



MINDS NEWSLETTER

- Published from 2011
- Articles on Psychiatry from over 22 specialities!!
- Contribution from More than 50 Authors!!
- Seven Sections in every Issue
- Free e-copy just by an SMS Request!!!

Editor

Dr. Bindu Annigeri
Consultant
Psychiatrist
Dept. of Psychiatry
JSS Medical College
& Hospital, Mysore

Assistant Editor

Dr. Suhas Chandran
Senior Resident,
Dept. of Psychiatry,
St. John's Medical
College, Bangalore

E-mail

editormind@gmail.com

Website

www.mindsnewsletter.com

For free e- copy!!
Just email us or SMS
MINDS <your Email ID>
to Editor/Asst. Editor.

Join us on
[www.facebook.com/min
ids.newsletter](https://www.facebook.com/minids.newsletter)



Wellbeing begins in Our MINDS

Monthly Newsletter on Psychiatry for Doctors & Medical Students

Volume 8

Issue 11

November, 2018

From the desk of Editor

Greetings to everyone from the editorial team of MINDS.

We are back with yet another issue. This is a unique issue, in that, it covers the basic concept of the art and science of psychiatry and an advanced theme like the role of scanpath in psychopathology. Apart from these, we have the regular sections on 'down the memory lane', quiz and a crossword. Hope all of you enjoy reading the latest issue of the MINDS newsletter, find it useful and send us your opinion and suggestions to improve it further.

Dr. Bindu Annigeri

Guest Column: Down The Memory Lane...

I joined the Indian army as an intern in 1984 & went on to specialise in psychiatry at AFMC Pune. I was fascinated by psychiatry since early days & that has carried me till date. In my 12 years of stay in the army having seen the extremes of climate (49°C in Rajasthan to -6°C in Kashmir) one outstanding feature I saw was the resilience of the Indian army which needs to be imbibed by all of us. This is all possible by the training & discipline which is so integral of our defence forces. SERVICE TO MOTHERLAND- FIRST AND ALWAYS is the motto of our army.

The transition after 12 years into the present civil world since 1996 has had an ADJUSTMENT toll on me to as also for my family. While in the army everything worked as an AUTOMATIC machine here it was more to DO IT YOURSELF phase. The dynamics of the civil world have been challenging in a different way & I have continued to enjoy my passion to psychiatry. Army training has helped me continue my disciplined life with primary importance to personal health & professional development. Living within my means & being contented with what I have, ensured refreshing nights' sleep for me. I observe a sense of urgency in the present day colleagues which is at the expense of personal health & professional stumbling. The use of substances of abuse is on the rise amongst all of us & we need to take time to reflect on the same.

Time spent with family is reducing & gadgets are taking over us. Emotional bonding within the family, friends & professional colleagues is lacking. I feel we as mental health professionals can bring the much needed change both within ourselves & help in bringing some change for those around us. We need to spend more quality time with our patients rather than being PILL oriented. I personally would request my colleagues to join organisations & take up responsible positions to serve the needy. IPS, IAPP, IMA, Rotary etc can be a few to name. A lot of NGOs are doing yeoman service to mentally ill like Chittadhama at H D Kote where we can make use of our abundant resources. All of us are truly blessed with a lot of senior teachers who are always ready to guide us. Karnataka is truly blessed in more than one way & we all need to make the best of it.

**Dr. Abhay Matkar, Professor & Head, Department of Psychiatry,
SDM College of Medical Sciences & Hospital, Dharwad.**

THE ART AND SCIENCE OF PSYCHIATRY

During the period of MBBS training, psychiatry is an enigma due to limited exposure to the branch. Students can have different perceptions about the nature of psychiatry as a discipline, especially when it comes to making a career choice. In a survey on attitudes towards psychiatry in MBBS students in our college we found that though 88% of students felt treating psychiatric disorders was the most challenging in medicine, 69% felt that psychiatry was too inexact and lacked a scientific basis. This perception is probably due to lack of investigative procedures in diagnosis of psychiatric disorders. This may be a boon or a bane; as modern medicine moves towards embracing technology, psychiatry is one of the few branches of medicine where the art of eliciting signs and symptoms is still crucial to the scientific clinical methods. As William Osler has famously said “Medicine is a science of uncertainty and art of probability.”

Psychiatry: Literally the term psychiatry means treating (iatry) the soul (psyche – greek word for butterfly which represents the human soul). Professor Johann Christian Reil of University of Halle in Germany is credited with introducing the term ‘psychiatry’ in 1808 and said that only the very best physicians would have the skills to become psychiatrists. For the purpose of studying psychiatry as a branch of medicine; mind can be understood as an integrative response of the brain to all internal and external stimuli in the form of awareness (consciousness), thoughts (cognition), emotions (affect) and motor response (behavior). This triad of cognition, affect and behavior forms the core basis of evaluation and diagnosis in psychiatry. For example, consider a student who is waiting for the result to be announced. He is probably thinking “what if I fail?” [Cognition], he is feeling anxious [affect] and probably fidgeting and pacing around the room [behavior].

The Art: How are approaches and techniques in psychiatry different from that in medicine? Probably the most important difference in psychiatry is the lack of any test to quantitatively measure signs and symptoms e.g. delusions and hallucinations are subjective experiences of a patient and cannot be measured. They can only be told by the patient and understood by the psychiatrist and to understand these experiences the psychiatrist must learn the ‘*art of empathic listening*’. Empathy is the art of understanding the subjective experience of another individual by precise, insightful, persistent and knowledgeable questioning.

The Science: Diagnosis and treatment in psychiatry is as much a scientific process as it is in other disciplines of medicine. The signs and symptoms elicited may be either qualitative or quantitative aberrations from normal mental functions. *Let’s take the example of a student who has failed in her exams. It would be expected that she is emotionally upset about it. But however, if this student experiences a sad mood throughout the day, has lost interest in all activities, feels a lack of energy continuously for 2 weeks this would be a quantitative variation qualifying for a diagnosis of depression. In addition, if the student is experiencing suicidal thoughts this would be a qualitative aberration. An additional criterion for diagnosis would be if the student has not been attending her classes, not interacting with friends. This is termed as dysfunction and is an essential criterion for diagnosis and which is why the term ‘disorder’ is used to describe psychiatric conditions. Using an analogy of diabetes, a fasting sugar greater than 126mg/dl would be quantitative variation qualifying for diagnosis of diabetes. In addition, the presence of diabetic neuropathy would be a qualitative variation.*

A study by Kendell in (1971) showed that psychiatrists in the US & the UK had gross differences in diagnosing schizophrenia. This introduced an important scientific method in psychiatry which was the use of classificatory systems such as DSM and ICD to maintain uniformity of diagnosis across clinicians, and ease of research. The etiology of disease in psychiatry is understood by the concept of biopsychosocial model. Disorders result from interaction of biological, psychological and social factors and this is the essence of all psychiatric evaluation, diagnosis and management. Another important scientific method is the use of structured rating scales which is an objective way to quantify symptom severity and response to treatment. Psychiatry is probably one branch of medicine that still retains the fine balance of art and science in medicine making it an enriching experience. In the words of Dr. Nancy Andreasen, former editor of American journal of psychiatry and pioneer of neuroimaging research in psychiatry:

- “We chose psychiatry because we want to understand the human mind and spirit as well as the human brain.”
- “Every person whom we encounter is a new adventure, a new voyage of discovery, a new life story, a new person”
- “This is what makes psychiatry challenging, intellectually rich, complex, and even enjoyable”

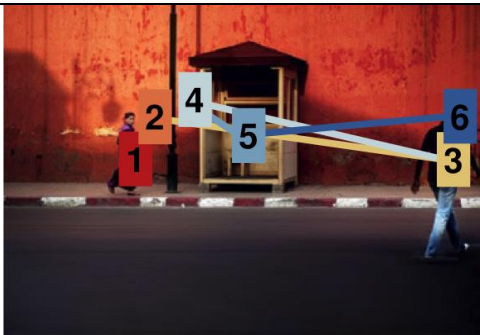
Dr Rishikesh V Behere, Consultant Psychiatrist, Manoshanti, Pune

VISUAL SCANPATH IN PSYCHOPATHOLOGY

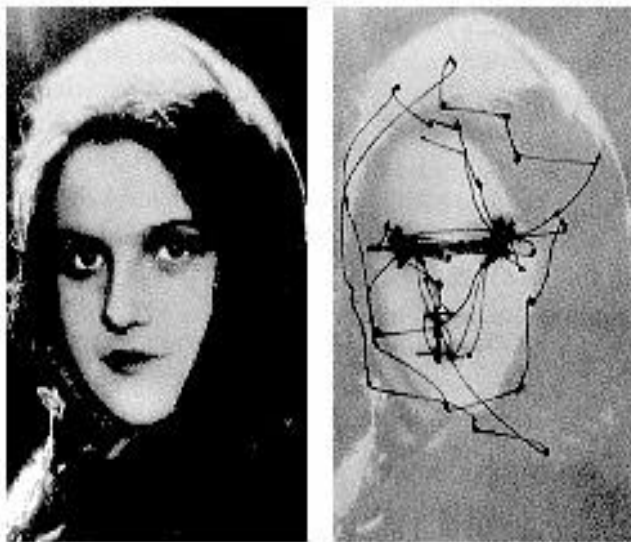
Eyes are our windows to the world. The current focus of attention on the role of eye movements underpinning adaptive functioning as well as psychopathology has certainly been a very unique development. This has been made possible by the advent of modern eye-tracking techniques.

Simply put, to process a visual scene, movement of the eyes in vertical and horizontal planes in a bid to acquire, fixate, and track the stimulus is necessary. High acuity information about aspects of the scene is derived through *fixation* that allows for visual signals to be concentrated on the fovea. Less detailed information is collected by parafoveal and peripheral retinal fields and these areas also help to locate the next fixation point. Eye rotations are calibrated in degrees of visual angle, and several successive rotations are required for a complete scan of the visual scene. Depending on whether the visual stimulus is in motion or stationary, 2 respective classes of eye movements, namely, *smooth pursuit* and *saccades* have been founded.

Fixed characteristic order of sequential eye movements known as *scanpaths*, help to note the features of a visual stimulus and subsequently lead to laying down of *memory traces*. Internal representation of visual stimulus is a sensory trace + memory trace. This continues along with external scanning consisting of motor shifts of the eyes which helps to form a feature ring. Memory traces help in successful *pattern recognition*. More than the visual input per se, the visual scanpaths and sequences is determined by the top-down cognitive factors of selective attention, expectations, contingencies and memory.



- Visual stimuli → eye movements first work towards gathering the gist of the scene → later, interpretation of the scene and task at hand (categorization or memory/recognition).



- When it comes to face perception, initially there is a registration of the overall face percept or general framework of the face and then salient features of foveal interest are inserted into the framework. This is in contrast to processing in a serial, piecemeal manner. It is known as gestalt perception.
- For neutral faces, typical inverted triangular pattern of scanning occurs with most fixations being focused on the eyes, nose and mouth. Older adults exhibit fewer overall fixations, which are disproportionately focused on the lower parts of the face, especially the mouth. Age – related frontal lobe atrophy has been elucidated as the cause.

Relevance in Psychiatric Disorders:

Eye tracking has been used to investigate disorder specific **attentional bias**. Attention combines early and late stage processing. Early attention → initial viewing of stimulus; indicates initial vigilance important in threat detection. Late attention → viewing pattern that occurs later; reflects rumination or maintenance.

In Major Depressive Disorder, individuals have an attentional bias to sad faces during late processing denoted as greater number of fixations. This may be indicative of the elaborative processing of dysphoric stimuli, akin to a ruminative cognitive style partially liable for the maintenance of MDD. Depression and bipolar disorder have been associated with prefrontal and cerebellar disturbances of oculomotor control during major depression.

Individuals high in body dissatisfaction have restricted and extensive scanning behaviours with a facial preoccupation. They attend more to their own perceived unattractive features and to the perceived attractive features of others (negative attention bias).

Endophenotype of Schizophrenia? In Schizophrenia, two discrete styles of visual scanning — “extensive” Vs “minimal” have been identified and are possibly related to positive and negative schizophrenia symptoms. They have reduced number of fixations of increased durations, visuospatial working memory deficits, superimposed upon a faulty oculomotor processing system. In contrast to gestalt facial perception, extraneous areas of the face are treated as equally critical as salient feature regions. Among non-neutral faces, they display restricted scanpaths, notably reduced for happy faces, yet with superior recognition accuracy, and increased attentional focus to salient facial features for sad faces. All of this may contribute towards misinterpretations of real-life social interactions.

Socially anxious participants were found to fixate more on the eye regions, and moreover, respond to direct gazes with increased physiological arousal. People with autism orient to different kinds of contingencies. Scanpaths are erratic, undirected, and disorganized, often reflecting the processing of only one or two relatively unimportant features of the face (e.g., an ear, the chin, or region of the hair line) but not the saccading between the eyes which is essential for face and affect recognition.

In this way, further eye tracking paradigms research can help in linking behavioral disturbances with underlying neurobiological correlates and assist in the identification of specific endophenotypes underpinning related psychological disorders.

Dr. YAMINI. D
SENIOR RESIDENT, DEPARTMENT OF PSYCHIATRY
VICTORIA HOSPITAL, BMCRI

Undergraduate section

15 DAYS OF AWE

“There are two kinds of people in this world, the binary blue and the non-binary pink. I belong to the former. And in being so I invented the most complex operating system – Android. With numbers flowing from my head into a cube and getting power from the source, the cube became the design for Android.”

On a rather regular Monday, I found myself sitting across a young lady who, had it not been for the D4 psychiatric wards of my hospital, I would have assumed had quite an idiosyncratic imagination. This lady however was convinced beyond doubt and evidence otherwise, of every word she said. It was this conviction that led to the ICD-10 classification of her mental condition as Schizophrenia. Set apart from the usual bustling world outside, I witnessed a realm of the human mind, which wasn't only complex, but also outstanding in ways I had failed to fathom before. At one end was a middle-aged lady with a peculiar dressing sense for her age, speculative and suspicious about every act of her care providers. While the other end had a young lad, whose intelligence could any day outscore the highest for any IQ test but failed to score enough for sanity. While all these men and women seemed like the other stranger riding on the same bus at first look, their brain's chemistry and wirings had been altered so much that they ceased to have a normal life.

And so here I was, an Intern, trying to grasp the psychopathology of the delusive, paranoid, combative minds in practice.

Each of the interns was assigned a department mentor right from the first day of our brief 15 days posting. While at first it seemed rather frivolous, the idea struck a chord as the days passed. Shadowing our mentor and post graduates through busy out patient days, arduous ward rounds, everlasting CLP, working with the Psychiatric social work team in faraway telemetric camps, attending late night emergency calls brought a sense of responsibility. It gave an opportunity to look closely at what goes into the making of a team that deals with the human mind in all its colors and flavors day in and day out.

Hours of self-learning, patience, perseverance, compassion, empathy even when the tongue is running dry eliciting details of every life event dating back to birth and the ears going numb at times from the continuous chatter, is not just self-less but also brave and noble. And the most challenging part, as I saw it, was in convincing the family of the psychological nature of the illness, especially in a social environment where mental illness is seen as a stigma. Assuring 17 year olds' parents that their kid is having a pseudo-seizure due to life stressors and will get better with cognitive therapy or elucidating to an old uneducated man from a traditional family that his worry about his only son's health is a psychosis, doesn't happen easily, certainly.

These 15 days made me realize that while reading about disorders of obsession and compulsion, personality, mood could be thrilling in terms of the spectrum, living and treating the same is far from it. It's tough at every level of being.

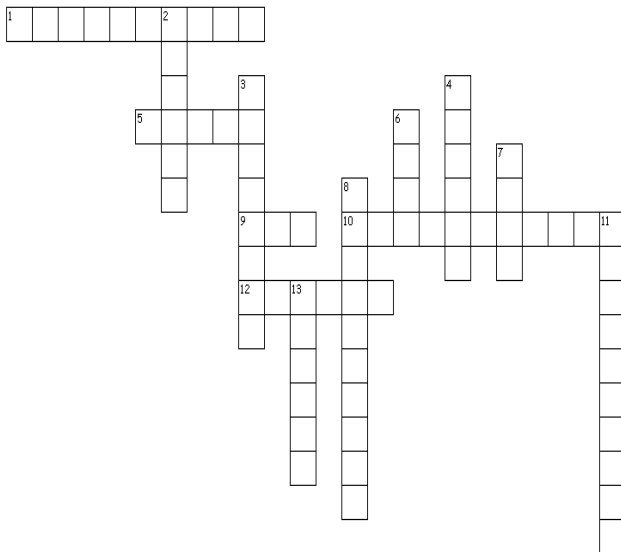
Unentangling this web of complex thoughts and emotions and replacing with reason and process is what makes an able psychiatrist.

Dr Khushboo Agarwal, Intern, KMC Manipal

MINDS QUIZ

1. Cause of Narcolepsy involves the loss of _____ releasing neurons within lateral hypothalamus
a. Ghrelin b. Oxytocin c. *Orexin* d. Noradrenaline
2. Which is not a risk factor for tardive dyskinesia?
a. Female Sex b. *Hypertension* c. Drug Holiday d. Organic Brain damage
3. A maneuver aimed to separate organic from non-organic paresis of the leg.
a. Rosenbach Sign b. Dalrymple Sign c. Allan's Sign d. *Hoover Sign*
4. Which of these is not a risk factor for clozapine induced agranulocytosis
a. *Male sex* b. Eosinophilia c. Elderly age d. HLA Haplotypes
5. All are true for lewy body dementia except
a. Visual hallucinations b. Fluctuating cognition c. Contraindication for antipsychotic use d. *emotional lability*

Can you cross the crosswords!!!



ACROSS

1. Uncontrollable recurrent use of vulgar or obscene language (10)
5. Hippocampal cells also known as the GPS of the brain (5)
9. Epworth Sleepiness Scale was first used in sleep disorders due to (3)
10. Inability or difficulty in describing or being aware of one's emotions or mood is termed as (11)
12. One of the primary symptoms of schizophrenia as described by Eugene Bleuler (6)

DOWN

2. Lack of will or initiative (6)
3. Primary auditory cortex is located in which lobe (8)
4. A satiety hormone (6)
6. A child of yrs can brush teeth, draw a square, count ten objects, dress and undress by self, is able to control bladder (4)
7. Conners rating scale is administered in (4)
8. EEG rhythm was first recorded by (4,6)
11. The cognitive triad of depression, negative views of self, world, and future was explained by (5,1, 4)
13. He proposed classification of Schizophrenia into type I & II based on presence of positive or negative symptoms (1, 1, 4)

Courtesy: Dr Abhimanyu, Post Graduate Resident, JSS, Mysuru

ANSWERS

MINDS QUIZ

1. c
2. b
3. d
4. a
5. d

CROSS WORDS

ACROSS

1. Coprolalia
5. Place
9. OSA
10. Alexithymia
12. Autism

DOWN

2. Abulia
3. Temporal
4. Leptin
6. Five
7. ADHD
8. Hans Berger
11. Aaron T Beck
13. T.J. Crowe



MINDS Newsletter was launched in July 2011 as a Monthly Newsletter on Psychiatry for doctors & medical students for creating awareness and continued medical education. You can receive a free e-copy of MINDS by an e-mail request to editormind@gmail.com

Join us at www.facebook.com/minds.newsletter.

All archives are available in our exclusive website www.mindsnewsletter.com

Your suggestions are important to us, kindly mail them to editormind@gmail.com & Please pass on the newsletter