULTS

The molecular dynamics simulation results indicated the dynamics of interactions of LasR protein. We could clearly identify the potential amino acid residues from the LasR protein responsible for the regulation of the *hcnABC* operon. We also predicted the binding interactions of LasR protein with its ligand.

CONCLUSION

The results from this study may be used in future drug development endeavors where the essential amino acid residues from LasR protein may be targeted.

ZINC NEUROTOXICITY INFLICTS MITOCHONDRIAL DYSFUNCTION IN THE BRAIN OF CLARIAS BATRACHUS L.: IMPLICATION IN FISH DEATH

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OBJECTIVE

The present in vivo study was designed to investigate the neurotoxic impact of zinc on mitochondrial function mediated by reactive oxygen species (ROS) generation in the brain of Clarias batrachus. Mitochondrial dysfunction is usually considered a prime cellular mechanism of cell death. Though the neurotoxic impacts of zinc have been studied in several animal models, the impact was completely unknown in the piscine model in relation to mitochondrial dysfunction.

DESIGN AND METHODOLOGY

Adult Clarias batrachus were exposed to $ZnSo_4.7H_2O$ treated water at 10% (9.45 mg L^{-1} Zn) and 20% (18.90 mg L^{-1} Zn) of the 96 h LC_{50} value (94.5 mg L^{-1} Zn). Eight fishes were randomly assigned for each aquarium containing 30 l of $ZnSo_4.7H_2O$ treated water, prepared in tap water (having dissolved O_2 6.5 mg L^{-1} , pH 7.12, water hardness 23.5 mg L^{-1} and water temperature 25 \pm 2°C). Identical groups of eight fishes each were kept in separate aquaria containing 30 L of plain dechlorinated tap water (without zinc salt) as controls. After each of the exposure periods of 20, 40 and 60 days, fishes from the respective experimental, as well as control aquaria were sacrificed and the brain tissues were utilized for various biochemical experiments pertaining to mitochondrial function i.e. mitochondrial respiratory complex activities, mitochondrial membrane potential, mitochondrial ATP generation and mitochondrial ROS generation.

RESULTS

Exposure of fish brain to zinc demonstrated partial inactivation of complex II, III and IV activities of mitochondrial electron transport chain, reduction in mitochondrial membrane potential, mitochondrial ATP depletion accompanied by enhanced mitochondrial ROS generation. The deleterious impact of zinc was maximum in the combination of 60 days treatment period with 20% (18.90 mg L^{-1} Zn) zinc exposure compared to 20 and 40 days treatment period at 10% (9.45 mg L^{-1} Zn) and 20% (18.90 mg L^{-1} Zn) of zinc exposure.

CONCLUSION

Based on data obtained from this study and from previous reports we can suggest that neurotoxic impact of zinc on fish brain can also be an important contributor of fish death though zinc is also known to accumulate in different organs of the piscine body including intestine and gills. Mitochondrial dysfunction as observed in our present study may contribute heavily for the cause of such neuronal cell death in piscine brain. Besides, our piscine model acts as an efficient alternate model for studying metal neurotoxicity in addition to the established animal (mostly mammalian) models.

PHARMACOPHORE SCREENING AND DOCKING STUDIES WITH SOME CNS ACTING PHYTOCOMPOUNDS FROM SELECTED AYURVEDIC MEDICINAL PLANTS.

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BACKGROUND

Parkinson's disorder (PD) is a movement disorder having symptoms such as slowing of movement, tremor, rigidity or stiffness, and balance problems. According to Dr. Dickson the typical Parkinson's patient has Lewy bodies (aggregates of a protein called alpha-synuclein or SNCA) in the brain's neurons. AMPA (alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionic acid) receptors are the main contributors of excitatory neurotransmission, mediating the fast, rapidly desensitizing excitation of many synapses, and are involved in the early response to glutamate in the synaptic space in PD. Research suggests that PD is a result of multi-gene mutation in combination with environmental factors.

METHODOLOGY

Mutated mammalian SNCA & AMPA implicated as factor causing PD were retrieved from the National Centre for Biotechnology Information (NCBI); templates as retrieved from BLAST were downloaded from PDB. The 3D structure of SNCA & AMPA was determined by homology modelling. The 3D structures of phyto-compounds (from selected Ayurvedic herbs) were retrieved from various databases. The pharmacophore hypothesis was generated for the existing ligands and the phytocompounds were screened against the generated pharmocophoric hypothesis. Ligands were shortlisted based on their fitness score. The selected phytocompounds were screened against SNCA & AMPA receptor.

RESULTS

It is seen that the phytocompounds arjunetin from *Terminalia arjuna* and Asiatic acid from *Centella asiatica* are having good fitness score with known AMPA ligands. Also, Colchicine from *Gloriosa superb* is having good fitness score with known SNCA ligand. These phytocompounds are seen to have good docking score with the receptor.

Further they are to be validated using receptor-ligand binding assay studies with SNCA & AMPA receptors *in-vitro*.

Phytocompounds selected as per receptor-ligand binding assay studies. Manuscript submitted: 14/04/2016. Manuscript accepted: 29/05/2016.

"YOGA AS PREVENTIVE AND TREATMENT FOR CARDIOVASCULAR DIEASE- A Review"

Rajesh.T.S and Chaithra Rajesh

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Cardiovascular disease (CVD) is a Heart and blood vessel disease — also called heart disease — includes numerous problems, many of which are related to a process called atherosclerosis. The human heart which is incredibly efficient marvel of a pump receives this fuel not from the blood passing though its chambers, but through two major arteries- the coronaries. Buried in the tissue of the heart muscle, ramifying it with their many brances the coronaries provide the heat with the elixir of life vital oxygen and glycose through the blood flowing in them. For the heart to stay in the pink of its health, the coronary vessels must reamin efficient at all times, catering to all its needs. Yet for a varietly of reasons, fatty depoisits begin building up in the inner wall of coronary arteries. By and by increasing amounts of fat is laid down making the arteries narrower. The amount of blood that can flow through them is correspondingly reduced. Atherosclerosis is a condition that develops when a substance called plaque builds up in the walls of the arteries. This buildup narrows the arteries, making it harder for blood to flow through. If a blood clot forms, it can stop the blood flow. This can cause a heart attack or stroke. disease includes coronary artery diseases (CAD) Cardiovascular as angina and myocardial infarction (commonly known as a heart attack). stroke, hypertensive heart disease, rheumatic Other CVDs are disease, cardiomyopathy, heart arrhythmia, congenital heart disease. aneurysms, peripheral endocarditis, aortic disease and venous artery thrombosis.

India is catching fast with an alarming increase in the incidence of hypertension and coronary artery disease, it is a matter of great concern that young Indian professional who are at the peak of their life and career are becoming victims of cardiovascular diseases. In spite of awesome advances in modern medicine, globally millions die of cardiovascular diseases every year. Allopathy depends on powerful drugs that have many undesirable side effects, expecially when administered over a period of time. Many hypertensives and heart patients have to take prolonged drug treatment with the consequent financial burden and undesirable side effects.

Non communicable dieases including cardiovascular diseases comprise more than 60% of health problems and are a major burden on our health care delivery system. In developed countries cardiovascular disease accounts for 30% of all cause mortality and the incidence is more among the elderly.

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.

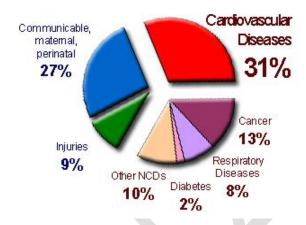


Figure 1: Global cause of all deaths (Source DATA: world health organization, Global atlas on cardiovascular disease prevention and control Geneva 2011)

According to the publishing of world health organization unhealthy diet, obesity, hypertension, diabetes, and dyslipidaemia, together with ageing and genetic factors, promote atherosclerosis and narrowing of the blood vessels. hypertension, diabetes and hyperlipidaemia cluster together and are major risk factors for strokes and heart attacks

AIM AND OBJECTIVE

It need to be emphasized that allophaty does not have all the answers for stress related disorders whose incidence is rising by the day. As we know that life style and psychological stresses play a major role in the genesis of cardiovascular disease, the current review is on the holistic approach by yoga to the CVD management

CONCLUSION

The yoga therapy appears to have been devised specifically to influence and rehabilitate the vital organs by consuming little energy and producing maximal physiological efficiency. It has been postulated that such effects are brought about by improving the micro circulation to the organs. The result of the present review have shown the influence of short term yogic practice over physiological function like, blood pressure, physical fitness etc. certain studies have shown the predominance of parasympathetic system after yoga practice. This has opened a gateway to reduce the usage of various drugs like cholesterol modifying enzymes, Aspirin, Beta blockers, Nitroglycerin, Angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptor blockers which can cause side effects. There is an urgent need of planned scientific studies in molecular level and also should be popularized as a means of promoting positive health for the common man in society.

SCHNEIDER'S FIRST RANK SYMPTOMS IN PATIENTS WITH BIPOLAR AFFECTIVE DISORDERS AND SCHIZOPHRENIA - A CLINICAL STUDY

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OBJECTIVE:

First rank symptoms focus usually on positive symptoms of psychosis, but also, they are shared by a number of psychiatric conditions. Schizoaffective disorder came into effect since there was a difficulty in differentiating bipolar disorder from schizophrenia. Affective disorders are commonly seen in patients with schizophrenia as comorbid disorders. There are very few Indian studies in assessing the frequency or prevalence of first rank symptoms in patients with bipolar affective disorders. This study intends to study symptom clusters and to evaluate the frequency of Schneider's First Rank Symptoms in patients with Bipolar Mood (Affective) Disorders and in Schizophrenia and to compare this between these disorders.

DESIGN AND METHODOLOGY

All inpatients in the department of psychiatry in Father Muller Medical College, Mangalore, with the diagnosis of Bipolar affective disorder or Schizophrenia were constituted the Population for the study. Consecutive 100 patients admitted to the ward who were diagnosed with bipolar affective disorder (n=50) and Schizophrenia (n=50) were included in the study after obtaining the institutional ethical committee clearance and informed consent.

It is a descriptive, cross-sectional, comparative clinical study. The inclusion criteria were patients of 18-65 years of age, who satisfy DCR-10 diagnostic criteria for Bipolar affective disorder or Schizophrenia, and with active phase of the disorder. And exclusion criteria are patients with coexistent mental retardation, with major medical comorbidity and patients in remission, in residual phase of the disorder.

All the patients in the sample were subjected to clinical examination which includes Physical, Mental Status Examination, Mellor's Symptom check list for First Rank Symptoms, Scale for Assessing Positive Symptoms (SAPS). The data obtained will be analyzed using the student t test and chi square test.

RESULTS

As for sociodemographic variables, mean age group of both schizophrenia and bipolar affective disorders were similar of about 38.5 years. Most patients were educated upto high school in both groups. Majority of patients were from rural (71%) and nuclear (88%) family background and lower middle class (45%). Family history of psychiatric illness was more in affective disorder was about (68%) than in schizophrenia (26%). Unemployment was about 70% in schizophrenia patients than patients with affective disorder (40%) with highly significant difference (p < 0.001).

As for first rank symptoms (FRS), FRS were found in 77% of schizophrenia patients than in bipolar affective patients (36%). Statistical analysis revealed highly significant difference in prevalence of FRS (p < 0.001). Voices arguing and voices commenting were the most common FRS. Thought insertion, audible thoughts, made acts, thought withdrawal, thought broadcast and somatic passivity were seen in schizophrenia groups. In bipolar affective patients, voices arguing, voices commenting are more commonly seen than somatic passivity and thought broadcast and made act.

The SAPS scores in schizophrenia patients was high for auditory hallucinations (73.7%), delusions (75%), voices conversing (52.5%), voices commenting (49.3%). Inappropriate affect was 10% in schizophrenia. In bipolar affective disorder, auditory hallucinations were found in about 49%, grandiose delusions in 48.5% and voices commenting in 33%. Pressure speech was fund in 20% of patients and persecutory delusions in 14%. Statistically, there was highly significant difference found for persecutory delusions and mean scores for SAPS on ANOVA was found to be very significant difference for hallucinations (p <0.001).

CONCLUISIONS

FRS are seen more frequently in schizophrenia than in bipolar affective disorders. But they are seen in significant number of affective disorders. Auditory hallucinations are more common than thought phenomenon in schizophrenia which appears in clusters. FRS are associated with persecutory delusions in schizophrenia and grandiose delusions in mania.

SYNTHETIC BRAIN FUNCTIONAL NETWORK MODELLING USING REVERSE ENGINEERING- A SURVEY

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INTRODUCTION

Synthetic Brain refers to imitating a natural product i.e. human brain. Brain understands pain, pleasure, intuition, perceived notion of success and failure but a machine cannot. We are on the way to study the operation of the brain, so that a system can be built which will overcome the shortcomings of a living being For this, first we have to study its wiring and circuitry in the form of veins, cords and brain cells and build computer systems that work the same way, This can be done with the help of Reverse Engineering. Reverse Engineering, as the name suggests is something that performs for engineering but in reverse direction. It is the process of analysing a product, and segregation into its components. It is performed for extracting knowledge, design information, operational functions etc. and using the extracted information to re-producing something another

MOTIVATION

Human brain can't work for so long as it get tired within a specific period of time but a system can work for days and months without getting affected. Also, sometimes the unfavourable situations in the personal life do not allow the brain to focus on the work in that case synthetic brain will help the smooth functioning. Other motivation for this project is the curiosity of consciousness and human mind. We can also give the proper treatment by understanding the exact causes of disfunctioning of the brain.

OBJECTIVES

The aim of this survey paper is to study the work that has been done in the area of constructing the synthetic brain. Our goal is to reconstruct a digital system that will work like the brain. Although so much work has been done for making computer man like, still there are things which brain can do and computers cant.

DESIGN & METHODOLOGIES

After the literature review, we found certain techniques as well as tools that help understand the intrinsic geometry of brain. Approaches encountered in the survey are: Modelling Abstraction and Simulation, Blue Brain Technology, Cognitive Modelling etc. There are certain tools which simulate the fMRI brain images. On the basis of regions present, dependencies among them will be measured.

RESULTS & CONCLUSION

Related Research shows that developing the artificial brain first requires geometry of brain to be clearly specified. After understanding complete functional network of the brain, the process steps up to actions and reactions of different components of brain on the basis of inputs received through neurons. On the basis of learning, responses of brain can be manipulated.

Keywords: Cognitive Science \cdot Reverse Engineering \cdot Modelling \cdot Neurons \cdot Blue Brain

Theme-3 MENTAL HEALTH

EFFECT OF MINDFUL PARENTING ON SELF- ESTEEM IN CHILDREN

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OBJECTIVE

To examine the relationship between self-esteem in children and MindfulParenting. Mindful Parenting encompasses effective cognitive and attitudinal aspects of parent child relationship which has the ability to impact the mental health of the children.

DESIGN

Quantitative study with Correlational Research Design.

METHODOLOGY

Through purposive sampling, data was gathered from 150 participants from Bengaluru city [75 children (10-12 y), 45 mothers, 30 fathers]. The study used Interpersonal Mindfulness in Parenting Scale (L. G. Duncan, 2007) and Rosenberg's Self- esteem Scale (Rosenberg, 1965). Data was analysed with statistical tool of Pearson Product Moment Correlation.

RESULTS

The results revealed a positive relationship between mindful parenting and selfesteem in children at significance level of 0.01.

CONCLUSION

Mindful Parenting has positive effect on mental health which is reflected by the person's overall self- worth. It acknowledges the child's feelings and thoughts which enables the child to perform better. It makes the child to feel accepted by being aware of and coping effectively with their emotional states, thereby setting a platform in which the child can be reared with positive emotional developmental conditions.

Key words: mindful parenting, self-esteem, children

EFFICACY OF COUNSELLING IN REDUCING STRESS AMONG ENGINEERING STUDENTS

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Engineering students in the present education system face high stress in adjusting themselves with their academic and family affairs, lack time management who in turn face negative circumstances in their professional courses and other aspects of their lives. Counseling helps one to understand oneself and its major objective is to help individuals become self-sufficient, self-dependent, self-directed and to adjust themselves efficiently to the demands of a better and meaningful life.

OBJECTIVE

This paper determines the effectiveness of counselling in managing stress among engineering students.

DESIGN & METHODOLOGY

In the Experimental design 'Before-and-after with control design', Stress Inventory (Hemalatha & Nandini Revised, 2005) was administered to 200 engineering students who were randomly selected from a private engineering college, comprising of 50 males and 50 females in each of the two groups, viz., the experimental group and the control group.

STATISTICAL ANALYSIS

Means, standard deviations and One Way Analysis of Variance were used to analyze the data.

RESULTS

It was found that the students had reduced their stress level after counselling, male and female students in the experimental group showed decreased stress level after counselling whereas students in the control group continued to have almost the same stress levels since counselling was not provided to this group.

CONCLUSION

Counselling is helpful in building confidence with good adjustment by reducing stress among engineering students.

MENTAL HEALTH SERVICES IN NAMIBIA: CHALLENGES AND PROSPECTS

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BACKGROUND

An analytical research approach was used to critically analyse information and facts that are already available on the services, gaps, challenges and opportunities of mental health in Namibia.

METHODOLOGY

Information on the current status as well as on the factors that directly and are strongly related to mental health and well-being such as, alcoholism, gender based violence, HIV/AIDS, chronic diseases, education and road traffic accidents was compiled and evaluated. This was done in order to provide support to the fact that there has been a neglect of the right to mental health and well-being and that urgent action needs to be taken to mediate the situation. This action will be in line with goals outline in Namibia vision 2030 in which health and well-being is clearly stated as one of the priorities or goals.

CONCLUSION

This article concludes by providing informed recommendations on the immediate steps that can be implemented to improve the situation of mental health in the Namibia.

MENTAL HEALTH ASSESSMENT OF CHRONIC KIDNEY DISEASE PATIENTS ON HEMODIALYSIS

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BACKGROUND

Approximately 7.85 million Indians are estimated to be suffering from chronic or end stage kidney disease (CKD). Among these, patients on dialysis are generally found to experience a feeling of dependence and apathy, not just because of the severity of the illness but also due to the debility associated with it. With worsening of the disease process and onset of dialysis, major disruptions are brought about in a person's daily routine and lifestyle. Associated with this is the fear of disability and reduced lifespan. Hence, anxiety and depression are seen to affect the patients' mental health. This study was carried out to elicit mental health of patients on hemodialysis by screening for anxiety and depression.

METHODS

This was a cross sectional study carried out on 120 patients with CKD and undergoing hemodialysis at Father Muller Medical College Hospital. A preformed questionnaire regarding demographic details and details regarding preexisting non communicable diseases and the 14 item Hospital Anxiety and Depression Scale (HADS) for screening for mental health disorders was used. Higher scores suggested higher levels of anxiety or depression. Data collected was tabulated and analyzed using SPSS software Version 15.0. Chi Square, Fisher's Exact test and unpaired t-test were used as tests of significance.

RESULTS

72(60%) of the study subjects were males and the remaining 48(40%) were females. Mean age of the dialysis patients was 59.3 years. At the time of interview, 52 (43.33%) had been newly started on dialysis with the remaining 68 (56.66%) being on regular dialysis. Our study found that 87 (72.5%) of these patients suffered from depression and 43(27.5%) from anxiety in varying forms of severity (mild/moderate/severe). 10 (8.33%) of these patients suffered from both. There was no statistically significant difference in mental health in terms

of gender or age. However, lower socioeconomic status was found to be significantly associated with anxiety and depressive disorders among CKD patients in our study.

CONCLUSION

Patients on hemodialysis are found to have poor mental health secondary to their illness. Physical inability to function, financial and emotional factors play a major role in contributing to this psychiatric morbidity.

Keywords: Chronic Kidney disease, disability, Mental health, Anxiety, Depression, HADS questionnaire

A STUDY ON MENTAL HEALTH AMONG RURAL WOMEN

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INTRODUCTION

Good mental health is a sense of wellbeing, confidence, and self-esteem. It enablesus to fully enjoy and appreciate other people, cope with day to day life and with his/her environment. Mental health problems affect women and men equally. But women are particularly exposed to some of the factors that increase the risk of poor mental health because of the role and status that they typically have in society.

METHODOLOGY

The aim of the study was to assess the mental health status (minor mental health problems) among women. The study was descriptive cross sectional. Fifty randomly selected respondents in a village were interviewed using Clinical Interview Schedule-Revised (CSIR) and substance abuse questionnaire developed by World Health Organization (WHO).

RESULT

The study found that (18%) of respondent had sub threshold psychotic symptoms, (6%) had common mental health disorder diagnosable as per ICD 10 criteria especially in minor mental health problems. About 44% fulfilled the criteria for dependence primarily on tobacco.

APPLICATION

The findings clearly describes that there is a need to create health awareness and enhance wellbeing among women especially in rural areas. The policy and social scientists intervention is required in many dimensions.

CONCLUSION

The study report the major health problems and an increasing in substance abuse among women are directing affecting their mental health.

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TRUST, GRATITUDE, AND HAPPINESS AMONG YOUNG ADULTS

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BACKGROUND

World today has transformed itself into a competitive realm, where a country's progress is evaluated mostly by GDP and not considering well - being and happiness of its pupil as an indicator. With population explosion there has been a continuous exertion by individuals to strive hard to their maximum potential in all aspects of life to emerge successful or reach their goals amongst all odds. This has led to increase in stress, crime rates, unethical actions and corrosion of value system, which has led to severe disturbance and commotion in the psychological well -being of individuals. Considering this situation there is an immediate need to understand, if psychological factors like trust and gratitude plays a predominant role to attain happiness among individuals or has deviated to other external factors.

PURPOSE

The aim of the present study was to examine Gratitude, Trust and Happiness among young adults

METHODS

The main objectives of the current study were to (i) Examine Gratitude among Young Adults (ii) Examine Trust among Young Adults (iii) Examine Happiness among Young Adults (iv) Examine the relationships among the mentioned variables and (v) Examine gender differences in the mentioned variables. A sample of 300 Young Adults with the age ranging from 18-27 years from different Colleges of Bengaluru City were selected using convenience sampling for the current study after having taken the written informed consent from them. The measures considered for the study were, Gratitude Questionnaire-6 Item version (GQ-6, Emmons & McCullough, 2002), Trust scale (Robinson, 2001) and Subjective Well-being scale (Diener, et al 1985). The

data was analyzed using descriptive statistics like mean and SD and correlational analysis was done to examine the relationship among the variables.

RESULTS

The study reveals that there is a positive significant correlation between trust and happiness; and gratitude and happiness. The implications of the current study will benefit further research to develop interventions and to promote positive mental health.

A STUDY OF FREQUENCY AND SPECTRUM OF PSYCHIATRIC COMORBIDITY IN MALE PATIENTS WITH ALCOHOL DEPENDENCE SYNDROME

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BACKGROUND

Alcohol dependence is common in most societies of the world. Alcohol use is related to a wide range of physical, mental and social harm. Alcohol dependence syndrome known to be associated with psychiatric and medical co-morbidity.

AIM

To evaluate the frequency of psychiatric co-morbidity in patients with Alcohol Dependence Syndrome and to evaluate the relationship between socio-demographic and clinical variables with psychiatric co-morbidity in patients with Alcohol Dependence Syndrome

METHODOLOGY

We assessed 100 inpatients with ICD 10 diagnosis of alcohol dependence syndrome for the presence of comorbid psychiatric disorders, using ICD10 Diagnostic Criteria for Research, within second week of inpatient care, Patients with other substance dependence except nicotine dependence were included. Patients with delirium tremens, alcohol-induced psychosis or organic illnesses were excluded.

RESULTS

Interviewed 100 patients suffering from alcohol dependence using mini plus.75% presented with psychiatric comorbidity. Depressive disorder and Anxiety disorders were the most common comorbid diagnosis.

CONCLUSION

Psychiatric comorbidity in alcohol dependence is very high. It signifies poorer outcome and need for multimodal approach in the management of patients with Alcohol Dependence Syndrome. Limited sample size limits the generalize ability of the study and requires large sample to conclude more accurately.

EFFECT OF HEALTH ON TAKING EXAMINATION IN HIGH SCHOOL STUDENTS

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It is important to consider the impact of health on educational attainment and the conditions that occur throughout the life course that can impact both health and education. Psychological health is significant for students relationship in school and its importance manifests itself in preparation for exams and making use of examination result. Mental health is not solely being free from psychological disorders, but it is the ability of reactions to various types of life experiences in a flexible and meaningful manner. Keeping this in mind a study was conducted on 30 students (10 from SSLC, ICSE and CBSE)

Objective was to explore the relationship between health and taking examination in high school students. It was hypothised that students with good health will have a good preparation for exams which is necessary to achieve success in the examination.

The extensive review of literature indicate a positive correlation between health and taking examination.

The sample consisted of 5 girls and 5 boys from each board(total 30). Study Habit Inventory (Palsane and Sharma, 1989) was administered which measures eight areas-budgeting time, physical condition, reading ability, note taking, memory, learning motivation, taking exams and health.

In order to examine the relationship between health and taking exams Spearman's rank difference correlation was used. The result indicate a substantial positive correlation between health and taking examination.

The findings indicate the following;a) There is a positive relationship between health and taking examinations for students belonging to all three boards.

- b) There is a substantial positive relationship between health and taking examination for girls and boys.
- c) The students of SSLC board have high correlation coefficient between the two variables in comparison to CBSE and ICSE board students.

Key words:health,cognitive ability and academic achievement.

A STUDY ON THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS ON GENERAL HEALTH AMONG POLICE OFFICERS WORKING IN BENGALURU

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The presence of stress at work is almost inevitable in all jobs but police jobs are considered to be more stressful due to the nature of work and the desired role and expectations of stakeholders in the society.

OBJECTIVE

The study looked into the effect of occupational stress among police officers. It is used as a first level screening process in the to detect the levels of stress indicating a probable high prevalence of distress contributing to the anxiety and depressive disorders experienced by police officers. The purpose of this study was to define the characteristics of occupational stress, in particular how occupational stress effects general health of the police officers. Further objectives are to determine the effect of gender on the levels of occupational stress experienced by the junior police officers in the department and how does that have an impact on the general health of the police officers.

DESIGN

Non-experimental research design was used. A total sample of 32 was obtained through purposive sampling method including female and male junior police officers in urban Bengaluru . Occupational Stress Index and General Health Questionnaire was administered Independent Sample Mann Whitney U test and Peasrson Product Moment Correlation was used to analyze the data collected.

RESULTS AND CONCLUSION

Statistical analysis showed no significant relational between occupational stress and general health among police officers working in Bengaluru. On the other hand there is no significant gender difference between occupational stress and general health among police officers working in Bengaluru.

CONCLUSION

India is one of the biggest democracy of the world with a fast growing economy and a population of nearly 1.22 billion, with a union of twenty nine states with different cultures, languages and religions. To maintain law and order and peace of the different states of the country, police plays a very crucial and active role. We as mental health professionals have to concentrate more on this department for the welfare of the employees and their family members and suggest remedial measures for Stress and work-life balance. The government should give high priority to this department and grievances should be checked immediately. Work force is to be increased and training session for stress relief can be initiated as a regular departmental activity. Measure should be taken by the police department to modify the entire system and help them in framing up a better policy for stress management and maintaining a good work-life balance of their employees, the researcher would feel immensely rewarded.

Keywords: Occupational Stress, General Health, Police officers.

PSYCHOLOGICAL WELL BEING AMONG THE ADOLESCENTS WHO HAVE EXPERIENCED AND WHO HAVE NOT EXPERIENCED SEXUAL ABUSE

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INTRODUCTION

Adolescence is the stage where important psychosocial changes and development takes place. An individual's experience as a child or an adolescent contributes to her identity development. Those experiences can be pleasant or unpleasant, tragic or unimportant. One of the tragic experiences that an individual can experience in life time as early as adolescence or child hood is sexual abuse.

OBJECTIVE

The present study aimed at understanding the level of psychological well being among adolescents who have experienced sexual abuse and adolescents who have not experienced sexual abuse.

METHOD

The study is exploratory in nature. The sample for the study included 91 college going females of the age range from 15 to 18 years. Out of 91 participants 41 had the experience of some kind of contact sexual abuse and 51 adolescents did not have any experience of sexual abuse. Psychological well being scale developed by Carol Ryff (1995)was employed to assess the level of psychological well being among the participants.

RESULT

The results of the study analyzed using independent samples t test revealed the significant difference between the two groups in the areas of environmental mastery, positive relationship with others, purpose in life and self acceptance. Mean scores indicated that adolescents with no experience of sexual abuse had significantly higher environmental mastery, positive relationship with others, purpose in life and self acceptance compared to adolescents with the experience of sexual abuse. In the areas of autonomy, and personal growth no significant difference was observed between the two groups.

CONCLUSION

The present study indicates that adolescents who have experienced sexual abuse face significant difficulty in accepting one's own qualities and is disappointed with their past experience where as adolescents with no experience of sexual abuse feel there is meaning to their present and past life, and make effective use of surrounding opportunities. Overall results of the study provide insight about the significant impact of sexual abuse on the well being among adolescents.

Key words: contact sexual abuse, psychological well being.

MANAGEMENT OF ADOLESCENT EXCESSIVE GAMING: A CASE STUDY

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BACKGROUND

Discussion and understanding about clinically relevant excessive rewardseeking behavior, such as prolonged video and mobile gaming and internet browsing are emerged in the development of electronic era. It cultivated the term of behavioural addiction which is considering as a diagnostic entity in the recent classification system for mental illness. Psycho social intervention is in the initial stage to reach an evidence based treatment.

OBJECTIVE

Study is to understand the psycho-social intervention for adolescent with excessive use Internet facilities and gaming along with behavioural problems

METHOD

This is a case study of A, 15 years boy studying in 10th class residing in an urban area of West Bengal along with his single mother and grand-mother who belongs to middle social economic. Client was hospitalized with chief complaints of decreased social interaction, poor scholastic performance and excessive indulgence with mobile games, feeling of low mood since last 5 to 6 years along with assaultive and abusive behavior mainly towards family members since last 3 years. Personality and Intelligence quotient assessment has done.

RESULTS

His premorbid temperament indicates difficult child. Multi-axial diagnosis of hyperkinetic conduct disorder, gaming addiction, overweight, family discord and high expressed emotion were derived through clinical interview and scales. Therapist prioritized client concerns and intervened by eclectic approach which includes developed rapport with client, psychological strategies for video gaming, role play, behavioral therapy, anger management, neurofeedbackand family Therapy. As a result, his irregular schedule of daily activities were regularized with adequate attention of personal hygiene and gaming hours were

decreased from 10-12 hours to 30 to 45 minutes. Physical and verbal abuse has significantly reduced and started to show interest in alternative pleasurable activities like reading book and sports. Follow-up consultation has done after 1 month and 3 months which showed persistence of positive outcome.

CONCLUSION

Eclectic approach is beneficial to the adolescent who had concern about his behavior addiction after prioritizing his needs in his life and targeting his personal goals.

Key Word:-Behavioral addiction, Video Gaming, Eclectic Approach

Theme-5 CREATIVE ARTICLES

THE CONTEXT OF SPATIAL BEHAVIOUR AND EXPERIENCE

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A central concept for understanding the dynamic quality of personenvironment relationships is the Behavior Setting. A behavior setting is founded in space and time and has a structure which interrelate physical, social and cultural properties so that it elicits common or regularized forms of behavior. Thus a behavior setting is a confluence of actions in relations to places and things, these actions are organized in systematic temporal sequences and patterns. Behavior gains meaning by virtue of its location in a particular spatial and temporal context; and the context gains meaning by virtue of the actors and actions that exist within it. Individual's quality of life is generally used to refer to an overall evaluation of the conditions of life experienced by him which refers to individual's aspirations, by the dynamic interaction between a individuals, his society and his habitat. Since it is determined by the satisfaction of aspiration, it ought to be analyzed by at least the same number of dimensions as those which make up the human space is determined by the minimum number of independent needs with which particular set of aspirations of any individual may be explained. In sum, it can be said that our life-either individual or collective-can attain its true quality only when physical and psychical, the moral and the economic aspect are highly coordinated. Ecological interaction is the pathway, through which one can become good human being, attain good physical health and inner-self to attain love.

EXISTING & NOVEL METHODS OF WATER HARVESTING

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Due to deforestation and increasing population, land pressure rises and as land pressure rises, more and more marginal and semi-marginal areas in the world are being used for cultivation. Noteworthy that much of this land is located in the arid or semi-arid belts where rain is less, falls irregularly and as a result much of the precious water is soon lost as surface runoff. Recent droughts in India have highlighted the risks to human beings and livestock, which occur when rains falter or fail. Irrigation is the most obvious response to drought and there is now increasing interest in a low cost alternative - generally referred to as "water harvesting". Water harvesting is the collection of runoff for productive purposes usually in irrigation. Instead of runoff being left to cause erosion, it can be harvested and utilized. In the semi-arid drought-prone areas, water harvesting is a directly productive form of soil and water conservation and yields and reliability of production can be significantly improved with this method. Water harvesting can be considered as a rudimentary form of irrigation; the difference is that with water harvesting the farmer (or more usually, the agro-pastoralist) has not much control over timing. Runoff can be harvested only when it rains.

INTEGRATING VIRTUAL REALITY AND SOLUTION-FOCUSED BRIEF THERAPY: A CONCEPT

Mageshprasath Nagarajan and Sreehari Ravindranath

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Virtual reality and solution focused brief therapy (SFBT) have been used in the field of psychotherapy and counseling for more than twenty years now. Virtual reality – called as virtual reality exposure therapy – is currently used to treat a variety of disorders such as anxiety, several phobias, posttraumatic stress disorder to name a few. Likewise, SFBT is also generally used to treat social phobias and other behavior disorders, especially in children like stuttering, bullying, etc.

There is an increase in both virtual reality exposure therapy and SFBT to treat behavioural disorders. Solution focused brief therapy was developed by Steven de Shazer and Insoo Kim Berg at the Milwaukee Brief Family Therapy Center in Milwaukee, Wisconsin. The main principles of this therapy are to treat clients as they are capable of bringing out change in their lives by setting goals for themselves and to focus on the solution to a problem and not the problem itself. In the meantime, virtual reality exposure therapy – along with cognitive behavior therapy – revolves around the principle of exposing clients to anxiety-provoking situations, which are built based on the specified problem of clients, and slowly increasing the exposure thereby making them immune to that particular stimulus.

Although it is around for many years, Virtual reality exposure therapy has been criticized for the lack of therapeutic alliance during therapy. Meanwhile, SFBT also faces criticism for not looking into the emotions of clients such as sadness, grief, anxiety, etc. This concept paper is about discussing the avenues of virtual reality therapy combined with solution focused therapy. This is an effort to use the advantages of both the therapies —the exposure of anxiety-provoking situations to clients and also the therapeutic relationship between the client and therapist. With the advent of new technologies in virtual reality, it is possible for the therapist to dive into the client's world and explore the emotions, feelings and thoughts, thereby setting up new goals and achieving them.

THIS INDEED IS LIFE

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'Don't want to die in this beautiful world'-I had read the wishes of our saintly bard long back but did not care to think about those words. But this time it happened so.....

It cannot be denied that my mother is now a replica of the old lady depicted in Easoph's fables. Troubles of old age and lack of fund transformed her into a weak, spiritless and helpless creature. People are dying in hordes but how death is alluding her-she is unable to figure it out. She has been offering prayers to god of death hundred eight times a day. She has also declared that had she happened to come across messenger of death, she would have thrown a few blows on him. 'God, please escort me other world'she prays but the god of death does not respond; he is engaged with other souls.

Yes, there is a long queue over there. God of death has been working with depleted man power; strikes and ceaseworks are a common feature over there but the old lady does not know. She is busy with herself. Why god of death does not pick her? Messenger of death is in stress due to workload and on the other hand the old lady is tired of herself. Now a days, neighbours do not lend helping hand to her; even they do not speak to her. Surrounded by people, she is living a solitary life.

Of late, it appears that the old lady does not bother about the call from messenger. What the hell is going on here.....let it be. What she can do?

Suddenly the messenger appeared with the sermon-time is up. As call from death-god reached her ,her wishes to leave the world evaporated. No...no...I am fine here. Alone in a distant and unknown place? It is okay here; just unload some troubles off me—she managed to whisper.

Incidentally mother came to learn from me a few days back that she would be a great grand mother in about three months. Now my mother is destined for an enviable promotion—promotion with letter-marks. She seemed to have lost ten years of age—the face radiant in festive mood.

For a while, mother was silent and then she directed me in a low but firm voice—do not forget to bring great grandson to me.

The point to mention here is that she wished to see great grandson but at the scheduled hour I arrived with great granddaughter. I stayed with her for several days did not notice any change in her attitude.

It appears that she has ceased to blame messenger of death. She was at ease with her all day long. May be—she desires to see the face of great grandson; thus begins another round of awaiting .

// Traslated from Bengalee by Apurba Ghosh, Jalpaiguri, WB.//