

**7th International
Conference on
Public Mental Health
and Neurosciences**

Abstract Book



ORGANISED BY

**SARVASUMANĀ
ASSOCIATION, BENGALURU**

12th and 13th December





सत्यमेव जयते

प्रधान मंत्री
Prime Minister

MESSAGE

It is heartening to learn that Sarvasumana Association is conducting the 7th International Conference on Public Mental Health and Neurosciences (ICPMN – 2020) on December 12-13, 2020. To bring together various stakeholders of the field through a virtual platform for a valued takeaway on the theme 'Functional Genomics of Mind' is laudable.

When we talk of fitness, it is as much about mental as physical. A healthy mind and a sound body are interlinked. Pace and stress of today's lifestyle are often viewed as a factor for the increasing number of lifestyle diseases across societies and nations.

The challenging times of Corona pandemic have brought the spotlight upon mental health issues and it is crucial to look into the issue with a wider perspective. Our emphasis must be on creating an environment of more openness and sensitivity while discussing the issue of mental health.

One effective way towards curing psychological ailments is not to be silent about depression and to discuss issues related to mental health with family members, friends and colleagues. Active lifestyle, Yoga and meditation can be of significant help in overcoming depression.

Yoga helps rejuvenate the body, mind and spirit and ushers in harmony and balance in everyday life. To include a special session of Yoga in the Conference is thoughtful.

Technology, as also medical advancements are constantly transforming the field of healthcare. We must leverage technology to conquer new frontiers in genomics and bioinformatics.

The gathering of experts at the online international Conference will surely discuss and analyse various issues and perspectives related to mental well-being and more. I am sure that the deliberations at the Conference will come up with a practical roadmap for larger benefit.

Best wishes for all success of the Conference.

(Narendra Modi)

New Delhi
अग्रहायण 20, शक संवत्, 1942
11th December, 2020

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WELCOME



On behalf of Sarvasumana association, as a President it is my pleasure to invite all delegates from across the world to the 7th **International Online Conference on Public Mental Health and Neurosciences**. I thank you all for being a part of the fight against covid pandemic.

This conference gives a platform to researchers and learners to share their ideas and inventions with their peers.

During this lockdown period, I request everyone to follow the safety measures like staying at home which being the sole motto for conducting this conference online.

By the unique theme, "Functional Genomics of Mind" this conference brings Big data to the world of Biotechnology and health sciences.

I hope you will enjoy the conference.

With best wishes.

Padmashree murthy

Padmashree Murthy.

President

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Vasishth Academy of Advanced Studies & Research



Parent institution, SARVASUMANA ASSOCIATION is a registered Scientific and Industrial Research Organization (SIRO), by Department of Scientific and Industrial Research (DISR), Govt. of India.

FROM CHAIRMAN'S DESK



Dear Friends,
Greetings!

It is my pleasure to invite all of the great scientists, academicians, young researchers, and students from all over the world to attend the **7th International Online Conference on Public Mental Health and Neurosciences**.

As the association is encouraging inter disciplinary research in the conference, research papers will be presented on Microbiology, Homeopathy, Ayur informatics, Acupuncture and Yoga in this platform. Young researchers are participating in oral presentations as well. Due to Covid-19 pandemic we are unable to conduct the conference physically, but thanks to technology that all of us are coming together to share the knowledge by connecting from home virtually.

During this lockdown period I request everyone to follow the safety measures like washing hands regularly, wearing mask, staying at home, going outside only for essentials. Containment rates are increasing day by day. People are loosing connectivity with their loved ones. This situation is affecting us socially, financially, spiritually as well as mentally. Stress and anxiety have been affecting people of all age groups.

I hope this conference would throw some light on the current researches. I wish everyone to stay safe and stay healthy.

Yours sincerely,

Dr. R. Somashekhar,
Director (Research)



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MESSAGE

The world has witnessed an unprecedented incident through covid19, which pushed us into uncertainty, endangering lives, which reminded and made us realize the very nature of our existence.

This international conference is intended to bring all traditional and modern medicine across the planet under one roof for self-expression, research, enrich and empower each other to help the humanity which turned out to be a great scientific feast in this transformation to make a difference.

This conference gives a platform to researchers and learners to share their ideas and inventions with their peers. During this lockdown period, I request everyone to follow the safety measures like washing hands at frequent intervals and staying at home, this is the sole motto for conducting this conference online. By the unique theme, "Functional Genomics of Mind" this conference brings Big data to the world of Biotechnology and health sciences.

Founder, Director

Rajesh
Rajesh.T.S M.Sc,M.Phil,YIC,(Ph.D)

Kathryn L. Rossi, Ph.D.

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8 December 2020

Welcome to the 7th International Conference on Public Mental Health and Neurosciences. What a wonderful opportunity we have to make a collective difference sharing our knowledge and humanity to make our world a kinder and gentler place. The gift of 2020's upheaval is that we can step outside of usual thinking to welcome new more innovative ways to plan for a better future. With joy let us share the best of ourselves with each other.

All the best in 2021!

Kathryn L. Rossi, Ph.D.

SRI DHARMASTHALA MANJUNATHESHWARA COLLEGE (AUTONOMOUS)

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04-12-2020


I am glad to learn that Sarvasumana Association, Bangalore is organizing the 7th International Online Conference on Public Mental Health and Neurosciences (ICPMN – 2020) on the theme Functional Genomics of Mind With special workshop/session on Yoga, Machine Learning and NGS-Bioinformatics on 12th and 13th of December 2020.

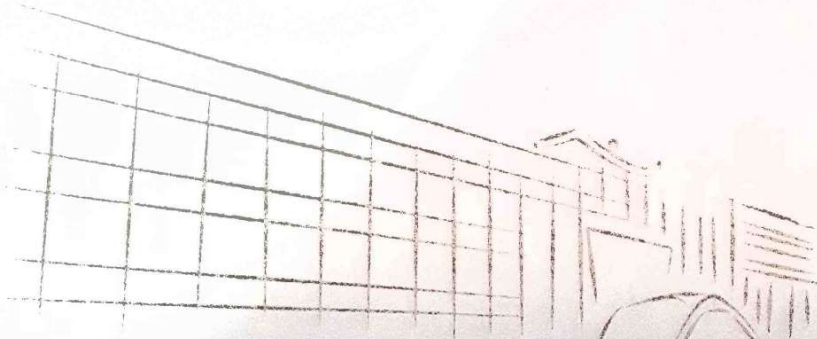
I have been a part of the programs organized by Sarvasumana Association in the past and the platform provides a great opportunity for learning and networking for students, scholars, academicians, and researchers from different streams. The team spirit towards providing interdisciplinary and trans disciplinary exchange of knowledge is tremendously appreciable.

Though this time the conference is going to be held online, I am sure that the amount of knowledge and the quality of dissemination of information will not be compromised.

Wishing you all a very fruitful and rewarding conference.

Regards,


Navyashree G.C. M.Sc., Ph.D., NET, SLET
Assistant Professor
Department of PG Studies and Research in Psychology
Sri Dharmasthala Manjunatheshwara College, Ujire, Karnataka



Sl.No

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PLENARY TALKS

**THE NEUROSCIENCE OF GRIEF:
A TRIBUTE TO ERNEST LAWRENCE ROSSI'S PRINCIPLES OF CREATING DAILY
AND HOURLY NEW COSMIC CONSCIOUSNESS**

Kathryn L. Rossi, PhD

2020 gives us new opportunities to make a difference. The death of my treasured husband and professional partner of 30 years has propelled discovering new and innovative ways to negotiate grief in the age of coronavirus and beyond. Understanding and expanding the principles of Patañjali's 8 limbs of yoga offers stability of mind and body. The biological principles of neuroscience paired with foundational Rossi theories of: The 4-stage creative cycle, living in the present moment, the 20-minute break, ultradian rhythms, observer/operator, NNNE—novelty, numinosum, neurogenesis effect— and more, may offer a more peaceful way integrate a new and unexpected solo life.

Together, can we form new psychosocial genomic research studies to understand changing neuro communications cascades of gene expression from the initial stages of grief and beyond?

ICPMN-V

BIO-PSYCHOSOCIAL DISORDER CHARACTERIZED BY PERSISTENT USE OF DRUGS, ALCOHOL DESPITE SUBSTANTIAL HARM AND ADVERSE CONSEQUENCES.

Dr. Shambhavi G

Addicts often express a desire to quit completely, but are unable to follow through. Short-term abstinence is common, but long-term relapse rates are high. Experience with an addictive substance sensitizes the user to environmental cues that subsequently trigger cravings. Loss of control means that one is knowingly acting against their prior determination to abstain — for example, consuming a larger portion of dessert after deciding to go on a diet. Addicts commonly continue their behavior even while reporting that the substance (e.g., cigarette or drink) is no longer pleasurable. Addicts often express that they continue to use drugs even when they no longer derive any pleasure. Despite the development of some effective treatments, there is no cure for addiction. Recovering addicts often manage their tendency to make mistakes by exercising cognitive control, such as voluntarily reducing or eliminating future options. The main purpose is to reduce the probability of encountering cues that will trigger relapse. Many addicts often substitute one compulsive problem for another. They become compulsive workers or gamblers, or use sex as they once used chemicals to combat the emptiness, boredom, anxiety, and depression that constantly threaten to overwhelm them. There is substantial evidence of a genetic predisposition to develop an addiction. The main purpose is to reduce the probability of encountering cues that will trigger relapse.



APPLICATION OF BIOINFORMATICS IN STRUCTURE-BASED DRUG DESIGNING

Dr. Angshuman Bagchi
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Structure based drug designing is an important field in the realm of structural bioinformatics. Before the advent of modern-day bioinformatics techniques, the entire process was dependent on the bench-lab experiments to design libraries of ligand molecules. Those molecules used to be tested to determine their binding efficacies with suitable protein targets. However, the entire process is very lengthy and above all highly expensive. With the availability of supercomputing facilities and increasing computational powers, the search process for finding suitable ligand molecules against target proteins has become more streamlined and cost-effective. Now the entire ligand search process is performed in-silico with the help of the techniques of virtual screening, molecular docking simulations and molecular dynamics studies. Such processes are elucidated with examples using TRAF6 and Basigin.

KEY DETERMINANTS THAT INFLUENCES THE EFFECTS OF CHILD SEXUAL ABUSE

Navyashree G.C & Manjula M.Y***

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Amongst the many social problems that exist worldwide, child sexual abuse is one which is heinous, disturbing, and violates the rights of the child for safe living and is an important public health concern. It is an abuse of power over a child and a violation of a child's right to life and normal development through healthy and trusting relationships. Most often the victim of the sexual abuse ends up suffering a lot and the perpetrator remains free of any hard feelings related to the abuse. For all boys and girls who experience sexual abuse, certain factors about the incident of sexual abuse affect the severity of the action to abuse soon after the abuse or after a few years. In the current conceptual study the five major factors that act as key determinants which influences the severity of effects of child sexual abuse are discussed. The key determinants discussed in the current paper are the perpetrator of the sexual abuse, whether or not violence was involved, duration of the abuse, disclosure of the incident of sexual abuse, and what happens after the abuse.

FATTY ACID ANALYSIS OF ANCIENT INDIAN MEDICINAL PLANT IN VIEW OF AROMATHERAPY

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Right from the vedic period, in India the traditional knowledge on medicinal plants has been passed on through generations. Ayurveda contains knowledge of the principles and methods of performing therapies through the medicinal plants and natural sources. In the current research the work focused on the medicinal plants which were used in the brain disorders. plants were subjected to the extraction of lipids through the solvent extraction method and it was analyzed for the fatty acids by Gas Chromatography (GC). The percentage of the fatty acids in the extracts were in the range of MCFA (medium chain fatty acid):47.04-99%, LCFA (Long Chain Fatty acid):0.86-47.85%, PUFA (Polyunsaturated Fatty Acid):10.78-64.58%, MUFA (Monounsaturated Fatty acid): 1.37-67.01%, SFA (Saturated Fatty acid):5.27-76.93%. in conclusion the most of the medicinal plant *Bacopa monnieri* (Bhrami) showed PUFA concentration up to 64.58% which is very important in brain metabolism. In this study will help people following their traditional knowledge like Ayurveda, aromatherapy, Yajna Therapy, Thai massage, traditional practices etc. can have the molecular approach to their treatments.

**SEQUENCING STUDIES AND EVALUATION OF EFFICACY OF SELECTED
MEDICINAL PLANT COMPOUNDS & COMMON INDIAN SPICES IN
INHIBITING THE POTENTIAL RISK FACTORS OF COVID-19 VIRUSES-
USING *IN-SILICO* VIRTUAL SCREENING ANALYSIS**

Preenon Bagchi, Somashekhar R and Ajit Kar

**Vasishth Academy of Advanced Studies and Research,
Sarvasumana Association, Bengaluru, India**

In view of corona virus or COVID-19 global pandemic affecting more than 200 (two hundred) countries so far, we have taken up extensive studies to evaluate dependable efficacy of selected medicinal plants & common Indian spices (most emphasized by Ministry of AYUSH & used as Ayurveda-Rasayana herbs) to combat the disease. Molecular docking analysis reveal that several phytocompounds have potent binding affinity against main COVID-19 spike proteins (proteases) and also compounds with a known anti-HIV synthetic drug, Saquinavir (SQV). The corona viral whole genome SRR8262656 and ERR4080473 were retrieved from SRA database of NCBI. RNA-SEQ analysis was done and heatmap plot was generated. The FASTA sequences of the above proteins were taken and docked with the phytocompounds from few medicinal plants & common Indian spices like *Cinchona cortex*, *Cinchona officinalis*, *Berberis aristata*, *Glycyrrhiza glabra*, *Ocimum sanctum*, *Curcuma longa*, *Piprorrhizakurroa*, *Phyllanthus niruri*, *Piper longum*, *Apiumgraveolens*, *Buniumpersicum*, *Corundum Sativum*, *Murrayakoenigii*, *Trigonellafoenum-graecum* and *Andrographis paniculata*. The ADME properties of the phytocompounds are given in the below table.

<i>Cinchona cortex</i>	miLog P	TPSA	nato ms	MW	nON	nOHNH	nrotb	volume	nviolations
Cinchonidine	3.03	36.36	22	294.40	3	1	3	285.25	0
quinine	3.06	45.59	24	324.42	4	1	4	310.79	0
<i>Berberis aristata</i>									
Berberine	0.20	40.82	25	336.37	5	0	2	296.30	0
taxilamine	-0.94	78.12	27	370.38	7	1	6	327.70	0
<i>Glycyrrhiza glabra</i>									
Glycyrrhizin	2.77	198.76	54	764.99	12	8	7	726.99	3
Glabridin	4.20	58.92	24	324.38	4	2	1	295.25	0
<i>Ocimum sanctum</i>									
Linalool	3.21	20.23	11	154.25	1	1	4	175.59	0
β -caryophyllene	5.17	0.00	15	204.36	0	0	0	229.95	1
<i>Curcuma longa</i>									

Cucumin	1.56	46.67	18	244.29	3	0	0	220.46	0
curcumin	2.30	93.07	27	368.38	6	2	8	332.18	0
<i>Picrorhizakurroa</i>									
Kutkin	1.07	151.99	33	460.44	10	4	9	395.50	0
Picroside I	0.03	167.68	35	492.48	11	5	8	417.89	1
<i>Andrographis paniculata</i>									
Andrographolide	1.05	86.99	25	350.45	5	3	3	338.33	0
andrograpanin	2.87	46.53	23	318.46	3	1	4	322.24	0

ICPMN-2020

MISCONCEPTION ABOUT IMAGINATION

Dr. Jayanthi R Prasad

Imagination:- The act or power of forming a mental image of something not present to the senses or never before wholly perceived in reality.

The human brain is exceptionally good at filling in the blanks in an image and creating a whole, that is greater than the sum of its parts.

Example:- It is like we see faces in things like tree leaves or sidewalk cracks or clouds. Then why is imagination harming us?

There is an external reality which is true.

For example: There is a 26-year-old girl sitting in front of me.

These are the facts which are visible to me

- a) she is about 5.5 feet
- b) she has black hair and brown eyes
- c) she is wearing a blue skirt and a black top

Now I check my internal thoughts

- a) why has this girl come to me?
- b) I can smell the perfume she is wearing, it is good
- c) she smiled and I smiled back

Now my imagination starts

- a) Has she come to sell something to me?
- b) What if she is trying to cheat me?
- c) Last week Mrs Mehera was talking about a good looking girl who came home asked for water.....

Our ability to imagine and create a complete image which is not at all real starts working causing anxiety, fear, anger, doubts, frustration

ROLE OF MILD STRESS IN HEALTHY AGING

Dr. A.A. Deshmukh

Professor, Department of Zoology, Shivaji University, Kolhapur.

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The rate of development of age-related neurodegenerative disorders is increasing in an alarming fashion globally. Increasing use of gazettes and applications to store contact numbers, passwords have declined the brain's inherent ability of recalling and retrieving the data to a significant extent. In school days; byhearting the tables, Sanskrit Shlokas, Chanting competition of different moral stories used to train the brain to aspire, learn and retrieve the things very sharply. Due to modernization and techno savvy life style this ability is getting adversely affected which may have an additive role in aging of the Nervous system.

Ageing commences due to deleterious alterations at cellular level leading to death of an organism. In the neurons, cytoskeletal protein tau gets hyperphosphorylated and deposited as neurofibrillary tangles and Amyloid precursor protein undergoes abnormal cleavage to produce amyloid beta. In addition, there is declined autophagic clearance of oxidatively modified molecules in the lysosomes resulting into formation and accumulation of lipofuscin granules in postmitotic cells like neurons.

Hormesis is a phenomenon in which exposure to mild stressful conditions evoke stress responsive pathways resulting into increased adaptability to unfavourable conditions. Evolutionarily, all eukaryotes including human have been provided with the arrays of stress response pathways. These pathways will come into play only when the cells experience stressful conditions. When, the cells and organ systems grow in optimum conditions, the stress responsive pathways are not turned on. Intermittently, if the cells are subjected to mild stress, these pathways are turned on.

In our laboratory we have studied the role of 40 % dietary restriction in neuronal aging in Swiss albino mice *Mus musculus*. Besides, we have studied the role of caloric restriction mimetic 2Deoxy glucose on degenerative alterations in mouse hippocampal pyramidal neurons. We also have studied the effect of mild heat stress on the primary culture of mouse prefrontal cerebrocortical neurons.

We observed that whatever may be the type of mild stress i.e. 40% dietary restriction, caloric restriction mimetic 2Deoxyglucose or mild heat stress, the mild stress slows down the aging associated neuropathological alterations. Although, aging is inevitable, but we can intervene and make it healthy by subjecting to different mild stressors.

WHEN THE VAGINA REFUSES TO OPEN UP

Dr Taru Jindal

Email: tarujindal@yahoo.co.uk

Vaginismus is the inability to allow vaginal penetration of a penis, finger, or a menstrual cup, due to involuntary spasms of the Pubococcygeus (PC) muscle, causing a wall like closure, even though the woman wants to participate. Due to a subconscious anticipation of pain or resistance to intercourse, PC muscles respond by tightening and closure. Every attempt at penetration further aggravates this defensive reaction, leading to further pain and a “Cycle of Pain” gets established.

Main causes are past trauma (sexual abuse, painful gynecological exam) or negative beliefs about sex (‘sex hurts’, ‘sex is immoral’). Physical conditions like endometriosis can also cause it. Vaginismus severely impacts the woman’s self-esteem and relationships.

There is poor awareness of this issue in our country. Shame and secrecy leads to delay in seeking help. Online resources are few and seeking help of a sexologist or a psychiatrist is considered a taboo.

To address this unmet need, we designed an Online Vaginismus Healing Program. It includes individual therapy, male and female support groups and psychotherapy support.

The eight week program covers four main steps:

Step 1: Insight, Body image, Kegel’s, Relaxation exercises

Step 2: Vaginal training with dilators

Step 3: Sensate focus

Step 4: Penetration in woman on top position

5 of the 12 women in the program healed completely. Long term support group is helping these women maintain the gains achieved. Key insights from our experience are that support groups and partner involvement are critical to healing. Guiding women towards pleasure, rather than just achieving painless penetration, is also important.

CULTIVATING A HEALTHY SELF-ESTEEM

Dr. Dharav Shah
DPM, MD Psychiatry

Our view about self impacts almost all our behaviours

A person with low self-esteem thinks that people would not be interested in talking to him and avoids socialising. He is very sensitive to comments. This increases his stress and spoils his relations. He/she develops people pleasing tendency and lands up in abusive relationships. He doesn't have faith in his judgement and avoids taking any decision. He aims very low in life and that seals his fate.

Some common reasons leading to low self-esteem:

- ✓ Having an over-critical family member or boss
- ✓ Pending tasks and challenges
- ✓ Not being good in studies or not earning a big salary.
- ✓ Having perfectionism.

Like all habits, our habitual way of thinking about self can also be changed with some focused effort:

- 1) Making a list of things we can feel proud of and reviewing it regularly.
- 2) Avoiding company of people who keep criticising.
- 3) Correcting our negative self talk regularly. Learning to accept ourselves with our weaknesses and mistakes.
- 4) Creating a mantra for ourselves and repeating it often Eg. I am an awesome individual; I am a hard worker and I love myself, etc.
- 5) Learning to accept compliments and letting them sink in.
- 6) Working hard to overcome our challenges, to cultivate some skill or to contribute to a good cause.
- 7) Being aware that for meaningfully contributing to the lives of people around us, we don't need to be academically brilliant or very rich.
- 8) Being proud of your wonderful human potential.
- 9) If self-esteem remains low even after trying above strategies, talking to a counsellor helps a lot.

PRESENTATION ABSTRACTS

ICPMM-2020

EVALUATION OF *IN VITRO* ANTIMALARIAL ACTIVITY AND IDENTIFICATION DITERPENOID AS ANTIMALARIAL POTENT MOLECULES USING HPLC-LC-ESI-MS/MS

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Diterpenoids and flavonoids are extensively arising in many plants used for their reputed medicinal properties and are of interest as potential potential phytopharmaceuticals in the form of standardized plant extracts. Diterpenoids and flavonoids are considered to be the major active compounds in *Andrographis paniculata* in an asset of their identification and structure, which we obtained appreciable *in vitro* anti-malarial activity (IC₅₀-10.75µg/ml). In the present study, we developed analytical methods for rapid identification and characterization of diterpenoid and flavonoid using High Performance Liquid Chromatography and LC-ESI-MS/MS in both positive and negative ion modes. Liquid chromatography analysis was performed using a C18, 150 X 2.1, 2.6 µm column with gradient mobile phase Solvent A: 95% (H₂O: ACN), Solvent B: Acetonitrile, Solvent C: Methanol, Solvent D: 5 mM NH₄ in 95:5 (H₂O: ACN) at a constant flow rate of 0.250 mL/min. The LC-MS spectra were acquired in both positive and negative ion modes with electrospray ionization (ESI) source. We have identified a total of 41 compounds including a total of 16 compounds in positive ion mode and 25 compounds in negative ion mode based on their chromatographic and mass spectrometric features (molecular formula). Diterpenes such andrographolid, and flavonoid such as Skullcapflavone I were selected for characteristic ions based on the obtained spectrum. The present method can be used for the identification and characterization of diterpenoids and flavonoids.

ASSESSMENT OF HEALTH CONDITION OF WORKING WOMEN IN DELHI

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In today's era, women are ahead in every field. She has managed to succeed in every field she has met with men in the business. In every region of India, women also have as much participation as a man. From safety to health talk, women have an important role everywhere. Health status is no longer considered an outcome solely of lifestyle choices.

To Assess the health condition of working women and Association between Availability & accessibility of health care facility and women health.

50 working women were enrolled in Delhi. Structured questionnaire was designed with contained 30 questions in the form of yes, no, don't know. GAD7 and PHQ-9 (patient health quality-9) were used to assess the depression and anxiety level of women. Awareness of health care facilities among working women was also assessed.

50 working women were enrolled in this study. Women reported many health problems like fatigue (80%), Headache (48%), obesity (64%), reproductive disorder (42%), Headache (48%), backache (56%). Women who have been working for a long time reported many health problems (hypertension (30%), diabetes (18%)). After having the sickness, they have to go for job (76%). GAD and PHQ-9 level were significantly high. We found that 5 primary health care centre, 2 Government hospital and 5 private hospitals are available around 1 km. 30% women had medical insurance and reimbursement facility of medical expenses but they don't have knowledge or not willing to go due to lack of time.

The workload increases so much on women that their health starts deteriorating. The awareness of availability of health care facility was observed very low and utility of these facility was also very low.

HUMOR AND SUBJECTIVE WELL-BEING AMONG WOMEN AGE GROUPS

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Humor is an enjoyable activity and subjective well-being refers to the evaluations and judgments that an individual makes about their quality of life. Usually women undergo major changes throughout her adulthood which includes accomplishment of job, satisfaction of expectations, financial shifts, menopause, role changes, commitment, retirement etc. Sometimes changes in experience might be health problems, unsatisfied parenting, failure in accomplishing dreams, unsatisfied relations; low level in job satisfactions reduces the level of well-being in women. There are more tremendous benefits for health and well-being through sense of humor. The present study examines humor and subjective well-being among women across age groups. And study further examines the relationship between the humor and subjective well-being. The participants of the study included 130 women across age groups such as 21-30, 31-40, 41-50, 51-60, and 61-70 years. Humor was assessed using Richmond Humor Assessment Instrument (RHA) developed by Richmond (1999) and Subjective well-being inventory developed by Nagpal, R and Sell, H (1985, 1992) used to assess the level of subjective well-being. Obtained data was analyzed using one way analysis of variance, post-hoc analysis and Karl Pearson coefficient of correlation. The result indicates that there is a significant difference in the level of subjective well-being and humor among women across age groups. There is a positive relationship between humor and subjective well-being among women across age groups. Thus Enhancing potential to use humor and fun makes significant changes in the level of happiness and also leads to well being and satisfaction among women.

A REVIEW ON HERBAL MEDICINES AS NEUROPROTECTIVE AGENT

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Herbal medicines make up a significant component of the trend toward alternative medicine. Herbal medicine is becoming ever more popular in today's world as people seek out natural remedies. Herbal medicines have been used since the dawn of civilization to maintain health and to treat various diseases. Neurodegeneration refers to any pathological condition in which the nervous system or neuron loses its function, structure, or both. Neuronal death happening as a result of progressive disease of long-term and is becoming a major health problem in the 21st century. Many neurodegenerative diseases are caused by genetic mutations, most of which are located in completely unrelated genes. In many of the different diseases neurons degenerated are not changed resulting in a cognitive loss, many neurodegenerative disorders, such as Alzheimer's disease, cerebrovascular impairment, seizure disorders, head injury, parkinsonism. The common pathology of neurodegeneration includes deposition of misfolded proteins such as amyloid- β in Alzheimer's disease, α -synuclein in Parkinson's disease, Neuroprotection refers to the ability for a therapy to prevent neuronal cell death by intervening in and inhibiting the pathogenetic cascade that are able to protect the central nervous system against neuronal injury and neurodegenerative disorders. The past decade has viewed an intense interest in herbal plants having long-term health-promoting or medicinal qualities. To compete with the growing pharmaceutical market, there is an importance to use and scientifically authenticate more medicinally useful herbal products. Comprehensive research and discovery have demonstrated that natural products, medicinal herbs, plant extracts, and their metabolites, have great potential as the neuroprotective agent. Thus the herbal plants can be a appreciated source of the drug against neurodegenerative disorders which will require high-throughput screening. This review will provides a general idea of herbal plants and their phytoconstituents against neurodegenerative infections and other related disorders, focusing on their mechanism of action and therapeutic potential.

MEDICAL COMORBIDITY AMONG PATIENTS DIAGNOSED WITH SCHIZOPHRENIA SPECTRUM DISORDERS. A HOSPITAL BASED CROSS SECTIONAL STUDY

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Medical comorbidity is higher among persons with persistent mental illness due to various factors. When compared to general population, patients with schizophrenia have a shorter life expectancy with a difference of 10-25 years and mortality rate is higher. Hence it is important to determine which chronic medical conditions are most common in patients with schizophrenia to deliver preventive and primary care at the earliest. To study the prevalence of medical comorbidity in patients with schizophrenia spectrum disorders. Patients between 20-40 years attending psychiatry OPD & IPD services in MVJ MC & RH who were diagnosed with schizophrenia spectrum disorders according to ICD-10 criteria and BPRS were included in this study. Informed consent was obtained. Participants were screened for any medical morbidity by physical examination and routine blood investigations. Appropriate statistical methods were used. 100 patients were assessed of which 69 had one or more had medical comorbidity. The most common was Diabetes mellitus (32%), hypertension (28%) and metabolic syndrome (17%), hypothyroidism (19%), nutritional deficiencies (39%), skin manifestations (16%), respiratory conditions (2%), cardiovascular (2%) and gastrointestinal conditions (3%). Significant association was found with diabetes mellitus, metabolic syndrome, skin manifestations and hypothyroidism in patients with schizophrenia spectrum disorders. Treatment gap in patients with schizophrenia is high. Detection and management of medical/physical illness in patients with schizophrenia should be done at the earliest to improve the socio-occupational functioning.

A QUALITATIVE STUDY ON MENTAL HEALTH CARE PROFESSIONALS' PERCEPTIONS ON MENTAL ILLNESSES AND ITS WARNING SIGNS IN YOUTH

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Mental Disorders are the leading cause of high morbidity and disability among youth and the burden of disease associated with mental disorders is 16% in youth. one out of every five adolescents meeting criteria for a diagnosable mental illness. Additionally, 50% of all lifetime cases of mental illness will develop by age 14, and 75% by age 24. Aim of this qualitative study is to explore the perceptions of mental health professionals on common mental illness and warning signs of mental illness in youth. Six in-depth interviews (IDI) were conducted with experienced and eligible mental health professionals such as psychiatrist, psychologist and psychiatric social worker in India by using an IDI guide. Purposive sampling method was adopted to select participants for the in-depth Interview. Data was analysed using thematic analysis approach by using Atlasti software. This study revealed that Young people fall between the age group of 15-24 years are susceptible to all types of mental illness which include depression, anxiety disorders especially social anxiety, phobias, obsessive compulsive disorders, hypochondriacal disorders, substance abuse disorders, suicide, personality disorders. Red flags of mental illness aid to identify the deviation from the normal state of mental health such as maladjustment, excess fear, rebellious behaviour, lack of attention and concentration in class, poor anger management, avoid talking with friends, acting out behaviour, drug and alcohol abuse, sadness, irritability, high and low moods, and changes in eating and sleeping habits. Understanding highly prevalent mental illness and its warning signs in youth helps to plan and implement strong interventions to condense the negative impacts associated with predisposing factors by modifying the risk factors and promoting the protective factors

NEUROPLASTICITY: STRUCTURAL AND FUNCTIONAL HOW THE ADULT HUMAN BRAIN REWIRES ITSELF

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This paper introduces the concept of neuroplasticity. It tries to show the evolution of the concept from its inception in psychology to a completely different meaning it has been able to acquire in modern neuroscience after the discovery by Paul-Bach-y-Rita that damaged nerve cells can regenerate again in humans. It shows the different types of neuroplasticity. Neuroplasticity can be broadly divided into two parts: *structural neuroplasticity* and *functional neuroplasticity*. In structural neuroplasticity, there are, based on experience of the subject, actual structural changes in the organization of neural networks of the brain. It includes neurogenesis, synaptogenesis and changes in the strength of synapses. In *neurogenesis* new neurons are formed. It takes place throughout our lives. Studies suggest its usefulness in maintenance of memory and learning of new tasks. *Synaptogenesis* is the formation of new synapses. It too takes place throughout the lifetime of individuals. Studies suggest it is majorly associated with learning. *Changes in strength of synapse* is the change in the frequency of firing in the pre-synaptic neuron. According to studies, the strength of synapses alter according to increase in dexterity in acquired skills like learning musical instruments, etc. The second type of neuroplasticity is called *functional neuroplasticity*. In functional neuroplasticity, different regions of the brain that perform different functions are modified according to the needs of the brain and its relation to the environment. There are four types of functional neuroplasticity: *Homologous area adaptation*: The substitution of a particular cognitive process by a homologous region in the opposite hemisphere. It occurs when one particular part of one hemisphere of the cerebrum is injured. *Map expansion*: It is the enlargement of a functional brain region on the basis of performance. This type of neuroplasticity, entails the flexibility of local brain regions that are dedicated to performing one type of function or storing a particular form of information. *Cross-modal reassignment*: It occurs when structures previously devoted to processing a particular kind of sensory input now accepts input from a new sensory method. *Compensatory masquerade*: It is a novel allocation of a particular cognitive process to perform a task. Most people, to a greater or lesser extent, have an intuitive sense of direction and distance that they employ for navigation. However, a person who suffers some form of brain trauma and impaired spatial sense will resort to another strategy for spatial navigation, such as memorizing landmarks. This paper deals with all the above mentioned types of neuroplasticity by providing pieces of evidence of each type of neuroplasticity. It is of relevance in modern day medical practices especially those that deal with neurodegenerative disease and mental health conditions that come as a result of neuronal disturbances.

DEVELOPING AN ASSESSMENT TOOL TO DIAGNOSE DEPRESSION BY INVESTIGATING SPEECH PERCEPTION PATTERNS IN DEPRESSED PATIENTS WITH THE HELP OF NEURO-IMAGING (EEG)

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One of the most common mood disorders is Depression which is also called as Clinical Depression or Major Depressive Disorder. According to Diagnostic And Statistical Manual - V, depression can have mainly five symptoms which include lack of interest in life, fatigue, a persistent feeling of sadness, weight loss or weight gain and recurrent suicide ideation. If the symptoms persist more than two weeks then with the help of clinical assessment, depression is diagnosed by a clinical practitioner. The lifetime prevalence of Major Depressive Disorder is around 17% and has notable impact on overall quality of life, comorbid health conditions, risk of committing suicide, and utilization healthcare (Andrade et al., 2003). DSM (Diagnostic Statistical Manual of Mental Disorders - V) provides the guidelines to clinical practitioners for application of criteria to diagnose MDD (Major Depressive Disorder). Hit and Trial Method is applied with the first line of anti-depressants after a diagnosis of MDD. Initial Pharmacotherapeutic intervention works only for 50% of the patients (Papakostas, 2009). Continued drug trials are required for months to the non responding patients which may delay the recovery process to a great extent. Moreover, recent studies suggest cognitive deficits in depressed patients like attention level deficits, problems in executive function and working memory, task planning and problem solving. (Marazziti, 2010). This paper aims to explore the cognitive aspect of speech perception in depressed people versus euthymic state in the normal population, as clinically depressed people have been reported to deviate from typical word usage. (Smirnova, Cumming, 2018) Distinct linguistic patterns in depressed people can point towards devising a novel diagnostic marker which can further be validated by using Electroencephalography (EEG) Neuroimaging Techniques. Machine learning algorithms can acquire neuroimaging data to distinguish the intensity of depression in the brain images of mildly depressed vs majorly depressed brains and predict outcomes efficiently (Patel, Khalaf, 2016).

**PREVELANCE OF STRESS, MENTAL WELL-BEING AND MENTAL
HEALTH AMONG STUDENTS OF PUNJAB UNIVERSITY,
CHANDIGARH**

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The purpose of this study is to see the prevalence of perceived stress, wellbeing and general health among students of Panjab University, Chandigarh. The total sample size was 40, comprising of males (n=13) and females (n=27). The age range was 18 to 35 years. The instruments used to administer variables of this study were The Perceived Stress Scale (PSS) developed by Sheldon Cohen and his colleagues in 1994, The Warwick-Edinburgh Mental Wellbeing Scale developed by Warwick and Edinburgh Universities in 2006 and The 12-item General Health Questionnaire (GHQ-12) developed by Goldberg & Williams in 1998. The study was based on a correlational research design and conducted during COVID-19. The study revealed that there exist a significant relationship between perceived stress, wellbeing and general health among students of Panjab University, Chandigarh.

EMOTIONAL INTELLIGENCE : MANAGING ACADEMIC STRESS AND ANXIETY OF SECONDARY SCHOOL STUDENTS

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Abstract

The phenomenon of emotional intelligence is a growing topic for behavioural investigation in positive psychology, so as researchers strive to understand its influence on various social interactions. Recent research indicates that emotions play an integral part in managing academic stress and anxiety of school students. A review of the literature highlights on emotional intelligence as an overarching concept to the management of stress and anxiety. The main objective of research is to establish the impact of emotional intelligence in managing academic stress and anxiety of school students. The researcher examines three hypothesis that investigate the measurement of emotional intelligence as a predictor in managing academic stress and anxiety. 120 Secondary students were taken for the study. Three standardized scale like Emotional Intelligence Scale, Academic Stress Inventory and State-Trait Anxiety Inventory were used for the measurement of all the variables. Descriptive statistics like mean, SD, correlation and inferential statistics like 't' test were used for quantitative analysis of data. The results reveal negative, low and insignificant correlation ($r=-0.14$) between emotional intelligence and academic stress. Furthermore, insignificant and positive correlation was found ($r=0.09$) between emotional intelligence and state anxiety is and positive and significant correlation ($r=0.12$) was also noticed between emotional intelligence and trait anxiety. Gender difference related to emotional intelligence, academic stress, state and trait anxiety were found to be mostly insignificant. The present research seems to have opened newer avenue in the field of cross-cultural studies, adult population and counselling area.

Keywords : Emotional Intelligence, Academic Stress, State-Trait Anxiety.

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