

NATIONAL WEBINAR ON
“IMPLICATIONS OF BIOLOGICAL RHYTHMS ON
NEUROSCIENCE OF LEARNING”

National webinar on “Implications of Biological rhythms on Neuroscience of Learning” was organised by the Department of Zoology, St Philomena’s College, Mysuru on 25th August 2020. Dr. Moses Satralkar, Associate Professor, Education, CHRIST (Deemed to be University), Bangalore, Executive Director, Global Resilience Consortium and Associate Director, Global Challenges Forum, Switzerland, was the resource person for the session. He is a dynamic educator, prolific researcher and an active contributor to many global projects on sustainable development goals, social welfare and youth leadership.

The webinar focussed on the undeniable role of the endogenous biological clock in coordinating the physiological processes and subsequently the behaviour of organisms. The session, conducted via the Google Meet platform was moderated by Mrs. I. Mary Sofia, Assistant Professor, Department of Zoology. On behalf of the organising committee, Mrs. Neena. P. K, Assistant Professor, Department of Zoology, welcomed the speaker, other invited guests and the participants. Dr. Ruth Shantha Kumari, the Principal, stressed on the role of external cues on regulating the biological rhythm and the impact of our changing lifestyle on health. The resource person was formally introduced to the audience by Mrs. Cecilia. N. A. D’ Souza, Head of the Department of Zoology.

Dr. Moses Satralkar elaborated on the most important aspects of biological rhythms and its implications on neuroscience of learning. This included circadian rhythm and bio-cognitive cycles, age dependent learning windows of opportunity, neuro-systematic influence on learning and career, learning and brain development, gender differentiation in learning, diet and cognitive cycles, sleep-rhythms and exercises, special education and mirror neurons and integrated approach to holistic development. The session was very resourceful, engaging and motivating. The speaker ended the session by urging the participants to unlock their full potential and add purpose to one’s own life. Mrs. Sangeetha. M. D, Assistant Professor, Department of Zoology, proposed the vote of thanks. E-certificates were sent to the participants.

The resource person has shared the link for the detailed presentation-<https://www.drmosessatralkar.com/Pdf/National-Biological-Rhythms-and-Neuroscience-Webinar.pdf>

The link for the recorded video-<https://www.youtube.com/watch?v=HE3QuH8YPX4>

REC | Moses Satralkar is presenting | Sneha A.E. Sneh... and 98 more | 11:51 AM | You

Brain Development influences Personality

LEFT BRAIN USER

LANGUAGE

- uses logic
- detail oriented
- facts rule
- words and language
- present and past
- math and science
- can comprehend knowing
- acknowledges
- order/pattern perception
- knows object name
- reality based
- forms strategies
- practical

Class List
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cecilia n d souza zoology
96 of 110 participants
Start: 10:52
of Duration: 58min
Google Meet Attendance - V2.0.0

Participants: You, Moses Satralkar, Dr Manju V Su..., Kunal A Electro..., shereen kouser, ANAGHA M, Farhana Iqbal

Circadian Rhythms

Chronobiology and Neurobiology are Integrated Sciences

Circadian rhythms: Self-sustaining biological rhythms characterized by a free-running period of about 24h (circa diem) → day-night, day-night. They occur periodically over 24 hours.

Characteristics of circadian rhythms:

- Occur in bacteria, fungi, plants, flies, fish, mice, humans, etc.
- Entrainment by light-dark cycles, temperature, social cues, etc.
- Phase shifted by light pulses (i.e. - synchronized to external environmental time cue or zeitgeber)
- Endogenous in nature
- Adaptive in nature

Circadian rhythms occur at a molecular level. (see sec. 10.1, 10.2)

These rhythms are the product of an internal biological timekeeping system which is controlled by a biological clock located in the Brain.

Biological Rhythms: Circadian rhythms

to know the biological clock in control of circadian rhythm

Identified the difference between Endogenous Pacemakers and Exogenous Zeitgebers

2013 Nobel research on circadian clock

Participant: Moses Satralkar