

# Drug Intoxication & Detoxication: Novel Approaches

Open access Commentary

## The Fascinating World of Psychoactive Substances and Stigma and Discrimination

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#### **DESCRIPTION**

Psychoactive substances, often referred to as psychotropic drugs, are a diverse group of chemical substances that act on the central nervous system to alter brain function, resulting in temporary changes in perception, mood, consciousness, and behaviour. These substances have been used throughout history for various purposes, including medicinal, ritualistic, and recreational. In contemporary times, their use continues to be widespread, sparking debates around their benefits, risks, and legal status. The use of psychoactive substances dates back thousands of years. Ancient cultures utilized naturally occurring compounds found in plants and fungi for religious ceremonies, healing rituals, and social gatherings. For instance, the use of peyote by indigenous tribes in North America, ayahuasca by Amazonian tribes, and cannabis in various cultures across the globe highlights the deep-rooted connection between humans and psychoactive substances. These early uses were often tied to spiritual or shamanistic practices, where the substances were believed to facilitate communication with the divine or enhance spiritual awareness. Psychoactive substances can be broadly categorized into several groups based on their effects on the brain and behaviour: These substances, such as caffeine, nicotine, cocaine, and amphetamines, increase alertness, attention, and energy by enhancing the activity of certain neurotransmitters in the brain. They are commonly used to boost productivity and stay awake, but they can also lead to increased heart rate, anxiety, and, with prolonged use, addiction. Including alcohol, benzodiazepines, and barbiturates, depressants slow down brain function and induce relaxation and sleep. They are often prescribed to treat anxiety and insomnia but can be dangerous when used excessively, leading to impaired judgment, motor skills, and potential overdose. Natural and synthetic substances like morphine, heroin, and prescription painkillers are known for

their potent pain-relieving properties. They work by binding to opioid receptors in the brain, producing euphoria and pain relief but also posing a high risk of addiction and overdose. They can induce profound changes in consciousness, leading to experiences that some users describe as mystical or enlightening. However, they can also cause disorientation and anxiety. Marijuana contains psychoactive compounds which produce a range of effects from relaxation to altered sensory perception. Cannabis is unique in its varied effects, acting as both a stimulant and depressant depending on the dose and individual response. Substances like ketamine, PCP, and dextromethorphan (found in some cough syrups) cause a sense of detachment from reality and oneself. They are used medically for anaesthesia and pain relief but can also produce hallucinations and an altered sense of time and space. In modern medicine, psychoactive substances play a crucial role. Antidepressants, antipsychotics, and anxiolytics are prescribed to manage mental health conditions such as depression, schizophrenia, and anxiety disorders. Stimulants are used to treat ADHD and narcolepsy, while opioids are essential in managing severe pain. Moreover, emerging research into psychedelics is revealing potential therapeutic benefits for conditions like PTSD, depression, and substance use disorders. Controlled clinical studies are exploring how substances like psilocybin and MDMA can facilitate psychotherapy, showing promising results in cases where traditional treatments have failed. Despite their benefits, psychoactive substances come with significant risks.

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### **CONFLICT OF INTEREST**

The author declares there is no conflict of interest.

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