Can psychedelics treat depression?

Why in news?

Psychedelic substances has given strength to clinical/research interests, and have added to psychiatry's ever-expanding therapeutic techniques.

What are Psychedelics?

- **Psychedelics –** They are a group of drugs that alter perception, mood, and thought processing while a person is still clearly conscious.
- **Not toxic –** Psychedelics are non-addictive and non-toxic and the person's insight also remains unimpaired.
- **Two types –** The two most commonly used psychedelics are d-lysergic acid diethylamide (LSD) and psilocybin.

What is the status of psychedelics in India?

- **Prohibited –** In India, the *Narcotic Drugs and Psychotropic Substances Act, 1985, prohibits* the use of psychedelic substances.
- **Ketamine –** It is a dissociative anaesthetic with psychedelic properties, is used under strict medical supervision, for anaesthesia and to treat treatment-resistant depression.

What is the history of psychedelics?

- **Humphrey Osmond** – A psychiatrist named Humphrey Osmond first used the term psychedelic in 1957, to denote the therapeutic tendency of these drugs.
- The word is derived from the Greek words psyche, meaning mind, and deloun, meaning to manifest.
- **Arthur Heffter –** The modern-day use of psychedelics is commonly associated with the German chemist Arthur Heffter isolating mescaline from the peyote cactus in 1897.
- **Albert Hofmann –** In 1938, while investigating compounds related to ergotamine, the Swiss chemist Albert Hofmann first synthesised LSD.

Ergotamine is present in ergot, an alkaloid that causes construction of blood vessels and is used in the treatment of migraine, and it is produced by the parasitic rye fungus Claviceps purpurea.

What is the experience of using psychedelic substances?

- **Changes –** Users of psychedelic substances report changes in perception, somatic experience, mood, thought-processing, and entheogenic experiences.

Somatic experiencing is a form of an alternative therapy aimed at treating trauma and stressor-related disorders like PTSD, with the primary goal of modifying the trauma related stress response.

- **Perceptual distortions –** They most commonly include the visual domain.

Entheogens are psychoactive substances that induce alterations in perception, mood, consciousness, and cognition for the purpose of spiritual development or in sacred contexts.

- **Synaesthesia –** An intriguing phenomenon called synaesthesia may occur, where the sensory modalities cross and the user may 'hear colour' or 'see sounds'.

Synaesthesia is the production of a sense impression relating to one sense or part of the body by stimulation of another sense or part of the body.

How do psychedelic substances work inside the body?

- **Serotonin –** Classical psychedelics boost brain serotonin levels.

Serotonin is the substance that is found mostly in the digestive tract, central nervous system and platelets.

- **Psilocybin –** Psilocybin's therapeutic effects requires activation of serotonin receptors.
- About half of the ingested psilocybin is absorbed via the digestive tract.
- **Psilocin –** In the body, psilocybin is converted to psilocin, which is then metabolised in the liver.
- LSD is completely absorbed in the digestive tract and then metabolised in the liver.

Can psychedelic substances cause harm?

- **No deaths –** Death due to direct toxicity of LSD, psilocybin or mescaline has not been reported in the 50+ years of recreational use.
- **Synthetic psychedelics –** They have been associated with acute cardiac, central nervous system, and limb ischaemia, as well as serotonin syndrome.
- The psychological effects of psychedelics depend on the interaction between the drug and the user's mindset (together called a set), and the environmental setting.

What is psychedelic-assisted psychotherapy?

- **Psychedelic-assisted psychotherapy –** It has three types of sessions:
  - Preparatory
  - Medication (1-3 sessions with moderate/high doses of psychedelic)

- Integration

Can psychedelics be really used to treat depression?

- Psychedelic substances provide an intriguing avenue through which to probe the broader constructs of creativity, spirituality, and consciousness, aside from their therapeutic effects.
- If larger trials establish their safety and therapeutic efficacy, the FDA and other regulatory bodies may clear these agents for routine clinical use.

Reference

1. The Hindu | Can psychedelics treat depression?

