

After decades of being seen purely as illegal, the potential for psychedelic drugs to be used as a treatment for mental health problems is being considered once again. Richard Shrubbs reports

**I**n the 1950s and 60s a raft of research was carried out into psychedelic drugs such as lysergic acid diethylamide (LSD), psilocybin (a compound found in 'magic' mushrooms), MDMA (ecstasy) and mescaline, which alter cognition and perception, and their potential benefit to people with mental health problems.

But at the same time as this research was being carried out, the hippy and beatnik crowds discovered the drugs' recreational benefits, and the political landscape changed from acceptance of such drugs as being potentially useful therapeutic substances, to being 'dangerous' to the point that the US banned all use of psychedelics in 1968 – even for research.

Albert Hoffman, the creator of LSD, summed up scientific thinking when this happened in his 1979 memoir *LSD: My problem child*:

"This joy at having fathered LSD was tarnished after more than 10 years of uninterrupted scientific research and

medicinal use when LSD was swept up in the huge wave of an inebriant mania that began to spread over the western world, above all the United States, at the end of the 1950s."

In his and many others' opinion, the door was closed to a potential psychiatric wonder drug being tested properly.

Now however, there are a number of studies taking place that are once again investigating whether psychedelic drugs could have a therapeutic benefit if administered properly.

### Re-opening the door

Dr Ben Sessa is a consultant psychiatrist in Somerset and a leading voice calling for scientific rigour to be taken to the benefits of psychedelics. His last job was as a researcher for Professor David Nutt in the Advisory Council for the Misuse of Drugs (ACMD). His career plans changed when Nutt presented Sessa's paper on the safety of MDMA to the Government in 2009, which resulted in Nutt's dismissal.

# Altering perceptions





Referring to the cessation of psychedelic research in the 1960s, Sessa points out: "The only thing stopped by the outright ban was legal clinical research. The hippy movement made the stuff themselves and recreational use has continued unabated."

Citing morphine and codeine in medicine, Sessa wonders what would happen if a government took a 'moral stance' on opiates? "Doctors wouldn't have much they could use; such is opiates' proven efficacy. They'd be up in arms!"

## Unfounded fears

Robin Carhart-Harris, a post-doctoral researcher at the neurophysiology unit in Imperial College London, suggests that the primary fear of politicians – psychedelics causing schizophrenia – is largely unfounded. "A recent meta-analysis of LSD studies in the 1960s with over 1,000 subjects showed that there is a very low chance of LSD inducing schizophrenia – much less than that which people contract the illness anyway, regardless of drug use."

A 1998 paper published by the Multidisciplinary Association for Psychedelic Studies in the US reinforces Harris' assertions. *A Critical Review of Theories and Research Concerning Lysergic Acid Diethylamide (LSD) and Mental Health* by David Abraham reports:

"[A study] surveyed all the researchers using LSD in the United Kingdom in 1968. He gathered data on 4,300 psychiatric patients, who between them received 49,500 doses of LSD. Prolonged psychoses were reported in 37 patients."

Put another way – if psychedelics caused schizophrenia there would have been an explosion of it since the 1950s and the advent of such drugs being abused. There hasn't – the global prevalence of schizophrenia has remained at 1%.

However, those who are predisposed to schizophrenia should not take psychedelics because of the potential effects. Anyone else may well be safe, but working out who is predisposed is the difficulty as the exact causes of schizophrenia are not yet fully understood.

Carhart-Harris researches the therapeutic effects of psychedelics at Imperial. "When we assess someone for a trial, we look at their immediate family history, whether they have had any psychiatric conditions before, and whether in using the drug before they have had a bad trip," he says.

Such assessment looks at whether the candidate is predisposed to mental illness – if they are, they won't be trialled. They have not had one bad trip in their studies.

## MDMA and PTSD

Elsewhere, there is now some initial research that has shown that MDMA has positive effects on post-traumatic stress disorder (PTSD), though the research to date has been small scale and is far from ready to be rolled out across the NHS.

Dr Michael C Mithoefer published a double-blind randomised control trial into the therapeutic benefits of MDMA in US veterans of war with PTSD in April 2011, in the *Journal of Psychopharmacology*. "The safety and efficacy of  $\pm$ 3,4-[MDMA] methylenedioxymethamphetamine-assisted psychotherapy in subjects with chronic, treatment-

resistant post-traumatic stress disorder: the first randomized controlled pilot study' found that:

"MDMA-assisted psychotherapy compared with the same psychotherapy with inactive placebo produced clinically and statistically significant improvements in PTSD symptoms as measured by standard symptom scales. This difference was immediate and was maintained throughout the time period. There were no drug-related serious adverse events and no evidence of impaired cognitive function as measured by neuropsychological testing."

There may be even more radical uses for psychedelics; research is showing that they may be able to treat personality disorders (PDs).

A small-scale study was published in 2011 into personality changes induced by psilocybin. 'Psilocybin occasioned mystical-type experiences: immediate and persisting dose-related effects' was published in the *Journal of Psychopharmacology*. It found that:

"One month after sessions at the two highest doses, volunteers rated the psilocybin experience as having substantial personal and spiritual significance, and attributed to the experience sustained positive changes in attitudes, mood, and behavior, with the ascending dose sequence showing greater positive effects. At 14 months, ratings were undiminished and were consistent with changes rated by community observers."

PD is widely viewed as untreatable in current medicine. Sessa argues that: "A powerful, almost religious feeling and a sense of being part of a greater whole induced by a controlled trip can really change one's outlook on life. In changing one's outlook on life, so one's personality changes. This is a strong argument for research into a psychedelic intervention for personality disorder."

"One has to weigh up the dangers of a drug being used therapeutically against the benefits it brings."

However, he doesn't advocate blindly giving anyone with PD some mushroom coffee and telling them to enjoy their trip. "Proper, rigorous scientific research needs to be done in the way any psychiatric drug is tested first. There may be intractable problems associated with psychedelics' therapeutic use, and in this case the proper thing to do would be to put them on the scrapheap, as many trialled drugs are."

"Psychopharmacology is crying out for new medicines. You only have to look at the current drugs being used in psychiatry, with their adverse side effects and often hit-or-miss efficacy for patients. One should be open-minded as to what new drugs may have therapeutic benefit, even if they are demonised by current political thinking." ■

Abraham D (1998) *A Critical Review of Theories and Research Concerning Lysergic Acid Diethylamide (LSD) and Mental Health* [online]. Available at: <http://www.maps.org/research/abraham.html> (accessed March 2012).

Hoffman A (1980) *LSD: My problem child*. London: McGraw Hill.

Mithoefer MC, Wagner MT, Mithoefer AT, Jerome L & Doblin R (2011) The safety and efficacy of  $\pm$ 3,4-methylenedioxymethamphetamine-assisted psychotherapy in subjects with chronic, treatment-resistant post-traumatic stress disorder: the first randomized controlled pilot study. *Journal of Psychopharmacology* 25 (4) 439-452.

Roland R, Johnson MW, Richard WA, Richards & McCann U (2011) Psilocybin occasioned mystical-type experiences: immediate and persisting dose-related effect. *Psychopharmacology* 218 649-665.

Richard Shrubbs is a freelance journalist