- Drugs—Psychological aspects

Benefits of microdosing LSD might be placebo effect, study finds

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It became the trend in Silicon Valley and spread swiftly around the world: the latest hack to boost the mood, sharpen the mind and get the creative juices flowing.



But for all the entrepreneurs and tech gurus that flocked to the practice, scientists have never been sure whether consuming small doses of LSD has the benefits its advocates claim.

Much of the problem is down to the law. Without easy access to the schedule 1 drug, researchers have struggled to run clinical trials. In their absence, most evidence is anecdotal. And as scientists are all too happy to stress, the plural of anecdote is not data.

Now researchers at Imperial College London have made progress on the question. In the largest placebo-controlled trial into psychedelics to date, they found that small doses of LSD indeed boosted the psychology in all manner of ways.

That was only half of the results, however. When the researchers examined what trial volunteers took, they found placebos worked equally as well as the drug. In short, the uplift reported by microdosers might be nothing more than the placebo effect.

"Our findings confirmed some of the beneficial psychological effects of microdosing from anecdotal reports and observational studies, such as improved sense of wellbeing and life satisfaction," said Balázs Szigeti, the lead author and a research associate at Imperial's Centre for Psychedelic Research.

"But we see the same improvements among participants taking placebos. This suggests that the improvements may not be due to the pharmacological action of the drug but can instead be explained by the placebo effect."

The trend for microdosing followed enthusiastic endorsements for LSD from Steve Jobs, the late CEO of Apple, who proclaimed that taking the drug was one of the most important things he ever did. The practice conjures up images of Bradley Cooper, whose struggling author Edward Morra in Limitless finds that a regular pill does more than overcome writer's block.

Launched in 2018, the Imperial trial recruited 191 members of the public who were already microdosing with LSD and able to participate online. The volunteers followed instructions to prepare gel capsules containing either a low dose of LSD, estimated at about 13μg, or a placebo. They then followed instructions to muddle up the capsules in envelopes bearing QR codes so they did not know which they took when.

During the study, the researchers used scans of the QR codes to log when each participant took a placebo versus a microdose of LSD. Throughout the four-week trial, the volunteers completed surveys on how they felt and performed a series of online cognitive tests. Typically, those on the trial reported feeling a psychological boost within a few hours of taking either LSD or placebo capsules.

The scientists found that those who microdosed for four weeks reported improved wellbeing, mindfulness and life satisfaction, along with reduced feelings of paranoia. But the placebo group also improved – to such an extent that there was no statistical difference between the two. The findings, published in eLife, suggest the expectation of taking a small dose of the drug was as good as taking the drug itself.

While the scientists believe the results are valid, they concede that the study is not as robust as a standard, laboratory-based placebo-controlled clinical study. Since the participants sourced their own drugs, it is impossible to be sure what doses each ingested, and many of the participants were evidently familiar enough with the effects of the drug to guess whether they had taken a microdose of LSD or a placebo capsule.

James Rucker, a clinician scientist who runs the psychedelic trials group at King's College London, and was not involved in the research, said: "This suggests that the perceived beneficial effects of microdosing psychedelics in this group are more likely to be a result of positive expectation than the capacity of the drug to induce a beneficial effect."

While it is possible the study was too small to detect a beneficial effect, Rucker said that if that was the case, then the improvement was likely to be so small that it might not have much real world impact anyway.

"It remains to be seen whether microdosing may have therapeutic effects in patients with a defined mental health condition such as depression, or over a longer time period," he added. "These are tractable hypotheses and we should be able to explore them with trial designs where participants receive legal microdoses of psychedelics of known purity and quality. However such studies are largely impossible under the UK government's Schedule 1 restrictions, under which all classical psychedelics are classified.

"This highlights why the authors chose this unusual and clever design. But it also highlights how schedule 1 restrictions stifle legitimate clinical research."