

The Strongest Studies Tell a Different Story but Psilocybin Microdosing Sounds Promising

Researchers have recently reviewed the available literature to systematically examine the reported effects, motivations, dosing protocols, adverse events, and transparency in studies on [psilocybin](#) microdosing among adults.



Study

The current systematic review critically examines and synthesizes scientific evidence regarding adult MM or truffle microdosing. It addresses reported [health effects](#), perceived benefits, user motivations, dosing protocols, side effects, adverse events, and demographic differences.

A comprehensive literature search was conducted in March and April 2025 and updated in June 2026 across multiple databases, including CINAHL, OVID, ProQuest, PsycINFO, PubMed, and Scopus. Studies published in English or Spanish were considered, with no restrictions on publication date. Eligible studies included adults (aged 16 or older), utilized either quantitative or [qualitative methodologies](#), and specifically investigated psilocybin MM or truffle microdosing. Preclinical studies without adult data were excluded from analysis.

Microdosing was defined as either author-reported definitions or quantitative thresholds: less than 0.5g of dried or fresh MM, or less than 1g of fresh truffles. The 1g truffle threshold was informed by lay sources, as no peer-reviewed references for cut-off values were identified. Studies involving synthetic psilocybin, [isolated compounds](#), or combined treatments were excluded.

Designated reviewers independently screened study titles and abstracts using PICO criteria: population (adults), intervention (psilocybin MM or truffle microdosing), comparator (placebo or none), and outcome (any [health-related outcome](#)). A meta-analysis was not conducted because study designs, dosing schedules, and reported outcomes were too heterogeneous for meaningful quantitative pooling.

Findings

A comprehensive database search identified 897 references. After removing duplicates and screening, 103 articles underwent full-text review, of which 11 met the inclusion criteria. The

included studies were published between 2018 and 2024. Four were conducted in the United States, while the others took place internationally, including [Argentina](#), the Netherlands, Slovenia, and two international surveys.

Five studies used quantitative designs (cross-sectional, double-blind, [placebo-controlled](#), quasi-experimental), while six used qualitative approaches, including five case studies or reports and one mixed-methods qualitative study. Across all studies, 3,262 participants were included, mostly male (69.9%), with study mean or median ages ranging from 19 to 70 years. Demographic details such as race and socioeconomic status were rarely reported; education and employment data were provided inconsistently.

Eight studies reported at least one positive effect or perceived benefit of microdosing; one found both positive and negative effects, and two reported no significant improvement. In some outcomes, control groups outperformed intervention groups. Outcomes spanned seven domains: well-being, mental health, cognition, physical health, [social relationships](#), creativity, and enhanced senses.

Most studies on well-being reported improvements in mood, happiness, energy, sleep, and quality of life, though some found mixed or no significant changes. Mental health outcomes mainly included reported improvements in depression and [anxiety](#), with some reductions in suicidal ideation and anhedonia. Two studies reported no significant changes, while one qualitative study reported negative findings, including symptoms of psychosis.

Cognitive outcomes included reported improvements in focus, productivity, motivation, and creative thinking, though some studies found no change or noted decreased inhibitory control and [mental confusion](#). Similarly, some studies reported improved flexibility, functional ability, athletic performance, and self-care, though one reported no significant change in physical activity.

Social relationship studies generally reported increases in emotional connection, empathy, sociability, and communication, though some noted declines. Most studies reported positive creativity-related outcomes, while one study found no change. All three studies on enhanced senses reported positive effects, including subjective improvements in post-COVID-19 anosmia and self-reported improvements in sight, hearing, or smell. Single studies reported improvements in substance dependence, [chronic pain](#), and curiosity.

Most (86%) microdosing motivations were non-medical; only 14% related to medical diagnoses, mainly mental health. Research indications included cognition, creativity, [stress](#), anxiety, depression, emotional processing, subjective experience, and perception.

Studies used various psilocybin forms (MM, truffles) and heterogeneous dosing regimens. Most studies did not report adverse events; those reported were generally mild. One study reported serious symptoms including psychosis-like experiences, sensory distortion, and suicidal ideation at higher doses, as well as intense anxiety, [panic attacks](#), and a Crohn's disease exacerbation.

Among quantitative studies, randomized controlled trials and one observational study raised concerns, while another observational study and one quasi-experimental study had a very high or [serious risk](#) of bias. Most qualitative case reports met appraisal criteria, though one did not;

the mixed-methods study had unclear domains. Qualitative studies were considered hypothesis-generating rather than evidence of efficacy.

It must be noted that five studies reported some form of support, including government funding, private nonprofit support, or industry-related [material support](#); two had no financial support, and four did not specify. Most research declared no conflicts of interest, but three reported conflicts.

Conclusion

The current review highlighted that although some studies reported potential benefits of microdosing psilocybin in adults, [evidence](#) is limited by methodological limitations, small or highly uneven sample sizes, heterogeneity, and high or unclear risk of bias. Most data are qualitative or cross-sectional, with five studies consisting of single-patient case reports or small case series, and the two placebo-controlled trials have not shown significant improvements. Current evidence is insufficient to determine efficacy or safety, with adverse event reporting notably lacking.

Future studies should use robust randomized controlled designs, standardized dosing, and thorough [adverse event](#) monitoring, and enroll diverse, clinically relevant samples. Rigorous research is needed to clarify the true benefits and risks as microdosing becomes more widespread.

Source:

<https://www.news-medical.net/news/20260907/Psilocybin-microdosing-sounds-promising-but-the-strongest-studies-tell-a-different-story.aspx>