MICRODOSING CLASSIC PSYCHEDELIC SUBSTANCES FOR OBSESSIVE-COMPULSIVE EXPERIENCES: AN INTERPRETATIVE PHENOMENOLOGICAL ANALYSIS.

by

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THESIS OVERVIEW

This thesis contains two academic reports and their corresponding press releases. This thesis is submitted as partial fulfilment for the Clinical Psychology Doctorate (Clin.Psy.D) degree at the University of Birmingham.

Literature Review

This chapter includes the full meta-ethnography, which explores people's experiences of microdosing one or more classic psychedelic substances to help anxiety associated with the NICE (2014) list of anxiety conditions. This meta-ethnography includes nine studies and presents four themes within the results. This meta-ethnography finds largely positive reports of microdosing psychedelics helping felt anxiety, with attention paid to some contradictory reports of infrequent increased anxiety when microdosing. The discussion section outlines multiple strengths and limitations of this review and suggests potential future research ideas to continue this line of exploration. This chapter also contains a press release for the meta-ethnography.

Empirical Paper

This chapter consists of a qualitative empirical study exploring people's experiences of microdosing one or more classic psychedelic substances to help with experiences of obsessions and compulsions. This study used Interpretative Phenomenological Analysis (IPA) to interpret the eight interviews conducted via an online web chat with participants. Three overarching themes were found. Participants typically reported beneficial and positive outcomes of microdosing psychedelics for obsessions and compulsions. The discussion section outlines elements of the results of this study that align with previous research in similar areas, the strengths and limitations of the study, and the theoretical implications and suggestions for future research. This chapter also contains a press release for the empirical study.

DEDICATION

This thesis is dedicated to Sophie.

You are the most powerful, caring, enduring, authentic, funny, gracious and profoundly moving woman. Your radiant warmth encourages everyone around you to be a little more loving and a lot more free. As your little sister, I have always been and will always continue to be, in awe of you endlessly.

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Ardıç, I sit here now, the day before I submit this thesis, thinking about how I was able to assemble the thousands of words used to write this report, but yet I never felt like I found the perfect few words which were heartfelt, sincere and thoughtful enough to accurately express my gratitude for finding you. The ways in which you have jumped headfirst into supporting me through this last year, with all its highs and lows, is profoundly and deeply appreciated. Your humour, kindness, dependability, adventurousness and enthusiasm inspire me to live larger and to take chances I wouldn't have had I not met you. Multiple difficult moments this year have felt conceivable again because we have faced them together. You are my true teammate, best friend, and favourite person.

To my decade-long best friend, Al. Living with you these past three years has been one of the greatest joys of my life. It is rare how often you find someone who is so obviously cut from the same cloth. From the fun we share in one breath to our introspective, respectful and supportive insights into ourselves and our relationships in the next, you never fail to surprise and delight me. You are a truly incredible friend and human being.

Finally, I want to express my gratitude to everyone who gave their time to participate in my study. It is a strange feeling to have asked about so many details of your lives without ever meeting you or even hearing your voice, and I want to thank you all for your grace in inviting me into your worlds for an hour or more. Thank you for believing in this study, and thank you for sharing your stories.

TABLE OF CONTENTS

C. LIST OF FIGURES

D. LIST OF TABLES

CHAPTER A

LITERATURE REVIEW: Experiences of microdosing classic psychedelic substances to reduce anxiety conditions: a meta-ethnography

Abstract

Introduction. Contemporary research investigating psychedelic usage for anxiety shows promising yet contradictory results. However, with growing intrigue regarding microdosing psychedelics for anxiety conditions and the ability of qualitative research to illuminate personal accounts of previously conflicting results, this meta-ethnography is important to consolidate the currently available literature and is the first of its kind to be conducted when exploring microdosing psychedelics to reduce anxiety conditions.

Methodology. A meta-ethnography was conducted following Noblit and Hare's (1998) stepwise method and is presented alongside a grounded explanation of how the primary author executed each step to complete this meta-ethnography.

Results. Four overarching themes were found: 1. Motivations for microdosing psychedelics; 2. Microdosing psychedelics change experiences of anxiety; 3. Processes of change when microdosing psychedelics for anxiety conditions; and 4. Integrating lessons from microdosing psychedelics into everyday life.

Discussion. Participants more frequently reported positive experiences, highlighting many areas in which microdosing helped reduce anxiety symptoms and proposed processes of how participants believed microdosing worked to help lessen their symptoms. Reflections on the meta-ethnography results with proposed connections to previous literature on similar topics are presented. The strengths of this study included its rigorous research design, and the limitations included the potential of a biased sample, with further consideration provided. Multiple suggestions for future research are discussed.

Conclusion. Microdosing psychedelics for anxiety conditions is perceived as a promising treatment for anxiety. However, much more quantitative and qualitative research is needed to understand how microdosing psychedelics for anxiety may work fully.

Introduction

Definitions

This chapter will draw from Nichols' (2016) definition of classic psychedelics. The term 'psychedelics' includes the classic serotonergic hallucinogens, which have a similar method of working, including Lysergic Acid Diethylamide (LSD), psilocybin, N-Dimethyltryptamine (DMT) and mescaline. These substances are psychotropic, meaning they may alter perception and mood, affect numerous cognitive processes, and are often used recreationally (Nichols, 2016). This definition excludes cannabinoids, dissociative substances, Salvinorin A (such as ketamine) or entactogens (such as 3,4 methylenedioxymethamphetamine; MDMA) as they have a different way of working to serotonergic hallucinogens (Nichols, 2016).

Microdosing refers to the routine ingestion of doses low enough not to trigger perceptual changes such as auditory or visual hallucinations of at least one psychedelic substance (Fadiman, 2011); a microdose of a psychedelic is between one-tenth and one-twentieth of a 'recreational dose', therefore for LSD, a microdose is between 7–13 micrograms; and for dried psilocybin mushrooms, 0.1–0.4 grams (Fadiman & Korb, 2019). In contrast, macrodosing refers to dosing for a typical psychedelic 'trip' to induce alterations in cognition, perception, and emotion (Halberstadt, 2015; Nichols, 2016).

Lastly, the term 'anxiety conditions' will draw from the National Institute for Health and Care Excellence (NICE) definition of recognised anxiety disorders, including Generalized Anxiety Disorder (GAD), Panic Disorder, Social Anxiety Disorder (SAD), and Post-Traumatic Stress Disorder (PSTD), Obsessive-Compulsive Disorder (OCD) and Body Dysmorphic Disorder (BDD), and phobia-related conditions (NICE, 2014).

History and legality of psychedelic usage

Non-Western indigenous cultures have used psychedelics for their medicinal properties and as sacramental tools for thousands of years (Doblin et al., 2019; Sessa, 2016). In the West, research examining psychedelic use and its potential medical and psychological value grew enormously in the 1950s (Dyck, 2005). By the 1960s, this widespread research represented an encouraging and novel branch of psychiatry (Dyck, 2005). However, The 1971 UN Convention on Narcotics banned psychedelic substance use globally, meaning that in the following decades, research regarding psychedelic usage was virtually extinct (Nutt & Carhart-Harris, 2021).

Many countries have recently decriminalised psychedelics as the medical benefits are becoming more apparent (Rose, 2023), with the recent second 'boom' of psychedelic research in previous years (Nutt & Carhart-Harris, 2021). For example, Portugal is one of the first countries to decriminalise all drugs, including psychedelics; a legal loophole in the Netherlands laws allows for the sale and consumption of psilocybin; multiple countries in South America have ayahuasca and mescaline as legal drugs, with Brazil as historically one of the most liberal countries for psychedelic usage (Rose, 2023). Furthermore, two states in the US have legalised and decriminalised psychedelics (Oregon in 2020 and Colorado in 2022), and as of July 2023, Australia legalised psilocybin and MDMA for medical purposes (Rose, 2023).

Macrodosing psychedelics for anxiety conditions

Recent literature has focussed on macrodosing psychedelics for anxiety conditions, with varying results. One recent review investigated the efficacy and safety of macrodosing psychedelics in treating anxiety disorders, including nine psychedelic-assisted trials using ayahuasca, ketamine, LSD, MDMA, or psilocybin (Fuelner et al., 2023). This review found significant efficacy in reducing anxiety symptoms as well as increasing self-perception and social functioning within GAD, SAD and anxiety regarding physical conditions (Fuelner et

al., 2023). The review suggests that the therapeutic effects of psychedelics lasted weeks post-dosing, and no severe adverse effects were reported (Fuelner et al., 2023). However, the authors report that the small number of studies which fit their inclusion criteria for the review limited their ability to analyse more varied groups of anxiety conditions (Fuelner et al., 2023).

Furthermore, of the nine studies included, ketamine was used within four of these studies, meaning the results may be skewed to focus mainly on the effect of ketamine, with the other psychedelics weighing less within the results (Fuelner et al., 2023). The methodology of all nine included self-report measures, and authors reported through an assessment of bias that all studies had a 'high' bias rating for performance bias (through limited or inadequate blinding of participants and researchers) and detection bias (through limited or inadequate blinding of the outcome assessment; Fuelner et al., 2023). However, all studies showed low reporting bias, meaning it is likely that all included participants were not selectively reporting either the positive or adverse outcomes of the psychedelic-assisted treatment (Fuelner et al., 2023).

There are currently multiple randomised control trials (RCTs) being conducted globally which aim to investigate the efficacy of macrodoses of different psychedelics with varying anxiety conditions, including but not limited to a study of DMT with participants with GAD and depressive symptoms (Cybin IRL Limited, 2024), one study investigating LSD for palliative care patients experiencing death anxiety (University Hospital, Basel, Switzerland, 2024), one study exploring psilocybin-assisted therapy for cancer-related Anxiety (University of Washington, 2023), a Phase 2 trial for MDMA-assisted psychotherapy for social anxiety (Luoma, 2022), two studies of psilocybin for people receiving palliative care due to psychological distress linked to an incurable illness diagnosis (Ottawa Hospital Research Institute, 2024; EuroPsy, 2024), and seven studies investigating the efficacy of

psilocybin for OCD symptoms (Beersheva Mental Health Centre, 2023; Centre for Addiction and Mental Health, 2024; Imperial College London, 2022; Johns Hopkins University, 2022; University of Arizona, 2019; Yale University, 2018; Yale University, 2023). Trials were referenced with the year the study began.

A systematic review of classic psychedelics for the treatment of depression and anxiety (Muttoni et al., 2019) reports that macrodosing psychedelic studies typically report adverse effects such as transient anxiety, short-lived headaches, nausea and mild increases in heart rate and blood pressure. Microdoses of psychedelics have also been explored regarding psychological distress, and this may offer an opportunity to avoid side effects reported with macrodoses.

Microdosing psychedelics for anxiety and general mental health

Recent systematic reviews tentatively suggest that microdosing serotonergic psychedelics promotes neurogenesis and neuroplasticity (Calder & Hasler, 2023), which in turn alleviates some symptoms of various psychiatric conditions such as rumination, thus leading to a reduction of depressive symptoms (Kuypers, 2020; Sarris et al., 2022). Furthermore, a recent systematic review was conducted, reviewing all available studies at the time it was written, exploring accounts and effects of microdosing psychedelics (44 studies published between 1955 and 2021; Polito & Liknaitzky, 2022). The review reported findings related to anxiety were contradictory, with six studies reporting decreased anxiety, four studies reporting increased anxiety, and three studies reporting both increases and decreases in anxiety (Polito & Liknaitzky, 2022). The review discussed how these contradictory findings might be explained through contextual factors such as the setting in which a person microdoses and that individual differences could explain that microdosing may reduce anxiety in some people but increase anxiety in others (Polito & Liknaitzky, 2022).

Systematic reviews outline some limitations to the available literature on microdosing psychedelics, including not using blinded conditions for participants or researchers within randomised control trials (RCTs), small sample sizes and lack of Phase III clinical trials (Kuypers, 2020); Sarris et al., 2022). Other reviews highlight limitations such as gender bias, heterogeneity of dosing schedules and substances used (Ona & Bouso, 2020; Polito & Liknaitzky, 2022), as well as insufficient breadth of testing on both healthy and unhealthy participants (Bălăeț, 2022). The research paucity means there are currently few high-quality quantitative studies such as RCTs available, and research is heavily skewed towards narrow self-report methods such as questionnaires.

However, microdosing psychedelics remains intriguing to many people. A recent study explored the perceptions of mental health services users on microdosing psilocybin (Corrigan et al., 2022). Using a qualitative questionnaire with 99 participants, the research found that 59% of respondents supported psilocybin as a medical treatment, with 72% agreeing that more research should be conducted in the area (Corrigan et al., 2022). Typical concerns for microdosing psychedelics included fear of adverse effects, lack of knowledge, insufficient research, and illegality of the substances (Corrigan et al., 2022).

Neurobiology of anxiety, SSRIs and classic psychedelics

In the United Kingdom (UK), the National Health Service (NHS) will first offer a selective serotonin reuptake inhibitor (SSRI) as medication for people experiencing anxiety (NHS England, 2022). SSRIs can help anxiety as they block the reuptake of serotonin at the synaptic level, increasing serotonin activity in the brain (Hyttel, 1994). Literature continues to suggest that low serotonin levels link to presentations of higher anxiety experiences (aan het Rot et al., 2009; Booij et al., 2010; Jans et al., 2007; Millan, 2004; Wong et al., 2005). Thus, pharmacological treatment of anxiety typically targets serotonin systems, such as SSRIs (NICE, 2023). However, within some papers, this link is weak and not consistently

reproducible, suggesting low serotonin may act as a predisposing factor instead of a causal root of anxiety (Karg et al., 2011; Kishi et al., 2013).

Classic serotonergic hallucinogens and SSRIs work similarly as they both exert their pharmacological effects through the 5-HT system, acting as agonists of the 5-HT2A receptor (Passie et al., 2008; Vollenweider et al., 2007; Vollenweider & Kometer, 2010). Neurobiological research into lower doses of LSD has been found to decrease the firing of serotonergic neurons in the dorsal raphe nucleus (which controls various physiological functions, including learning, memory and affect) without affecting the activity of dopaminergic neurons, therefore not causing a 'trip' or psychotic-like symptoms (De Gregorio et al., 2016). Instead, repeated lower doses of LSD in mice who experienced chronic exposure to stress stimuli have been found to desensitise serotonin receptors, therefore enhancing the levels of serotonin in the brain and reducing anxiety (De Gregorio et al., 2022). Thus, microdosing LSD, and potentially other classic psychedelics with similar working mechanisms, may work by shifting neural processes in ways that alleviate anxiety but with fewer side effects to macrodoses. This may suggest microdosing as a more tolerable option for some people.

Rationale for a review of qualitative research exploring microdosing psychedelics for anxiety conditions

Qualitative methods can be helpful in illuminating explanations and unique perspectives of people as part of subpopulations with previous contradictory or ill-fitting literature (Chang & Yoon, 2011). This is particularly important for this research question due to the contradictory reports on the effectiveness of treating anxiety by microdosing psychedelics (Ona & Bouso, 2020). Secondly, qualitative research is important to provide depth and context for our quantitative counterparts, with qualitative research enabling the development of understanding and meaning that people ascribe to their experiences (Sutton &

Austin, 2015) and facilitates the development of initial understandings within a topic area less explored (Creswell, 2013). Furthermore, syntheses of qualitative research are not restricted to only the summarising of qualitative results but may also include the generation of new theories, adding breadth of understanding to existing knowledge, and identifying literary gaps in research (Chrastina, 2018).

Therefore, it is important for qualitative accounts of microdosing classic psychedelics for anxiety conditions to be synthesised because research exploring psychedelic usage and anxiety conditions remains limited. The existing research typically focuses on macrodosing, is often quantitative, and explores efficacy ratings. Therefore, synthesising accounts of the qualitative research may offer insight into the motivations, experiences, behaviours, wishes and expectations of people microdosing psychedelics for anxiety conditions.

Summary

In summary, psychedelic literature is currently going through a rapid increase in research interest in the treatment of psychological conditions. Neurobiological links between anxiety, SSRIs and classic psychedelics have shown that serotonin plays an important role in all three. Microdosing psychedelics is much less researched, and the few studies published on microdosing psychedelics for anxiety conditions also show promising and contradictory preliminary results. Therefore, further understanding of motivations, benefits and limitations, and broader experiences can be identified through qualitative research.

Aims

At the time of writing, there are no meta-ethnographies which explore people's experiences of microdosing classic psychedelics for anxiety conditions. The primary research question of this meta-ethnography asked what are the perceived effects on anxiety of people taking microdoses of classic psychedelics. This meta-ethnography aimed to explore:

(1) What are the perceived benefits of microdosing classic psychedelics for people experiencing anxiety or diagnosed with an anxiety condition
(2) What are the perceived challenges of microdosing classic psychedelics for people experiencing anxiety or diagnosed with an anxiety condition
(3) What processes do participants believe are behind microdosing classic psychedelics which may help people feel a reduction in anxiety symptoms

Methodology

Procedure

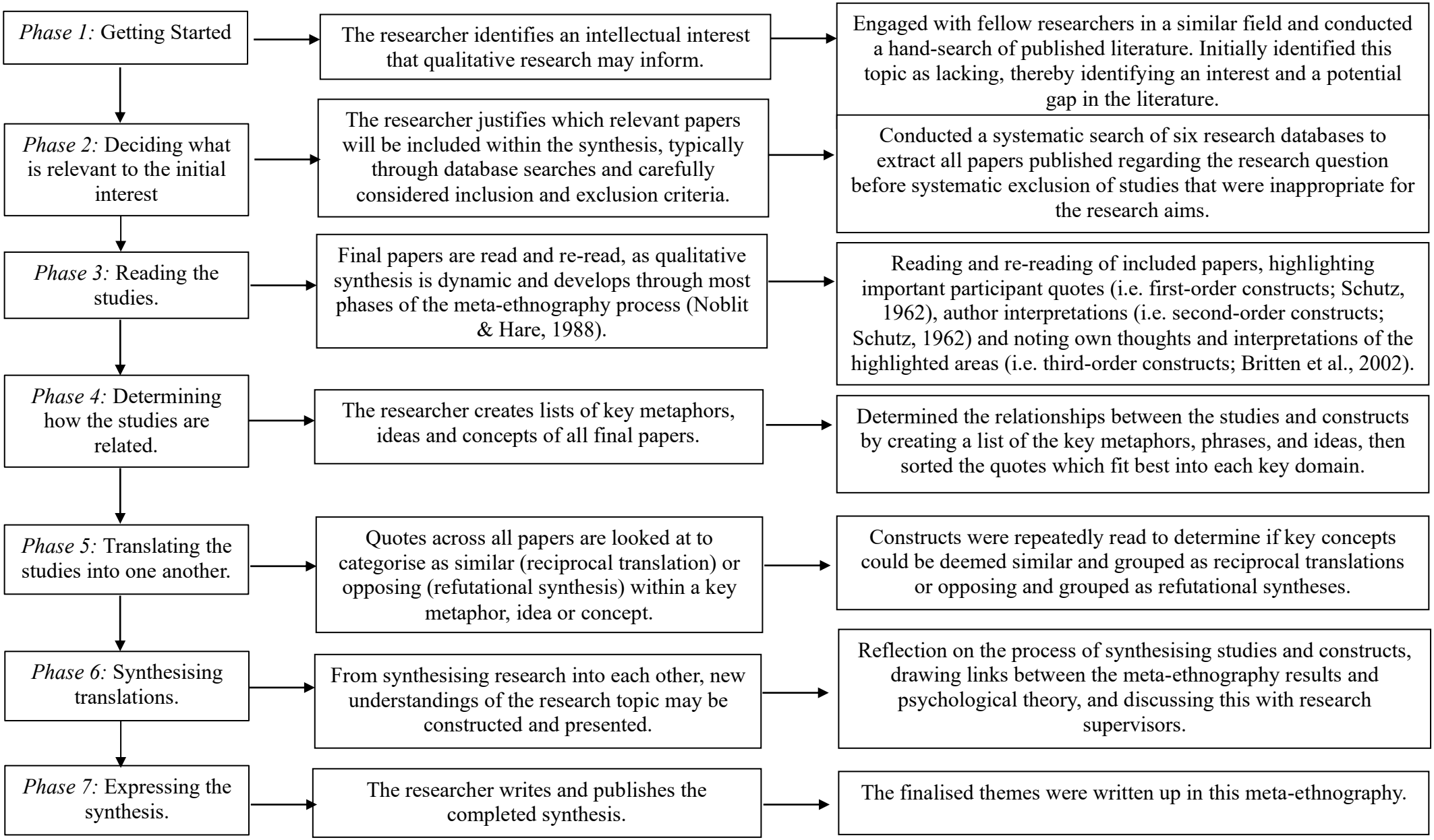
The knowledge and conduct of methodology for this meta-ethnography are primarily based on Noblit and Hare's (1988) book Meta-Ethnography: Synthesizing Qualitative Studies. Please see Figure 1 for a brief description of each of the seven phases of conducting a meta-ethnography (Noblit & Hare, 1988), alongside how the author addressed and completed each methodological step.

Meta-ethnography was chosen for this research due to its explicit emphasis on interpretation within and between multiple studies, which can support the development of new understandings of people's experiences and potential psychological processes behind the experiences being explored (Soundy & Heneghan, 2020). One benefit of using a meta-ethnography approach is that it differs from other qualitative synthesis methodological approaches as the author re-interprets the themes, concepts and metaphors interpreted by the initial authors through a unique translation method to transcend the findings of individual accounts to create higher-order themes (Noblit, 1988; Sattar et al., 2021). Due to this synthesis style, meta-ethnographies can also identify any current gaps in knowledge regarding the research area of interest (Sattar et al., 2021). This is particularly important for the current research question as the qualitative exploration of microdosing classic psychedelics for anxiety conditions remains scarce, meaning we do not yet have a

consolidation of knowledge regarding psychological processes associated with microdosing classic psychedelics in the context of anxiety conditions. Identifiable gaps in the literature and suggestions for future research are important to define clearly, given that the literature currently indicates many people choose to microdose classic psychedelics for anxiety conditions, yet little is currently known about this.

Figure 1.

The seven phases of conducting a meta-ethnography, as described by Noblit and Hare (1988), alongside a brief description of the aligned steps taken to conduct the current meta-ethnography.



Literature search

Search strategy. Three database searches were conducted between February and June 2023. Databases accessed for this review included Web of Science, PubMed, PsychInfo, Embase, and a hand search using Google Scholar. These databases were chosen due to their inclusion of psychological and medical research papers. Synonyms of the four fundamental concepts of the research question - anxiety conditions (as defined by NICE, 2014), microdosing, classic psychedelics and qualitative research - were translated into Boolean search terms to maximise the return of relevant papers. Within the PsychInfo database search, search terms were separately matched to subject headings to ensure the capture of all potentially relevant research papers within the database. The primary author met with a librarian at the University of Birmingham to ensure the search terms would yield the most accurate and numerous results. Please see Table 1 for the Boolean search terms used for database searches.

Table 1.

Boolean search terms used for database searches

Key concepts	Search terms derived from key concepts
Anxiety conditions	Panic OR trauma OR post-traumatic stress OR PTSD OR general anxiet* OR GAD OR social anxiet* OR SAD OR obsessive-compuls* OR OCD OR phobi* OR fear
Microdosing	Microdos* OR sub-hallucinogen* OR low-dos*
Psychedelics	Psychedel* OR Psychoactiv* OR Hallucin* OR Psychotrop* OR Psilocybin OR Magic mushroom* OR Lysergic acid diethylamide OR LSD OR DMT OR Mescaline

Qualitative	Qualitative OR Interview* OR Semi-structured OR Interpretative Phenomenological Analys* OR IPA OR phenomenology OR Thematic Analys* OR TA OR grounded theory OR discourse analysis OR narrative OR meaning making

Systematic screening process. The primary author exported all papers returned from the database searchers and removed all duplicates before the first screening of all extracted papers. The reference manager EndNote was used to aid in the sorting and tracking of all papers exported from literature databases. Inclusion and exclusion criteria were employed to aid the screenings of extracted papers. Please see Table 2 for the inclusion and exclusion criteria for papers in this meta-ethnography.

Table 2.

Inclusion and exclusion criteria for papers returned from database searches.

Inclusion	Exclusion
Uses 'Big Q' qualitative methodology which aims to interpret people's experiences through meaning-making analyses	Written in any language other than English
Includes at least two separate quotations from participants talking about their experiences of microdosing for one or more anxiety condition	Published grey literature, such as theses submitted for a Masters degree
	Focuses on a substance which is not included in Nichols (2016) definition of classic psychedelics

	Does not name a diagnostic anxiety condition specifically within the paper
	Sole inclusion of experiences macrodosing classic psychedelics, or doesn't include differentiate between microdosing and macrodosing experiences

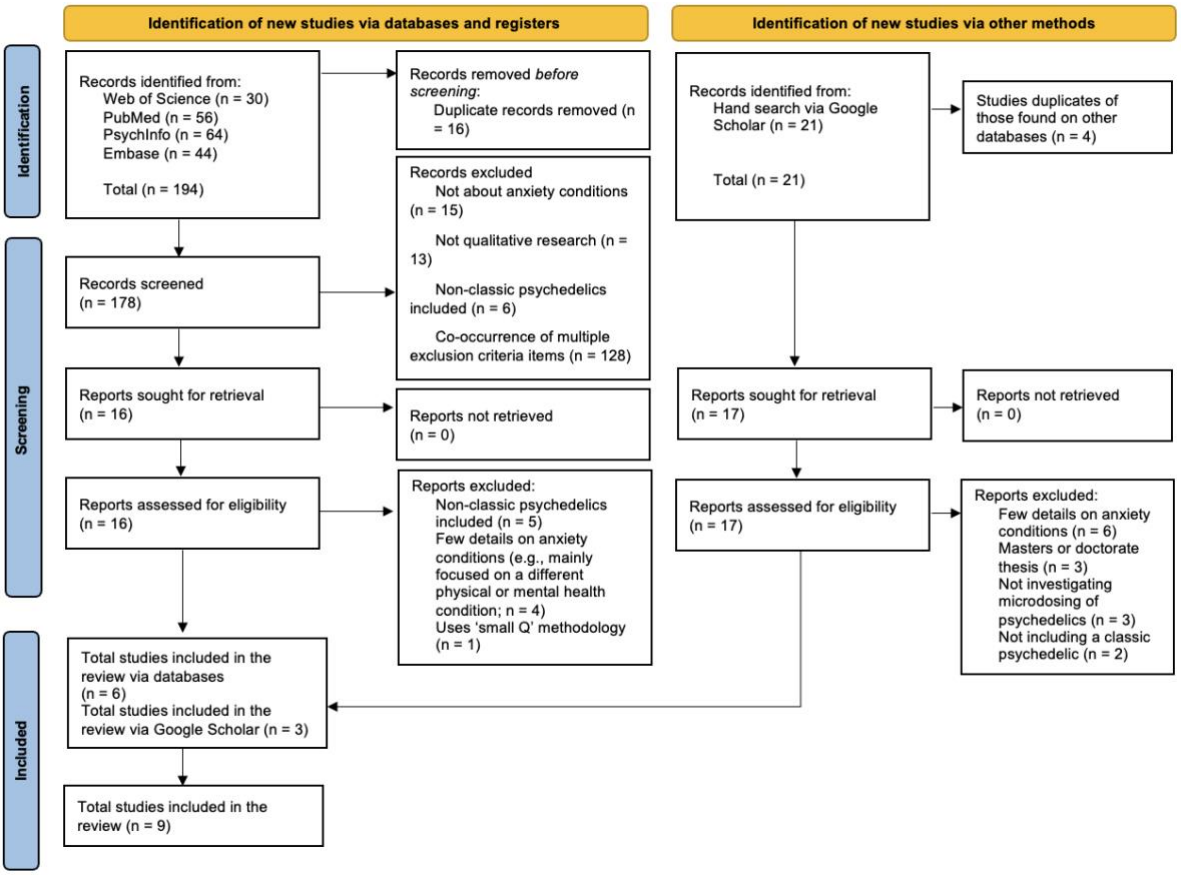
The first inclusion criterion states that papers must have examined individuals' experiences of microdosing classic psychedelics and referenced anxiety conditions through a 'Big Q' methodological approach (Kidder & Fine, 1987). Big Q methodologies are characterised by an approach to qualitative data that is not within a positivist framework and utilises organic processes of coding and theme development (Braun & Clarke, 2006; Langridge, 2004). It was important that the papers in this meta-ethnography used the 'Big Q' methodology as the research aims to focus on people's experiences of microdosing and to be able to provide a detailed analysis of people's meaning-making of their experiences of microdosing for anxiety conditions. The second inclusion criterion resulted from the author noticing many papers being returned as 'relevant' during hand searches that would mention anxiety once within the paper and not again further. Therefore, it was decided that to be included in this meta-ethnography, the paper must include at least two quotes from participants that reference anxiety or a specific anxiety condition. Exclusion criteria for this meta-ethnography were papers written in any language other than English due to this being the only language of the primary author. Papers were also excluded if they focused on any other substances not included in Nichols' (2016) definition of classic psychedelics and if they did not mention 'anxiety' or another specific diagnostic anxiety condition from the NICE (2014) definition to keep the meta-ethnography definitions consistent. Masters and Doctorate

theses were also excluded from possible inclusion within this meta-ethnography due to the chance of variability within the quality of these papers, which may not have been peer-reviewed through similar rigour review processes as other papers and, therefore, could have introduced unpredictability within the synthesis of this meta-ethnography. Finally, papers were excluded if they focused on macrodosing psychedelic experiences to keep the focus on microdosing psychedelics within this meta-ethnography.

When assessing papers for eligibility, papers published as master's or doctorate theses were also excluded as these are not peer-reviewed. In total, literature databases were searched three times, with the first being a curious, exploratory search to view more generally what papers had already been published on the research topic. The three searches were conducted on 6 February 2023, 12 May 2023, and 6 June 2023.

Please see Figure 2 for the PRISMA diagram (Page et al., 2021), which details the number of papers initially extracted from all databases and the number of papers removed due to each exclusion criterion.

Figure 2.
PRISMA 2020 (Page et al., 2021) flow diagram of research papers included for review



Nine papers are included within this meta-ethnography. The nine papers were read, and the characteristics of the papers and included participants were extracted. Of the nine included papers, five recruited participants through posting a digital study advertisement on online social discussion forums (with one of these studies [Golia, 2022] also recruiting from the author's social network), two studies recruited participants through posting physical advertisements in local clinics and medical centres, and two studies did not directly recruit participants due to analysing already publicly available social discussion forum comments on Reddit and YouTube videos. Of the nine included papers, six used online, web-based data collection methods and, therefore, were not restricted to including participants from any specific geographical area. Six papers interviewed participants, two papers used online comment sections to analyse written data, and one study used a qualitative survey design. Five of the nine studies analysed the data collected through Interpretative Phenomenological

Analysis (IPA), and four used Thematic Analysis (TA). Please see Table 3 for the study characteristics of the final included papers.

Table 3.

Study characteristics of included meta-ethnography papers

	Study location	Journal published in	Recruitment method	Data collection method	Data analysis method
Agin-Liebes et al. (2023)	United States	Journal of Humanistic Psychology	Posting study advert in local HIV and AIDS clinics	Microphenomenological elicitation interviews	IPA
Andersson & Kjellgren (2019)	International *	Harm Reduction Journal	Due to data being publicly available, participants were not directly recruited	User comments on YouTube videos	TA
Beaton et al. (2020)	International *	Journal of Drug Issues	Posting study advert on Facebook groups and other online discussion forums	Semi-structured interviews	TA
Belser et al. (2017)	United States	Journal of Humanistic Psychology	Recruited from local University's cancer centre	Semi-structured interviews	IPA
Golia (2022)	United Kingdom	Alef Trust Journal	Recruited from author's social network and through posting study advert on Reddit and Facebook	Semi-structured interviews	IPA
Johnstad (2018)	International *	Nordic Studies on Alcohol and Drugs	Study advertisement posted on seven online social forums	Semi-structured interviews	TA
Lea et al. (2020)	International *	Journal of Psychoactive Drugs	Due to data being publicly available, participants were not directly recruited	Reddit user comments on microdosing subreddits	TA

Petranker et al. (2022)	International *	Journal of Humanistic Psychology	Study advertisement posted on 11 subreddits relevant to microdosing	Open-ended question within larger survey	IPA
Ryan et al. (2023)	International *	BMC Psychiatry	Study advertisement posted on Reddit and other discussion forums	Semi-structured interviews	IPA

Note. International* means this study was conducted via online, web-based data collection methods and, therefore, was not restricted to any specific geographical area, enabling the potential for international data collection; TA = Thematic Analysis; IPA = Interpretative Phenomenological Analysis.

The participants in the papers included in this meta-ethnography are varied. In all nine studies, 1128 participants were included, with all participants aged between 17 and 69. The gender of all included participants across all nine studies is skewed towards including more men. However, two studies did not report the gender of their participants due to their data collection method of analysing online comments on social media websites. Across all nine papers, participants cited using LSD and psilocybin as the psychedelics used to microdose. Seven papers reported that participants microdosed psychedelics independently, with two papers reporting on participants included in larger psychedelic-assisted therapy trials. The most common anxiety conditions referenced within the nine papers were General and Social Anxiety conditions, with two papers also reporting on trauma conditions and one paper reporting on anxiety specific to receiving a cancer diagnosis. Table 4 reports participant characteristics for each of the papers included in this meta-ethnography.

Table 4.

Participant characteristics for each paper included within the meta-ethnography

Demographics	Participants included (N)	Participant age range (years)	Gender	Psychedelics included	Dosage	Individually taken or psychedelic-assisted psychotherapy	Anxiety condition(s) referenced
Agin-Liebes et al. (2023)	9	50-64	All male	Psilocybin	0.3-0.36mg/kg	Psychedelic-assisted psychotherapy	Trauma related to HIV/AIDs crisis
Andersson & Kjellgren (2019)	198 YouTube users	Not reported	Not reported	General 'psychedelics', LSD and psilocybin most commonly cited	Not reported	Individually taken	Trauma and General Anxiety
Beaton et al. (2020)	30	18-69	20 male; 10 female	LSD and psilocybin	Not reported	Individually taken	General Anxiety
Belser et al. (2017)	13	22-69	7 male; 6 female	Psilocybin	0.3 mg/kg	Psychedelic-assisted psychotherapy	Anxiety associated with a cancer diagnosis
Golia (2022)	12	24-38	6 male; 6 female	Psilocybin	0.05g-0.3g	Individually taken	General Anxiety and PTSD
Johnstad (2018)	21	Median age = early 30s	All male	General 'psychedelics', LSD and psilocybin most commonly cited	LSD = 10 -25 mcg; psilocybin = 0.1–0.3g	Individually taken	General Anxiety and Social Anxiety

Lea et al. (2020)	714 Reddit users	Not reported	Not reported	LSD and psilocybin	LSD = 4-20mcg; psilocybin = 0.1-0.6g	Individually taken	General Anxiety and Social Anxiety
Petranker et al. (2022)	118	17-65	99 male; 17 female; 1 nonbinary; 1 not reported	General - "psychedelics"	Not reported	Individually taken	General Anxiety and Social Anxiety
Ryan et al. (2023)	13	Median age = 34.9	10 male; 3 female	LSD and psilocybin	Not reported	Individually taken	"Long-term anxiety disorder"; Social Anxiety; General Anxiety

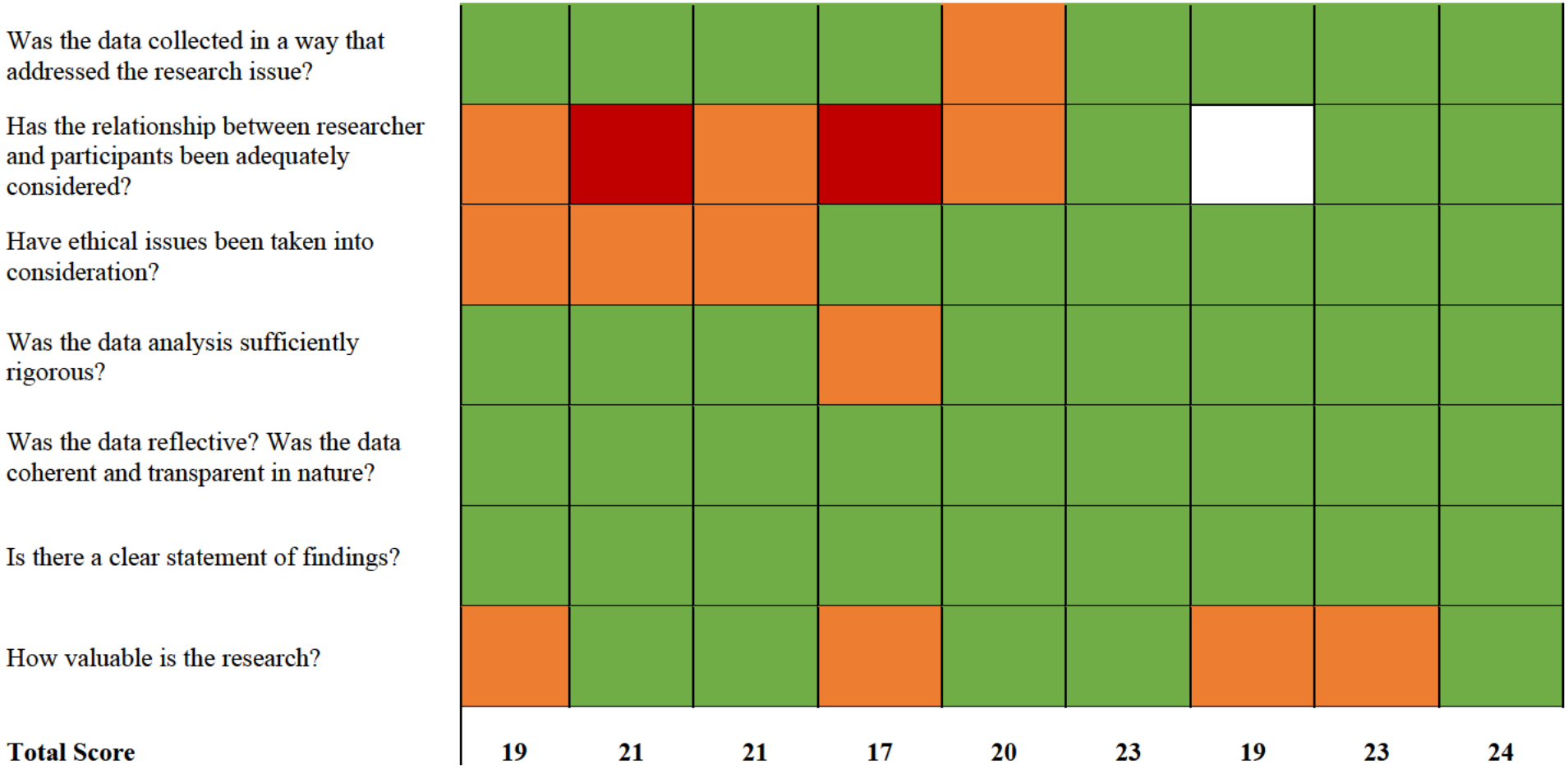
Research quality framework

The Critical Appraisal Skills Programme (CASP) qualitative research checklist (CASP, 2018) was selected to form the basis for assessing the strength of each research paper included. The CASP qualitative research checklist questions are presented alongside one additional question, which assesses the quality of the definition of microdosing included within the papers. All nine papers met or partially met the criteria listed. Strengths across papers included appropriate qualitative methodology, a clear statement of findings, and reflective, coherent and transparent results. The quality varied in whether studies clearly stated their research aims and adequately considered the value of their research. Five of the nine studies either did not adequately consider the relationship between the researcher and the participants or only somewhat considered this relationship. Please see Table 5 for the quality appraisal framework, which is colour-coded as green for criteria met, orange for partially met, and red for not met.

Table 5.

Quality appraisal framework of included meta-ethnography papers based on the CASP qualitative checklist (2018)

Quality assessment criteria	Agin-Liebes et al. (2023)	Andersson & Kjellgren (2019)	Beaton et al. (2020)	Belser et al. (2017)	Golia (2022)	Johnstad (2018)	Lea et al. (2020)	Petranker et al. (2022)	Ryan et al. (2023)
Was there a clear statement of the aims of the research?									
Is a qualitative methodology appropriate?									
Was the research design appropriate to address the aims of the research?									
Was the recruitment strategy appropriate to the aims of the research?									
Was microdosing clearly and sufficiently defined? From a reliable source?									



Note. Scores out of a possible total of 24. Green = Yes (2 points); Orange = Somewhat (1 point); Red = No (0 points); White = Can't Tell (0 points); NA = Not applicable (0 points).

Ontological and epistemological positioning

For the analysis and writing of the results, the primary author worked from a critical realist ontological position and constructivist epistemological position. A critical realist approach treats the world as theory-laden, not theory-determined, meaning that through a critical realist approach, people can attempt to understand the realities or 'truths' of the world and that some deeper levels of reality cannot be accessed or observed through human senses, therefore meaning that as humans, we can get close to a 'truth' but understand this may be an approximation formed through the knowledge currently available to us (Fletcher, 2014). A constructivist approach acknowledges that to understand the world, one must interpret it, and therefore, knowledge is constructed from experiences (Schwandt, 1998).

Synthesising of qualitative data

Noblit and Hare's (1998) framework for synthesising qualitative data was utilised as described in Figure 1. Firstly, the primary author extracted quotes from participants and authors from each included paper into an Excel document. The results and discussion sections of each paper were read three times, extracting first and second-order constructs and including third-order interpretations on all three occasions to ensure that no essential sections of each paper were missed (for an explanation of first-, second- and third-order constructs, please see Figure 1).

Constructs were sorted underneath the headings of the themes initially used by the authors. The primary author then created a new Excel table listing all nine authors/papers as individual columns and then named each theme created by the authors in the cells underneath each column. The primary author then began colour-coding themes across papers that seemed conceptually linked. For example, a theme from Lea et al. (2020) called 'benefits of microdosing' was coded the same colour as another theme from Johnstad (2018),

‘experienced therapeutic effects’. This allowed the primary author to start synthesising all included papers' overarching themes into distinct new themes. The primary author then looked at all constructs extracted from one paper and attempted to sort each construct into one of the new synthesised themes. This process was continued in the following paper, attempting to sort first-, second-, and third-order constructs into established themes. Constructs that could not be sorted into a synthesised theme were then collated into a new table within Excel, with similar constructs sorted into their own new and unifying theme, with this process repeated until a suitable point was reached where all constructs had been categorised. All constructs sorted into a new, synthesised theme were reciprocal translations (i.e., the primary author could draw similarities between constructs and ‘map’ one onto another).

In hopes of easing comprehension of the results section, the primary author has marked ‘[Participant]’ at the beginning of the quoted constructs below for first-order constructs or ‘[Author]’ for second-order constructs.

The final themes identified include: 1. Motivations for microdosing psychedelics; 2. Microdosing psychedelics change experiences of anxiety; 3. Processes of change when microdosing psychedelics for anxiety conditions; and 4. Integrating lessons from microdosing psychedelics into everyday life.

Data on the number of original themes from papers synthesised into each new meta-ethnography theme and a tally of the ‘weight’ of each paper within the new synthesised themes were then created (see Tables 6 and 7).

Table 6.

The total number of papers and original themes included in each meta-ethnography theme.

Themes	Papers which reported on this theme (N)	Original themes included to create synthesised theme (N)
Motivations for microdosing psychedelics	6	7
Microdosing psychedelics change experiences of anxiety	9	20
Processes of change when microdosing psychedelics for anxiety conditions	8	8
Integrating lessons from microdosing psychedelics into everyday life	7	11

Table 6 demonstrates that 'Microdosing psychedelics change experiences of anxiety' and 'Processes of change when microdosing psychedelics for anxiety conditions' included all, or all but one, of the included papers contributing to the themes. Table 6 shows that 'Microdosing psychedelics change experiences of anxiety' included the most original themes synthesised together to create this new, overarching theme.

Table 7.

Themes weighed against the total number of constructs included in each theme and from each paper, alongside each paper's previously reported quality appraisal score based on the CASP qualitative checklist (2018).

	Agin-Liebes et al. (2023)	Andersson & Kjellgren (2019)	Beaton et al. (2020)	Belser et al. (2017)	Golia (2022)	Johnstad (2018)	Lea et al. (2020)	Petranker et al. (2022)	Ryan et al. (2023)	**Total constructs included in each theme**
CASP (2018) Score	19	21	21	17	20	23	19	23	24	**N/A**
Motivations for microdosing psychedelics	0	1	2	0	0	1	3	1	3	**11**
Microdosing psychedelics change experiences of anxiety	1	5	3	4	4	7	13	8	4	**49**
Processes of change when microdosing psychedelics for anxiety conditions	11	13	0	3	4	2	3	1	5	**42**
Integrating lessons from microdosing psychedelics into everyday life	1	3	0	3	1	0	2	4	2	**16**
Total constructs included from each paper	**13**	**22**	**5**	**10**	**9**	**10**	**21**	**14**	**14**	**118**

Table 7 demonstrates that ‘Motivations for microdosing psychedelics’ included the least number of constructs from all nine papers, with 11 included in the total. The ‘Microdosing psychedelics change experiences of anxiety’ included the greatest number of extracted constructs from all nine papers, with 49 included in the total. Overall, Beaton et al. (2020) had the least number of constructs extracted from the paper (n=5), and Andersson & Kjellgren (2019) had the most constructs extracted (n=22). Therefore, the range of constructs included in each paper is relatively large, showing that some papers are weighted more significantly regarding the frequency of constructs from each paper within the results of this meta-ethnography than others.

Of all nine studies, the average quality appraisal score received was 20.7. Therefore, with Andersson & Kjellgren (2019) scoring 21, this paper was just over the average quality of all included papers. Furthermore, a score of 21 out of a total of 24 shows a good level of quality for this paper, meaning the inclusion of many constructs from this specific paper can be deemed good quality. Furthermore, the paper with the highest quality appraisal score (Ryan et al., 2023; score of 24 out of 24) had 14 constructs total included within the synthesised themes, and the paper with the lowest quality appraisal (Belser et al., 2017; score of 17 out of 24) had ten constructs total included within the synthesised themes. Within the range of constructs extracted from each paper (between 5 and 22), the number of constructs from both Ryan et al. (2023) and Belser et al. (2017) is within a mid-range of included constructs. This offers confidence that lower-quality papers are not disproportionately represented in the syntheses.

Results

This meta-ethnography describes four overarching themes with subthemes nested within these: 1. Motivations for microdosing psychedelics; 2. Microdosing psychedelics

change experiences of anxiety; 3. Processes of change when microdosing psychedelics for anxiety conditions; and 4. Integrating lessons from microdosing psychedelics into everyday life. Some constructs may have been edited for length and clarity, shown through a […] symbol. Please see Table 8 for a list of themes and subthemes of this meta-ethnography.

Table 8.

Meta-ethnography themes and subthemes: experiences of microdosing classic psychedelics for anxiety conditions.

Theme Number	Theme Name
1.	Motivations for microdosing psychedelics
2.	Microdosing psychedelics change experiences of anxiety
2.1.	*Desired effects of microdosing for anxiety conditions.*
2.2.	*Undesired effects of microdosing for anxiety conditions.*
2.3.	*Reduction in anxiety symptoms: comparisons between microdosing and traditional treatments.*
3.	Processes of change when microdosing psychedelics for anxiety conditions
3.1.	*Increased access to suppressed cognitions and beliefs causing anxiety.*
3.2.	*Changing psychological patterns which previously maintained or increased anxiety.*
3.3.	*Increased acceptance of previously distressing thoughts and feelings.*
4.	Integrating lessons from microdosing psychedelics into everyday life

Theme 1. Motivations for microdosing

Of the nine included papers, six reported on participant motivations to microdose psychedelics (Andersson & Kjellgren, 2019; Beaton et al., 2020; Johnstad, 2018; Lea et al., 2020; Petranker et al., 2022; Ryan et al., 2023). All six of these papers reported that one common motivation for participants to microdose classic psychedelics was their curiosity about psychedelics' reported therapeutic benefits. Of these six papers, four included quotes from participants who stated they chose to microdose classic psychedelics specifically to change or improve their anxiety conditions. Within these four papers, microdosing to reduce anxiety was spoken about concerning PTSD with dissociation (Lea et al., 2020, p. 4), Social Anxiety Disorder (SAD; Ryan et al., 2023, p. 6), general anxiety (Beaton et al., 2020, p. 8; Petranker et al., 2022, p. 14; Ryan et al., 2023, p. 6), and general stress (Beaton et al., 2020, p. 8). Johnstad (2018) proposed that people's two most common motivations for microdosing are desires for general enhancement and therapeutic effects.

[Author] *In either case, the desired effect from microdosing was to be lifted out of a state of relative limitation into a state of higher functioning. The difference was that in therapeutic use, the state of limitation corresponded with a specific medical diagnosis. (Johnstad, 2018, p. 48)*

This quote demonstrates that people's motivations for microdosing a psychedelic went beyond just the recreational, and people's choices to microdose psychedelics were for specific motivations regarding their identity and hopes for better mental health.

Additionally, participants from four papers who had tried traditional treatments, such as prescribed medication, to alleviate their anxiety symptoms cited motivations to microdose as traditional treatments were deemed as limited and 'can only go so far' in participants' healing journeys.

[Participant] *The huge benefit I've noticed is that I'm starting to process my life/trauma differently. I started dosing because I felt like I had hit a wall in my treatment and was tired of feeling so haunted and like my whole sense of self and life were dictated by trauma. (Lea et al., 2020, p. 6).*

This choice to continue further into intervention through microdosing may be linked to Ryan et al.'s (2023) finding that participants seemed to view themselves as scientists motivated to heal their anxiety. Both Ryan et al. (2023) and Beaton et al. (2010) make conclusions derived from participant quotes stating that microdosing should be conceptualised as more than the typically negative societal connotations attached to drug use, with Ryan et al. (2023) stating "there seemed to be an agency to their microdosing, in that they [participants] were making an active choice, and there was a sense of importance that this was not 'just' recreational drug use." (p. 6) and Beaton et al., (2020) citing that nineteen of their participants voiced microdosing "should be viewed as a legitimate form of medicine and not seen as an example of deviance." (p. 10-11). Therefore, these papers posit that psychedelic usage may be reconceptualised as a path towards deep-rooted recovery as some participants reported their motivations to microdose psychedelics were due to its effectiveness as a therapeutic driver.

Theme 2. Microdosing psychedelics change experiences of anxiety

Participants discussed how microdosing psychedelics helped to reduce their overall anxiety, with some participants commenting on any comparisons they had made in the efficacy or tolerability of microdosing psychedelics and more traditional treatments like medication for their experienced anxiety conditions.

2.1. Desired effects of microdosing for anxiety conditions. All nine papers discussed how participants' symptoms of anxiety were reduced after microdosing classic psychedelics. Across all included papers, reductions in anxiety were reported for GAD, SAD, OCD, PTSD, general stress, trauma-related anxiety and night terrors. The anxiety conditions most frequently reported by participants were GAD and SAD, with common citations of feelings of freedom from the anxiety symptoms after microdosing. For example, in the

context of general anxiety, one participant from Lea et al.'s (2020) paper stated, "As someone that suffered a lot from anxiety and depression, it's amazing how ... normal I feel now." (p. 6). Similarly, a participant from Ryan et al.'s (2023) study reports on the reduction of their social anxiety symptoms:

[Participant] *I have gained so much confidence it's crazy. I have a new career lined up. I am sociable, I am happy to speak up for myself. I don't even recognise the person that I was!... No social anxiety...For the first time ever. (p. 9)*

In both papers from Lea et al. (2020) and Ryan et al. (2023), participants spoke about how microdosing helped them feel more open to experiences, in turn reducing their anxiety typically felt when interacting with others, with the authors of Lea et al. (2020) reporting that, "Some posters reported that microdosing provided relief from social anxiety, and that feelings of "inner doubt," fear of judgment, and over-analyzing situations were replaced by feelings of self-confidence, openness and acceptance". (p. 7).

Therefore, all nine papers reported participants to have felt a reduction in their anxiety symptoms to some extent, and this was reported for a variety of anxiety conditions across the included papers.

2.2. Undesired effects of microdosing for anxiety conditions. In total, six of the nine studies reported some increased anxiety in participants when microdosing (Andersson & Kjellgren, 2019; Belser et al., 2017; Golia, 2022; Lea et al., 2020; Petranker et al., 2022; Ryan et al., 2023). Furthermore, some participants also reported feelings of depersonalisation (Petranker et al., 2022), panic attacks (Andersson & Kjellgren, 2019; Golia, 2022), trauma flashbacks (Golia, 2022), and paranoia (Belser et al., 2017) after microdosing. Three papers emphasised that these reports of increased anxiety were in the minority (Lea et al., 2020; Petranker et al., 2022; Ryan et al., 2023).

Of the six papers reporting undesirable outcomes from microdosing, two main reports for heightened anxiety were stated. The first was transient anxiety feelings associated with accidental dosing inaccuracies (Lea et al., 2020; Petranker et al., 2022). The second reason provided by participants in five papers (Andersson & Kjellgren, 2019; Belser et al., 2017; Golia, 2022; Lea et al., 2020; Petranker et al., 2022) was difficulties integrating resurfaced trauma or other anxious thoughts and emotions through the perceived process of microdosing encouraging the mind to 'open up' to what was feared, hidden or avoided within an individual, leaving people feeling vulnerable to uncomfortable and anxious emotions. Belser et al. (2017) further report on this:

[Author] The sequential progression of these experiences suggests an arc of experience or a necessary sequence; a participant's capacity to surrender in the face of a struggle or frightening encounter may facilitate an unfolding therapeutic process. In this way, the "incredible struggle" that is a hallmark of the psilocybin experience may not be an undesirable side effect, but rather a central and necessary feature of participants' healing narratives. (Belser et al., 2017, p. 369).

This quote indicates that the reported heightened anxiety from some participants may be in part explained through avoidance of a necessary internal surrender to face, process and integrate fearful internal struggles which arise during the microdosing experience. This potential for heightened anxiety may be linked with another perceived process of microdosing increasing access to suppressed cognitions and beliefs causing anxiety, which was found by this meta-ethnography to be cited as largely positive, therapeutic experiences, described in further depth in Theme 3.1. Therefore, while some participants cited this new access to suppressed anxiety-provoking content as a positive opportunity to process and integrate new meaning and more acceptance for the material, other participants cited this as a mechanism which enhances their anxiety. It could not be determined whether these reports of increased anxiety changed over time for participants who were reporting these effects;

therefore, it is not known whether some participants initially referenced new access to cognitive material as anxiety-provoking and then, after multiple dosing sessions, eased into the experience to feel more able to learn from the experience and integrate these lessons.

2.3. Reduction in anxiety symptoms: comparisons between microdosing and traditional treatments. Participants from six papers also referred to the differences in their anxiety symptoms when comparing microdosing to more traditional treatments such as SSRI medication and talking therapies. Four papers included comments from participants regarding conventional medication, and these participants consistently compared microdosing favourably to SSRIs, for example:

[Participant] *I have had very positive results from infrequent psilocybin microdosing. I have found fast and relatively long-lasting relief from depression and social anxiety doing this, as compared to other pharmaceutical options I've been offered such as SSRIs [selective serotonin reuptake inhibitors], and without the intolerable (for me) side effects. (Johnstad, 2018, p. 44-45)*

Regarding talking therapies, participants from two papers (Golia, 2022; Petranker et al., 2022) spoke about microdosing in conjunction with therapeutic sessions and suggested that, for them, microdosing was a catalyst for further insights and healing within traditional therapeutic spaces. Golia (2022) describes how "one participant also found that microdosing encouraged progress in therapy sessions for anxiety, describing lower baseline anxiety even after more extended periods between microdoses." (p. 28). This suggests that microdosing may be beneficial when engaging in a safe place within therapy, potentially encouraging growth in sessions beyond that without microdosing.

Theme 3. Processes of change when microdosing classic psychedelics for anxiety conditions

Participants from most papers (n = 8) reported their views on what they felt it was about microdosing classic psychedelics, which helped reduce their anxiety symptoms.

3.1. Increased access to suppressed cognitions and beliefs causing anxiety.

Linking with the finding in Theme 2.3 that microdosing psychedelics allowed access to a type of healing not offered through conventional medicinal treatment, one paper reported:

[Participant] *Instead of blunting our emotional response to trauma that we've had in the past, the trauma starts to come up, and we have to look at it and integrate it in a way that helps us to become a more healthy self. (Andersson & Kjellgren, 2019, p. 8)*

Here, it is suggested that psychedelics allowed participants the opportunity to recognise the root of their emotional difficulties and be able to work through them, in comparison to conventional methods of treatment, which the authors described as more of a "passive coping" mechanism (Andersson & Kjellgren, 2019, p. 8). This suggests microdosing allows for the beliefs and pathways behind the felt anxiety to be re-evaluated, thereby allowing deeper access to the self and effectively 'getting to the core of the issue'.

Linking with findings of cited 'undesired effects' from Theme 2.2, five papers (Andersson & Kjellgren, 2019; Agin-Liebes et al., 2023; Belser et al., 2017; Golia, 2022; Lea et al., 2020) also cited microdosing was reported by participants to enhance access to previously suppressed trauma, allowing for opportunities for processing traumatic events and healing at the root of the issue: "microdosing revealed to me parts of my personality, my nature, that I wasn't proud of and wasn't easy to face" (Andersson & Kjellgren, 2019, p. 5). The authors interpret this quote as the participant gaining access to "latent emotional material through microdosing, which provides an opportunity to recognize and process lingering trauma, or integrate a psychological 'shadow', into more conscious levels of the psyche" (Andersson & Kjellgren, 2019, p. 5). Through this interpretation, it can be understood that microdosing classic psychedelics may hold an ability to find long-hidden parts of a personality or traumatic memories, bring them to the forefront of the person's mind, and provide support to safely and positively integrate new healing of these more difficult thoughts

or memories into mind long-term. However, from Theme 2.2, some participants viewed this process as anxiety-provoking, meaning that the same process may occur with some people responding to this as a necessary step by moving towards this process to face, learn from and integrate the new material. In contrast, others may view this process as an undesirable side effect of microdosing if they do not feel ready to process new material that arises during microdosing experiences.

3.2. Changing psychological patterns which previously maintained or increased anxiety. It was also reported by seven of the nine included papers that microdosing classic psychedelics allowed participants to change habitual psychological responses and patterns which historically maintained or increased people's anxiety.

[Participant] *That loss of ego, it stripped away a lot of the stuff. You know, just perpetual judgment of myself, like, okay, I've got to make this work, I've got to do that, I've got to do that. And just the fact that I let go of it, I mean, it all left yesterday, and I have no anxiety. (Agin-Liebes et al., 2023, p. 12)*

This participant speaks of how psychedelics aiding a 'loss of ego' for them helped them to let go of their typical worries and judgements on themselves, which previously caused them to feel anxious, and reports not feeling any anxiety after letting go of these previous habitual psychological patterns.

Three papers (Agin-Liebes et al., 2023; Andersson & Kjellgren, 2019; Lea et al., 2020) reported that participants described microdosing psychedelics as helping them become 'unstuck' from previous vicious cycles of anxiety; for example, Lea et al. (2020) reported: "posters [in online forums] who were microdosing for anxiety reported feeling calmer, more present and able to face situations that would normally be anxiety provoking without getting stuck in a cycle of worry and inertia." (p. 5). This quote suggests that microdosing allowed participants to become unstuck from their habitual anxious cycles and open themselves to

softening and liberation from catastrophising thought patterns and rumination with their accompanying fears, preoccupations and anxiety. By facilitating a person's ability to think and operate mentally from the present moment, microdosing was described as effectively side-stepping a common foundational mechanism of anxiety.

Six of the nine papers (Andersson & Kjellgren, 2019; Beaton et al., 2020; Lea et al., 2020; Petranker et al., 2022; Ryan et al., 2023) included participants who suggested microdosing classic psychedelics increased their ability to think from new perspectives, for example, Petranker et al. (2022) reported: "Participants also reported using microdosing to effect more permanent changes in their perspectives than single bursts of novelty, seeking to improve their ability to take other perspectives, change their personalities, or grow as people." (p. 9). Taking on new perspectives may broaden the possible emotional responses to cognitive material, creating new insights and relationships with thought patterns which historically caused anxiety. Furthermore, participants also reported not only letting go of their anxiety 'scripts' more easily but also experiencing the re-writing of their relationship with anxiety itself, with Agin-Liebes et al. (2023) reporting, "One participant explained that he experienced a "rewiring taking place"." (p. 10). This participant spoke about microdosing allowing for "re-wiring" of historical unhealthy cognitive patterns and habitual relationships with mental content, causing their anxiety to be re-evaluated and re-written in a way they did not know how to before microdosing.

3.3. Increased acceptance of previously distressing thoughts and feelings. Seven papers cited an increase in acceptance during and after microdosing, which was reported as helping participants let go of anxious thoughts more easily.

[Author] *The authors found that many individuals attributed the effectiveness of psilocybin to a greater willingness to accept emotions and emotional breakthrough and resolution as a result of a challenging return to old traumas. Two participants in the present study experienced resurfacing and*

subsequent resolution of trauma after microdosing when supported by breathwork and meditation, or therapy. (Golia, 2022, p. 27)

Furthermore, participants from four papers (Andersson & Kjellgren, 2019; Agin-Liebes, 2022; Belser et al., 2017; Lea et al., 2020) also reported that microdosing increased their ability to live more in the present moment and, therefore, feel more accepting of experiences.

[Participant] *The percentage of my life that I am able to be present in just a moment has increased dramatically, and it's really just been restored from almost nonexistent to often existent . . . it is unique and monumental in a way. (Belser et al., 2017, p, 374)*

Petranker et al. (2022) interpret the quote below as participants experiencing more calmness and higher self-acceptance in their relationships with themselves and others after microdosing, which may act as an underlying factor in decreasing anxiety within people.

[Participant] *I believe the greatest thing I learnt from microdosing was to stop trying to solve problems I perceived about myself and just accept them for what they were. Accept myself for who I am, relax, stop overthinking everything because at the end of the day none of this matters so you may as well enjoy yourself however you see fit. (Petranker et al., 2022, p. 13)*

These participants also reported that after microdosing, they experienced an increased ability for mindful observation of present-moment thoughts and feelings which allowed for a decrease in anxious symptoms, for example one participant from Andersson & Kjellgren (2019) paper said, "I was able to just 'be' instead of constantly evaluating/analyzing/talking with myself about the way things are, and that's a feeling that's been elusive in my normal state." (p. 4).

Furthermore, some participants reported a feeling of detachment from needing to process and untangle every memory and anxiety-relating trauma. One participant stated, "I

was witnessing it. It was just thoughts that coming up, and I didn't need to make sense of it. I just felt no need to structure it." (Agin-Liebes et al., 2023, p. 10).

Agin-Liebes (2023) interpreted this quote as participants having an increased ability to observe their mental phenomena without becoming attached to the meanings of the thoughts or experiencing a need to analyse the content. Instead, participants described a relaxed detachment from typical cycles of rumination to ascribe meaning to anxious thoughts or feelings.

Theme 4. Integrating lessons from microdosing classic psychedelics into everyday life

Participants across seven papers described how they integrated lessons and new ways of thinking learned from microdosing into their everyday lives. Participants in four papers described microdosing as a therapeutic "tool" (Andersson & Kjellgren, 2019, p. 8; Lea et al., 2020, p. 5; Petranker et al., 2022, p. 13; Ryan et al., 2023, p. 8). One participant from Lea et al.'s (2020) paper clarified: "It's a great tool to help you analyze various problems from new perspectives. But resolving them still comes down to you executing them." (p. 5). Therefore, while microdosing may help participants interrupt unhelpful cycles of anxiety throughout the processes described above, it is up to the person themselves to take an active approach to their healing of patterns which have previously caused them to experience anxiety.

Four papers (Andersson & Kjellgren, 2019; Golia, 2022; Petranker et al., 2022; Ryan et al., 2023) discussed participants using microdosing in conjunction with practices which have also been found helpful for healing anxiety. For example, Andersson and Kjellgren (2019) provided their interpretation of a participant describing their engagement with multiple healthy coping strategies:

[Author] *A "holistic" approach to health was often premiered, and in this context, microdosing was viewed as a catalyst for improving the overall orientation and results of health- or self-optimization efforts.* [Participant] *"I was already doing things to become less anxious and*

depressed, and to have more confidence. Things like yoga, meditation, eating right, working out, and doing personal development. But once I added mushrooms, it was like all of that, put on steroids." (p. 4)

In this context, it is suggested that microdosing may be a catalyst for positive change that is most effective when also practising a more comprehensive range of healthy habits. In this way, microdosing may support the healing journey of people engaged in various healing practices. Golia (2022) expands on this point and suggests that microdosing is just the tool which allows for unprocessed trauma to surface, and it is important to use multiple tools other than microdosing to safely and efficiently process and integrate these traumatic experiences and memories within the individual:

[Author] *Resurfacing of trauma was not always expected by participants in the present study, but was reported as being well-managed due to their ability to integrate their experience effectively with well-practised methods, such as meditation, journaling, and breathwork. This will inevitably not be the case for everyone and without proper guidance and integration, this could prove to be a challenging adverse effect of microdosing. (Golia, 2022, p. 27-28)*

Golia (2022) states that difficulties faced by participants attempting to integrate lessons learned from microdosing may be conceptualised as an adverse effect of microdosing and its healing properties and may link with theme 2.2, which details some participant reports of increased access to anxiety-provoking thoughts and feelings as an undesired effect of microdosing psychedelics for anxiety conditions.

Therefore, through nine qualitative papers exploring personal accounts of microdosing classic psychedelics and participants' reports on how this changed their experiences of anxiety, this meta-ethnography suggests microdosing psychedelics may serve to change anxiety symptoms through new opportunities to reflect on, heal and integrate what was previously distressing to participants. However, self-agency is necessary to enter this

experience to gain deeper insights into oneself. It seems to be necessary to perceive some experiences with microdosing as a further opportunity to address previously anxiety-provoking material, and this may seem too intolerable for some people.

Discussion

At the time of writing, this is the first meta-ethnography conducted to explore people's experiences of microdosing classic psychedelics for anxiety conditions. This meta-ethnography aimed to understand the common experiences associated with microdosing classic psychedelics for anxiety conditions and the psychological processes related to microdosing classic psychedelics in the context of anxiety symptoms.

Summary of findings

Potential perceived benefits of microdosing classic psychedelics for anxiety. Throughout this meta-ethnography, certain proposed benefits of microdosing classic psychedelics for anxiety conditions were noted. Firstly, reductions in anxiety were reported for GAD, SAD, OCD, PTSD, general stress, trauma-related anxiety and night terrors. Four papers also reported that participants found microdosing psychedelics helped them to reduce the frequency of ruminating on thoughts which typically caused them distress. This links with another benefit reported by participants, which was that microdosing classic psychedelics enhanced their ability to see previously distressing cognitions from different perspectives. These reports suggest that the separation of habitual emotional meaning from anxious thoughts may be mediated by the ability to see things from different perspectives. It also appeared that four papers included in this meta-ethnography identified that microdosing classic psychedelics is at times preferred over taking traditional medication, and two papers reported microdosing was seen as an important addition when engaging in talking therapy.

Common reasons for preferring microdosing over traditional medication included fewer adverse side effects associated with microdosing.

Undesired processes associated with microdosing classic psychedelics for anxiety. The included papers cited some adverse experiences associated with microdosing classic psychedelics for anxiety conditions. However, these appeared fewer when compared to the benefits described. Six of the nine included papers cited that microdosing may sometimes enhance anxiety. However, three of these papers stressed the minority of participants reporting this. Participants from two papers cited difficulties with measuring correct dosages when microdosing, and some participants also reported not feeling emotionally prepared to be opened up to the mechanisms behind how microdosing helps alleviate anxiety symptoms, which include resurfacing historical traumatic memories and 'unlocking' more profound introspective abilities.

Proposed processes of microdosing classic psychedelics for anxiety. Multiple processes of change regarding anxiety were suggested throughout the nine papers, with many papers arriving at similar conclusions. For example, five papers cited that microdosing increases a person's access to their suppressed anxiety-provoking cognitions and beliefs, allowing them new insight to be able to re-evaluate and re-write relationships with old distressing internal material. Linking to this, seven papers also reported that microdosing helps change psychological patterns to rewrite relationships with anxiety. Anxiety-driven psychological patterns were changed alongside a deeper level of acceptance participants felt for their previously distressing thoughts and beliefs while microdosing. Finally, four papers reported that microdosing classic psychedelics for anxiety conditions was understood by participants as a catalyst to positive change using holistic healing practices.

Reflections on personal positioning

Within qualitative literature, the author's personal positioning in relation to the topic area can never be eliminated entirely, however, it was endeavoured to be appropriately managed throughout the entirety of this study process. To manage my personal positioning within the topic area, I attended supervision with three research supervisors and one peer researcher, as well as monthly meta-ethnography analysis peer support groups. These spaces encouraged personal reflection on any identified biases, outsider interpretations of analyses, and access to multiple people's different perspectives which allowed for further identification of any bias and to remain as neutral within the analysis as possible.

Prior to conducting this meta-ethnography, I had very little knowledge regarding the therapeutic use of psychedelics. Therefore, I came to this research topic as a complete novice and held very few preconceived notions regarding the characteristics of people who use psychedelics or any estimates on the outcomes of psychedelic usage for therapeutic goals. Retrospectively, this was helpful as it allowed me to approach this research topic with an open and neutral attitude.

In order to immerse myself in the current context of psychedelics within psychological literature, I spent many consecutive weeks reading as many papers as I could on the usage of psychedelics, both micro-and-macro-doses, for many different psychological conditions. This is when I found myself beginning to guess what I thought would be the findings of different studies, and I began feeling more hopeful that psychedelics would lead to beneficial therapeutic outcomes due to the vast amount of previous positive reports within papers I had read already. I reflected that I had positioned myself from a 'natural' to a 'psychedelics are beneficial' belief.

After identifying the papers which I could include within this meta-ethnography and analysing each individual results finding both complimentary and contradictory evidence,

particularly regarding participant reports of microdosing psychedelics to increase and decrease anxiety, I adjusted my position again, finding that I feel strongly that it is difficult to firmly place myself on one side or the other of whether psychedelics is broadly beneficial for people with anxiety conditions and that much more research is necessary to be able to untangle consistently contradictory evidence towards the effect of microdosing psychedelics on felt anxiety. Instead, I believe that microdosing psychedelics may be helpful for some people but not revolutionary for everybody. Furthermore, due to the current lack of literature directed towards exploring the negative effects of psychedelics, I continue to consider that it is currently not firmly known how psychedelic usage may bring about unwanted or even harmful effects to people with different anxiety conditions.

Evaluating the meta-ethnography

Limitations. This meta-ethnography includes some limitations in its topic of focus, methodology, and inclusion of papers. Firstly, due to the research topic, participants in the studies may have been more likely to be passionate about the subject and, therefore, more likely to present more of the positives of microdosing and omit any challenges found. Hence, whilst offering insights into these participants' views and experiences and making an important contribution to the literature, it is limited in transferring to the wider population or making general claims. Similarly, people who had difficult experiences with microdosing psychedelics may be less likely to participate in qualitative research as their participation would require them to revisit any problematic or traumatic experiences associated with the use of psychedelics, meaning results of the psychedelic research included may be skewed towards more positive experiences.

Secondly, due to the illegal nature of the research area and the previously mentioned paucity of psychedelic research, studies included in this meta-ethnography which took

comments on social media platforms were included and, therefore, follow-up questions to participant comments could not be addressed. This means these studies could not ask further clarifying or exploratory questions to participants' comments, meaning authors may have had to interpret from more of a declarative stance rather than a back-and-forth curious conversation, as is typical with semi-structured interview studies.

Additionally, one study included within this meta-ethnography reports recruiting participants from the author's social network (Golia, 2022). Within the quality appraisal of this study, the primary author of this meta-ethnography rated Golia's (2022) recruitment strategy as 'somewhat' appropriate due to Golia reporting participant recruitment both through their social network, meaning they may have personal relationships with some participants, and through online discussion forums, therefore not personally knowing participants which is a similar recruitment method to four other studies included in this synthesis. Within Golia's (2022), the author states that participants were recruited through their social network, with no further discussions or clarifications of this throughout the rest of the paper. Therefore, it is not known whether the level of personal relationship the author shared with some of their participants, and it is possible that some bias or difference in relationship with participants is illuminated within the results of this paper.

Furthermore, many studies included within this meta-ethnography were skewed towards including more male participants. Of the seven studies that did report participant gender, four had more male than female participants, two included all male participants, and one reported an even split between male and female participants. Furthermore, two of the studies included interviewed participants who were part of a larger, psychedelic-assisted psychotherapy trial, whereas the other seven studies focused on participants who microdosed classic psychedelics without a mental health professional present. At the time of writing, no research has been

published comparing any differences between taking psychedelics independently or during therapy, meaning it is not currently known whether the two psychedelic-assisted psychotherapy studies would differ in participant response from the other seven studies.

Strengths. This meta-ethnography also had many strengths in its methodological procedure and analysis. Firstly, the primary author followed clearly defined steps to conducting a meta-ethnography from Noblit and Hare's (1988) book, supplemented with detailed descriptions of meta-ethnography from the current research literature (e.g., Sattar et al., 2021) and was supported by a research group of colleagues also using meta-ethnography. This facilitated reflective discussions with colleagues in addition to research supervisors to gain other perspectives and present a more well-balanced view of the research topic.

Another strength of this meta-ethnography was the use of the CASP (2018) quality appraisal checklist, with this primary author's precise investigation of each included paper's methodologies and added questions specific to this review's inclusion and exclusion criteria. For the nine included papers, the average quality appraisal score was 20.7 out of a total of 24. This shows that the papers in this meta-ethnography were of relatively good quality, adhering to robust methodological approaches. Additionally, this rigorous research design and methodology meant the analysis could present complementary and contradictory data.

Secondly, the author followed clear and popular definitions of microdosing to capture as many well-defined research papers as possible on the research topic. This author ensured to include a range of anxiety conditions, from the NICE guidelines (2014), to be able to draw conclusions which may help a variety of conditions with an underlying common theme of felt anxiety. The inclusion of anxiety conditions from NICE guidelines is beneficial due to its popularity and reliability in the UK; however, it may not be broad enough to include every

condition which includes anxiety. For example, the NICE guidelines for anxiety conditions (2014) do not include agoraphobia.

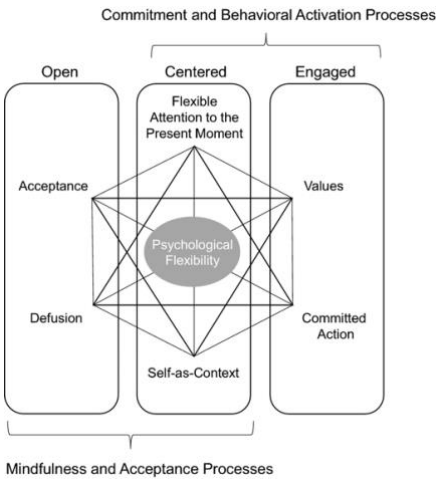
The role of microdosing in facilitating psychological flexibility

Throughout writing the results section, this author noticed that many participant theories of how microdosing psychedelics helped their experiences of anxiety were similar to previous literature investigating processes behind psychological flexibility. For a reflective account of how the primary author came to realise these similarities, please see Appendix 1.

Here, suggested similarities in the processes behind microdosing psychedelics and psychological flexibility will be discussed through the lens of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999) due to the psychological flexibility model forming part of the theoretical underpinning of ACT (Hayes et al., 2012). Findings from this ethnography can be mapped onto each process and all three overarching domains included within the ACT Hexaflex (Figure 3; Hayes et al., 2012). The ACT Hexaflex consists of six processes under three domains: acceptance and defusion processes as an individual's capacity to be 'open'; present-moment awareness and self-as-context as an individual's capacity to be 'centred'; and values and committed action as an individual's capacity to be 'engaged'.

Figure 3.

ACT Hexaflex (Hayes et al., 2012)



All six processes within the ACT Hexaflex are taken to create or enhance psychological flexibility. Acceptance refers to a person consistently allowing internal (mental) and external (physical) experiences to be met with little resistance or avoidance; Cognitive Defusion refers to a person forming and practising psychological distance from their thoughts, feelings, urges, and other internal noise; Present-moment awareness refers to an individual's ability to interact authentically with the here and now; Self-as-context refers to an individual's ability to understand that they are not the cognitions and emotions they experience, but are instead the consciousness which observes these internal experiences; Values refers to an individual's deepest desires in themselves, their relationships and the world surrounding them; and Committed action refers to an individual's ability to choose and engage within actions and behaviours which reflect and are congruent to their values (Hayes et al., 2012). Table 9 presents theme names and example quotes from the above analysis, which can be mapped neatly onto the six processes to increase psychological flexibility outlined in the ACT Hexaflex.

Table 9.

Quotes from participants and authors illustrating processes and changes after microdosing classic psychedelics, along with the meta-ethnography themes that map onto the six core processes of ACT.

ACT Process	**Theme relating to ACT process**	**Quotation reference**	**Example Quote**
Acceptance	Increased acceptance of previously distressing thoughts and feelings	Petranker et al., 2022, p. 13	[Participant] *I believe the greatest thing I learnt from microdosing was to stop trying to solve problems I perceived about myself and just accept them for what they were. Accept myself for who I am, relax, stop overthinking everything because at the end of the day none of this matters so you may as well enjoy yourself however you see fit.*

Defusion	Changing psychological patterns which previously maintained or increased anxiety	Agin-Liebes et al., 2023, p. 12	[Participant] *That loss of ego, it stripped away a lot of the stuff. You know, just perpetual judgment of myself, like, okay, I've got to make this work, I've got to do that, I've got to do that. And just the fact that I let go of it, I mean, it all left yesterday, and I have no anxiety.*
Present-Moment Awareness	Increased acceptance of previously distressing thoughts and feelings	Andersson & Kjellgren, 2019, p. 4	[Participant] *I was able to just "be" instead of constantly evaluating/analyzing/talking with myself about the way things are, and that's a feeling that's been elusive in my normal state.*
Self-as-Context	Increased acceptance of previously distressing thoughts and feelings	Agin-Liebes et al., 2023, p. 10	[Participant] *I was witnessing it. It was just thoughts that coming up, and I didn't need to make sense of it. I just felt no need to structure it.*
Values	Desired effects of microdosing for anxiety conditions	Lea et al., 2020, p. 7	[Author] *Some posters reported that microdosing provided relief from social anxiety, and that feelings of "inner doubt," fear of judgment, and over-analyzing situations were replaced by feelings of self-confidence, openness and acceptance.*
Committed Action	Integrating lessons from microdosing psychedelics into everyday life	Ryan et al., 2023; p. 9	[Participant] *I have gained so much confidence it's crazy. I have a new career lined up. I am sociable, I am happy to speak up for myself. I don't even recognise the person that I was!... No social anxiety...For the first time ever.*

Furthermore, Petranker et al. (2022) also suggested that microdosing psychedelics may help to increase psychological flexibility:

[Author] *Examples of benefits reported include a broader perspective wherein little problems are less troublesome; less overthinking; and an awareness of choices and their alignment with personal values. Similar benefits have been described for high-dose psychedelics (Carhart-Harris et al., 2018) and microdosing (Lea et al., 2019). Recent research has found that psychological flexibility mediates the effects of psychedelics on anxiety and depression (Davis et al., 2021), but a fleshed-out theoretical account of psychedelics causing psychological flexibility remains missing. For example, the REBUS [relaxed beliefs under psychedelics] model suggests that the use of psychedelics enhances psychological flexibility, but draws exclusively on studies that included high-dose psychedelics primarily in the context of therapy. In our sample, however, psychological flexibility was reported to be enhanced by microdoses without therapy. (Petranker et al. 2022, p. 17-18).*

Petranker et al.'s (2022) research suggest that microdosing enhances a person's psychological flexibility, similar to that found in higher-level doses of psychedelic usage. Research on psychological flexibility suggests it is beneficial for decreasing psychological distress, therefore lessening symptoms of many mental health conditions, including many anxiety conditions (see Kashdan & Rottenberg, 2010). At the time of writing, however, no known published research has explored the psychological flexibility model and psychedelic usage for any anxiety condition independent of depression.

In summary, the processes of psychological change when microdosing psychedelics identified in the meta-ethnography are similar to those identified across some talking therapies focused on increasing psychological flexibility. Therefore, this meta-ethnography provides some support to previous research that suggests that microdosing plays a role in improving psychological flexibility.

Clinical implications and future research

From the results of this meta-ethnography, many routes of future research can be explored. The novel research topic of this meta-ethnography, with the knowledge that

psychedelic research has become increasingly popular again in recent years, suggests that more studies are needed to continue to explore whether psychedelics help anxiety. This is particularly true for studies exploring microdosing psychedelics for anxiety conditions, as there is currently much less research on microdosing classic psychedelics compared to macrodosing. A balance between qualitative and quantitative research is needed to gain as much insight into this area as possible, as it is gaining traction both in research and wider society.

One of the results with the richest data was the proposed processes of change associated with microdosing psychedelics. As such, one potentially interesting research area may focus on the proposal that microdosing increases access to previously suppressed traumatic memories and re-surfaces these memories to allow for more opportunities to healthily re-process these memories. Furthermore, multiple participants reported microdosing with other healing practices, such as yoga and meditation. Future research on this topic may help to elucidate and clarify psychological processes across these practices to develop our understanding of 'holistic' approaches and whether such approaches may mitigate any of the unintended experiences of just using microdoses of psychedelics to alleviate anxiety symptoms alone.

Finally, due to the findings of similarities in outcomes between microdosing psychedelics and psychological flexibility, it is suggested that future research is conducted exploring psychedelic-assisted psychotherapy, particularly using ACT, due to its explicit focus on psychological flexibility processes for people experiencing specific anxiety conditions.

Conclusion

This meta-ethnography aimed to explore personal accounts of the perceived benefits and challenges of microdosing classic psychedelics for anxiety conditions and the processes

associated with microdosing classic psychedelics in the context of anxiety. The findings throughout four themes constructed within this meta-ethnography illustrated how participants understood microdosing to help manage their anxiety symptoms and drew on similarities between the processes behind microdosing and psychological flexibility to posit whether these may have similar working mechanisms for reducing psychological distress. However, as this was the first study of its kind, and current research on microdosing psychedelics for anxiety conditions independent of depression remains sparse, much more research is needed to determine microdosing psychedelics' interactions with changing felt anxiety and the processes behind this interaction.

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CHAPTER A

EMPIRICAL PAPER: Microdosing classic psychedelic substances for obsessive-compulsive experiences: an Interpretative Phenomenological Analysis

Abstract

Introduction. After decades of research paucity, the therapeutic effects of psychedelics have recently started to be explored again. Obsessive-Compulsive Disorder (OCD) is a serious mental health condition which affects millions of people globally. Previous literature investigating psychedelics' influence on OCD is promising but scarce, with literature focusing on microdosing psychedelics for OCD even more limited.

Aims. This research aimed to develop an understanding of how people make sense of microdosing psychedelics in an attempt to help with their experiences of obsessions and compulsions.

Methods. Eight semi-structured interviews were conducted, utilising an Interpretative Phenomenological Analysis (IPA) approach. Given the topic area's illegal nature in many countries, prioritising participants' anonymity and defining obsessive-compulsive experiences are thoroughly considered.

Results. This study constructed three overarching themes: 1. The powerful nature of obsessive-compulsive experiences; 2. Microdosing psychedelics was perceived to ease obsessions and compulsions; and 3. Positioning microdosing psychedelics within other therapeutic contexts.

Discussion. Participants suggested that microdosing psychedelics reduced their obsessive-compulsive experiences and broader anxiety, which linked with previous literature suggesting similar outcomes. Strengths of this study include the data collection method and the author's commitment to using reflective group spaces during the analysis stage. Limitations of this study are presented, including reflections on why this study may have attracted participants with more positive than challenging experiences of microdosing

psychedelics for obsessions and compulsions. Multiple suggestions for future research linked to the findings of this study are presented.

Introduction

Definitions

Drawing upon Fadiman's (2011) book *The Psychedelic Explorer's Guide: Safe, Therapeutic, and Sacred* Journeys, which is often used as a protocol for microdosing psychedelic substances, microdosing refers to ingesting 5–10% of a usual psychoactive dose (also known as sub-hallucinogenic dosages) of at least one psychedelic substance. Microdosing typically results in subtle though noticeable effects (Fadiman, 2011), is small enough dosages to provide no intoxication or significant alteration of consciousness' (Johnstad, 2018), and is commonly used to improve individual mental health and wellbeing (Lea et al., 2020).

This research will focus on classic psychedelic substances, which are defined as serotonin 2A receptor (5-HT2AR) agonists such as Lysergic Acid Diethylamide (LSD), mescaline, and psilocybin (Johnson et al., 2019). This research will exclude people using cannabinoids and dissociative substances as these are not routinely included within literary definitions of classic psychedelic substances due to their considerably different neurobiological mechanisms and effects (Johnson et al., 2019).

Background rationale

General background on psychedelic research. Psychedelic substances were historically used as psychotherapy aids between the 1950s and mid-1960s before global legislative criminalisation effectively ended psychedelic research (Carhart-Harris & Goodwin, 2017). After three decades of literature paucity, research exploring possible links between psychedelics and psychological wellbeing has been steadily increasing since the

1990s (Carhart-Harris & Goodwin, 2017). Many countries have recently decriminalised psychedelics as the medical benefits are becoming more apparent (Rose, 2023) with the recent second 'boom' of psychedelic research (Nutt & Carhart-Harris, 2021).

A recent study explored the perspectives of mental health service users towards microdosing psilocybin for therapeutic benefits (Corrigan et al., 2022). Utilising a qualitative questionnaire with 99 respondents, the research found that 55% would accept psychedelic treatment if recommended by a doctor, and 72% supported the idea of further research into psilocybin therapy (Corrigan et al., 2022). Furthermore, when investigating mental health professionals' attitudes towards psychedelic treatment for psychological conditions, 64% and 85% of a sample of 227 counsellors agreed that psychedelic treatment shows promise in treating psychiatric disorders and deserves further research, respectively (Hearn et al., 2022). This demonstrates that, despite the mixed findings in microdosing psychedelic research, both mental health service users and professionals remain curious about the effect of microdosing psychedelics on psychological distress.

Rationale for exploring obsessive-compulsive experiences. Obsessive Compulsive Disorder (OCD) is an anxiety-related mental health condition that current statistics estimate affects approximately 750,000 people in the United Kingdom (UK; OCD UK, no date [n.d.]-a) and 1.3% lifetime prevalence of the global population, which equates to approximately 100 million people worldwide (Fawcett et al., 2020). OCD is a condition where a person may experience frequent intrusive obsessional thoughts, which are distressing and may cause the person to engage in repetitive behaviours or rituals in order to prevent perceived fears that preceding obsessional thoughts focus on (Olatunji et al., 2019). These behaviours are often referred to as compulsions and are thought to bring brief relief from the anxiety associated

with obsessive thoughts (Olatunji et al., 2019). However, engaging in compulsions is known to maintain the anxiety cycle for people experiencing OCD (Olatunji et al., 2019).

OCD presents itself broadly and is very individual to the person experiencing it (McKay et al., 2004). In the context of OCD, 'themes' relate to the concepts a person's intrusive, obsessive thoughts may most often focus on (Cathey & Wetterneck, 2013). Typically, intrusive thoughts are experienced as recurrent thoughts, impulses or images that are 'egodystonic', meaning they are against the person's will and beliefs (Cathey & Wetterneck, 2013). Therefore, if religion is an integral part of a person's life, their intrusive thoughts may centre on whether their actions have offended God (OCD UK, n.d.-b).

Quality of life (QOL) can be defined as an individual's satisfaction with the health, occupational, and social aspects of their lives (Macy et al., 2013). Within a systematic review including 58 studies, Macy et al. (2013) found that QOL for people experiencing OCD was statistically lower than when compared to QOL within the general population.

A recent cost of illness analysis for OCD within the UK was conducted, with authors estimating a total annual cost of £378 million to the National Health Service (NHS), with cognitive behavioural therapy (CBT) as the most significant contributor to healthcare costs (Kochar et al., 2023). The authors reported that OCD carries a high clinical and economic burden in the UK and concluded that more research is needed into alternative treatments for OCD which hold greater efficacy for treating the condition (Kochar et al., 2023).

Theoretical links between psychedelic usage and obsessive-compulsive experiences. Theories have been posited, from varying schools of thought, on how psychedelic usage may change OCD symptoms. One school of thought draws from classic psychedelic substance's ability to affect specific neural receptors, such as the claustrum, which holds a role in cognitive control (Doss et al., 2022). With an abundant supply of 5-

HT2A receptors, Doss et al. (2022) suggest that classic serotonergic psychedelics may disrupt this process within the claustrum due to their agonistic properties on such receptors. The most recent review available investigating psychedelics and OCD reports on these findings from Doss et al. (2022) and suggests that due to this disruption, psychedelics may be helpful for people experiencing difficulties with cognitive control, mental rigidity and repetitive behaviours, such as OCD (Graziosi et al., 2024).

This links with another theory, which suggests that the similar mechanisms between conventional serotonin reuptake inhibitors (SSRIs) and some classic psychedelics may activate similar processes within the brain, effectively reporting that classic psychedelics may act similarly to SSRIs for treating OCD (Halberstadt, 2015; Pittenger, 2021).

Furthermore, the more psychological or 'mystical' experiences, such as the dissolution of ego often evoked by macrodoses of psychedelics, have also been suggested to improve symptoms of multiple psychological conditions (Romeo et al., 2021). Research has routinely evidenced that macrodoses of psychedelics can lead to higher levels of psychological flexibility, creativity, openness to experience, empathy, and wisdom (dos Santos & Hallak, 2020; Gandy et al., 2022; Hayes et al., 2020; Jungaberle et al., 2018), and this has also been found for microdosing psychedelics (Rifkin et al., 2020).

Microdosing classic psychedelics for obsessive-compulsive experiences. Literature which focuses on macrodosing classic psychedelics for obsessive-compulsive experiences is currently scarce. However, this is a growing area of literature, with seven ongoing studies reporting current investigations into the efficacy of macrodosing psilocybin for OCD symptoms (Beersheva Mental Health Centre, 2023; Centre for Addiction and Mental Health, 2024; Imperial College London, 2022; Johns Hopkins University, 2022; University of Arizona, 2019; Yale University, 2018; Yale University, 2023; trials are referenced with the

year the study began). Even less research has been published exploring microdosing classic psychedelics for obsessive-compulsive experiences; an outline of the currently available literature is below.

Moreno et al. (2006) conducted a double-blind study investigating the safety, tolerability and clinical effectiveness of four single-doses (ranging from sub-to-frankly hallucinogenic) of psilocybin for nine patients diagnosed with obsessive-compulsive disorder (OCD). The authors found marked decreases in OCD symptoms of variable degrees observed in all participants during at least one dosage session, with this improvement lasting over 24 hours (Moreno et al., 2006).

A recent online questionnaire included 410 participants who reported experience of microdosing a psychedelic and were diagnosed with at least one psychological condition (Hutten et al., 2019). For participants with OCD specifically, changes in symptomology did not have any difference when comparing psychedelics to more conventional treatment. No other findings were reported specifically for OCD.

A recent retrospective online survey conducted by Buot et al. (2023) aimed to evaluate which psychoactive substances may have a therapeutic effect for people in the general population with OCD. The survey was completed by 174 participants, and the most used substances were classic psychedelics (84%), entactogens (72%) and ketamine (49%). The authors also report that eight of the included 174 participants reported microdosing either LSD or psilocybin, but results do not differentiate between macro-and-microdosing when reporting on effects. More than 30% of participants reported reductions in OCD lasting for more than three months, and participants who had used psychedelics multiple times showed a higher magnitude of improvements for OCD symptoms (Buot et al., 2023). Therefore, the authors concluded that classic psychedelics are potentially efficient in reducing OCD

symptoms, but further research is needed to understand the potential efficacy and longevity of psychoactive substances on OCD symptoms (Buot et al., 2023).

In summary, only three currently published studies include a sub-hallucinogenic dose of a psychedelic substance, indicating that very little is known about microdosing psychedelic substances and the potential effects on OCD, highlighting the relevance of focused research to further the understanding of the possible effects microdosing may have on OCD symptoms.

Qualitative exploration for microdosing psychedelic substances to change obsessive-compulsive experiences. At the time of writing, qualitative research exploring the relationship between microdosing psychedelics and the management of OCD is also lacking, with currently no studies specifically and solely investigating this topic. Fadiman and Korb (MAPS, 2017) suggested during a conference lecture that microdosing should be further researched for its therapeutic efficacy for OCD, among other psychological conditions.

Qualitative methods contribute broad and varied advantages to psychological research, particularly when little is known about a topic. This can be achieved by providing a 'thick description' (Ponterotto, 2006), which aims to present the reader access to the inner world of participant emotions, perceptions, and intentions (Denzin, 1989). Thick descriptions within qualitative psychological research may help add a perspective to an under-researched topic area, like this current study, providing novel information and interpretations to a lacking area of understanding. Furthermore, qualitative research can challenge assumptions and account for a renewed perspective on the historical understandings of phenomena we employ to think about people and make sense of their actions and experiences (Willig, 2019). Qualitative methodology may also contribute to psychological research through the idiographic and inductive nature of particular qualitative analytical methods, such as the

method used within this paper, because it centres the lived experience of the participants when analysing results, which can be helpful for research exploring novel topic areas as it allows for a detailed, in-depth, primary exploration of new research areas (Willig, 2019).

Research Aims. This research aims to ask and develop an understanding of how people make sense of microdosing psychedelics in an attempt to help their experiences of obsessions and compulsions.

This study is the first to use qualitative research methods to explore the experience of using psychedelics in the context of obsessions and compulsions. This offers the opportunity to develop insights into individual decision-making processes, motivations, and perceived processes of change when microdosing psychedelic substances for obsessions and compulsions.

Methodology

Terminology of obsessive-compulsive experiences

Due to this study potentially including participants from different countries and cultures around the world, and therefore a potential difference in understanding and defining OCD diagnostically, the language used in this paper will from now on encompass 'obsessions', 'compulsions' and 'obsessive-compulsive experiences' to allow for a less a medicalised understanding of participant experience, shifting away from diagnostic criterion and onto the individual lived experience of the common characteristics of obsessive-compulsive experiences.

Rationale for the use of Interpretative Phenomenological Analysis

Interpretative Phenomenological Analysis (IPA: Smith, 1996) was used to analyse interview transcripts due to its close consistency with the research aims of providing richer sense-making of individuals' experiences (Smith, 2011). IPA is understood to have developed

from three important philosophies: phenomenology, hermeneutics, and idiography (Smith et al., 2022).

Husserl (1970) posited that phenomenology involves the thoughtful and detailed examination of human experience, and it is important for the researcher to shift perception from the external world inward, to focus on the individual understandings of the external world (as cited in Smith et al., 2022). The use of phenomenology is helpful in the analysis of participant interviews as it aligns closely with this study's aim to ask curious questions regarding people's inward thoughts, perceptions, and motivations regarding a specific lived experience.

Hermeneutics (discussed first by Schleiermacher, 1768-1834 as cited in Schleiermacher, 1998), in part, reflects that to understand any part of an experience, it is important to look at the whole and to understand the whole, we must look at its containing parts (Smith et al., 2022). 'Double hermeneutics' (Giddens, 1984 as cited in Montague et al., 2020) means the researcher is concerned with examining how a phenomenon appears and how the researcher plays a role in making sense of the phenomenon's appearance (Smith et al., 2022). Double hermeneutics is particularly relevant for the analysis of this study as it builds upon the phenomenological focus to add understanding that the primary author will play an important role of hearing lived experiences and reflect these back outwards through close examination and interpretation to construct a narrative of microdosing classic psychedelics for obsessive-compulsive experiences.

The third and final significant influence of IPA is idiography, which is committed to understanding the individual experience at two levels: 1. the depth of analysis, meaning IPA needs to consist of thorough and systematic analysis, and 2. understanding how a particular experience has been understood from the perspective of particular individuals within a

particular context (Smith et al., 2022). To achieve this, IPA typically includes small, purposively-selected participants to offer a deep-level, reflective analysis regarding individual sense-making within a particular context, aiming to discover each individual's uniqueness (Smith et al., 2022). This is in keeping with the study's aims to explore specific lived experiences of microdosing psychedelic substances to manage obsessions and compulsions.

Therefore, phenomenology is required to approach this research question with curiosity, the double hermeneutic cycle is required to make sense of participants' sense-making within a neutral and balanced perspective on a research topic rarely examined, and idiography is required to conduct an in-depth, thorough and illuminating narrative of the unique accounts of each person's lived experience of obsessive-compulsive experiences, microdosing classic psychedelics, and how these may have interacted within one another.

Ethical approval

This research received ethical approval from The University of Birmingham's Research Ethics Committee (ERN_0490; please see Appendix 1).

Recruitment and ethical considerations

Purposive sampling was used to recruit participants with self-reported experiences of using microdoses of classic psychedelic substances in order to help with their experiences of obsessions and compulsions.

Participants were recruited through a research advertisement (please see Appendix 2) posted online in psychedelic social forums, such as Reddit. Reddit pages were chosen due to their relevance to the research question, seeming neutrality towards the topic, and the large number of people who joined the Reddit pages. For example, 'Microdosing' and 'Psychonaut' were amongst the most popular Reddit pages for people who use psychedelics (269,000 users

and 485,000 users, respectively, at the time of writing), with no indication from their titles of solely including positive or negative experiences. The research advertisement included the study question, participant inclusion criteria, an approximate interview length of 60 minutes, the primary author's contact details, and a link to the University of Birmingham's hosted webpage for this study. The webpage included the study aims, links to the Participant Information Sheet (PIS; please see Appendix 3) and Consent Form (CF; please see Appendix 4), and the primary author's encrypted web chat platform username, which is where the interviews would take place.

The research advertisement also included a pronounced and clear statement that participants needed to contact the primary author from an account where their username did not identify them to ensure the anonymity of each participant. If interested in participating in the study, the individual was asked to contact the primary author directly through the webchat platform from an anonymised username to set up a date and time for the online interview. Participants were selected on a first-come, first-served basis.

After initial contact, the primary author reiterated the inclusion criteria, asked for confirmation that the participant had read the PIS and CF, and informed the participant that the interview would be conducted over an end-to-end encrypted online web chat. Due to the sensitive and often illegal nature of the described experiences, interviews were conducted entirely online. End-to-end encryption resulted in only the primary author and participant having access to the interview messages. The web chat platform had a feature which allowed the primary author to destroy individual messages and whole conversations immediately after downloading each interview transcript. When deleted, the messages were replaced with random code strings, rendering participants' responses unrecoverable. An end-to-end

encrypted webchat platform meant no IP address could be tracked while downloading the webchat content.

For all participants, no identifying data was collected to protect anonymity. As this study aimed to provide as much anonymity to participants as possible, participants were not asked to sign a consent form as it would have risked their identification. Instead, participants were given sufficient information for their participation decision via the research advertisement, PIS, CF and the primary author answering any additional questions before the interview began. Participants were asked on at least two occasions to read and confirm they had read the PIS and CF – first when the primary author was contacted to arrange an interview date and time and again before the interview began.

This study did not limit recruitment to only include individuals who have a clinical diagnosis of OCD. This decision was made due to geographical differences in discussing and diagnosing mental health difficulties. Thereby, the methods, results, and discussion of this study will use terminology which is symptom-focused, not diagnostic-focused, when discussing participants' lived experiences of obsessive-compulsive experiences. To counter the possibility of varying interpretations of "OCD symptoms", the PIS included a bullet-pointed list of definitions of common characteristics of obsessive-compulsive experiences copied from the OCD UK webpage 'Diagnostic and Statistical Manual of Mental Disorders and OCD' (OCD UK, n.d.-c; please see Appendix 5 for this list).

The inclusion and exclusion criteria for this study are presented in Table 1.

Table 1.

Inclusion and exclusion criteria for participants.

Inclusion criteria	Exclusion criteria

Have experience within the past year of microdosing at least one psychedelic substance to help reduce their frequency or distress levels of experiencing obsessive-compulsive experiences.	Use psychedelic substances to a high enough dosage that they experience full psychoactive effects such as visual or auditory disturbances
Can fluently read and write in English	Are currently microdosing to help with substance use problems/withdrawal
Are aged 18 years or older	

Procedure

At the date and time of the interview, the primary author would appear 'online' on the web chat platform and begin the interview by asking the participant to confirm in writing that they had fully read the PIS and CF and agreed to each item on the CF. Once the participant agreed, the primary author sent demographic questions for the participant to answer. No demographic questions threatened the anonymity of participants, and participants were reminded that they could refuse to answer any questions they wished. After participants answered the demographic questions, the primary author began asking the interview questions (please see Appendix 6 for the demographic questions and interview schedule).

Semi-structured interviews were utilised because they extract in-depth accounts of participant experiences through the primary author's increased flexibility to use open-ended questions, prompts and freedom to ask participants to clarify or expand on areas of interest (Arksey & Knight, 1999).

After the interview ended, the primary author thanked each participant for their time and reported a concise statement of the following stages of analysis. The interview was then

deemed completed, with the primary author copying the interview transcript over to a separate document, immediately replacing the participant's anonymous webchat name with ‘Participant 1’ (for example), and then deleting the entirety of the participant webchat conversation on the web chat platform. Please see Appendix 7 for a visual depiction of the study procedures.

Analysis

Ontological and epistemological positioning. While completing this study, the primary author worked from critical realist ontological and constructivist epistemological positions. A critical realist approach asserts the existence of a ‘real’ world and an ‘observable’ world (Zhang, 2023), with an understanding that, within critical realism, people can attempt to understand the ‘truths’ of the ‘real’ world (Fletcher, 2017). However, due to limited human senses, we may form an approximation of these ‘truths’ through the knowledge currently available to us (Fletcher, 2017). A constructivist approach acknowledges that to understand the world, one must interpret it (Schwandt, 1998). Therefore, constructionism is somewhat ‘built-in’ to the IPA methodology due to its focus on interpretivism. Within constructivism, knowledge is built through personal experience, and the language used to explain an experience may be adapted to a certain degree to fit within our pre-existing social structures of what is already known (Schwandt, 1998).

Reflections on personal positioning.

Before commencing the initial reading of psychedelic psychological literature to prepare for this study, I had only thought relatively superficially about the use of psychedelics for therapeutic reasons. Reflecting on this lack of knowledge in supervision, I spoke about how I felt a block when attempting to identify any assumptions I had about the research, explaining that, at the time of completing the study procedures, this was not

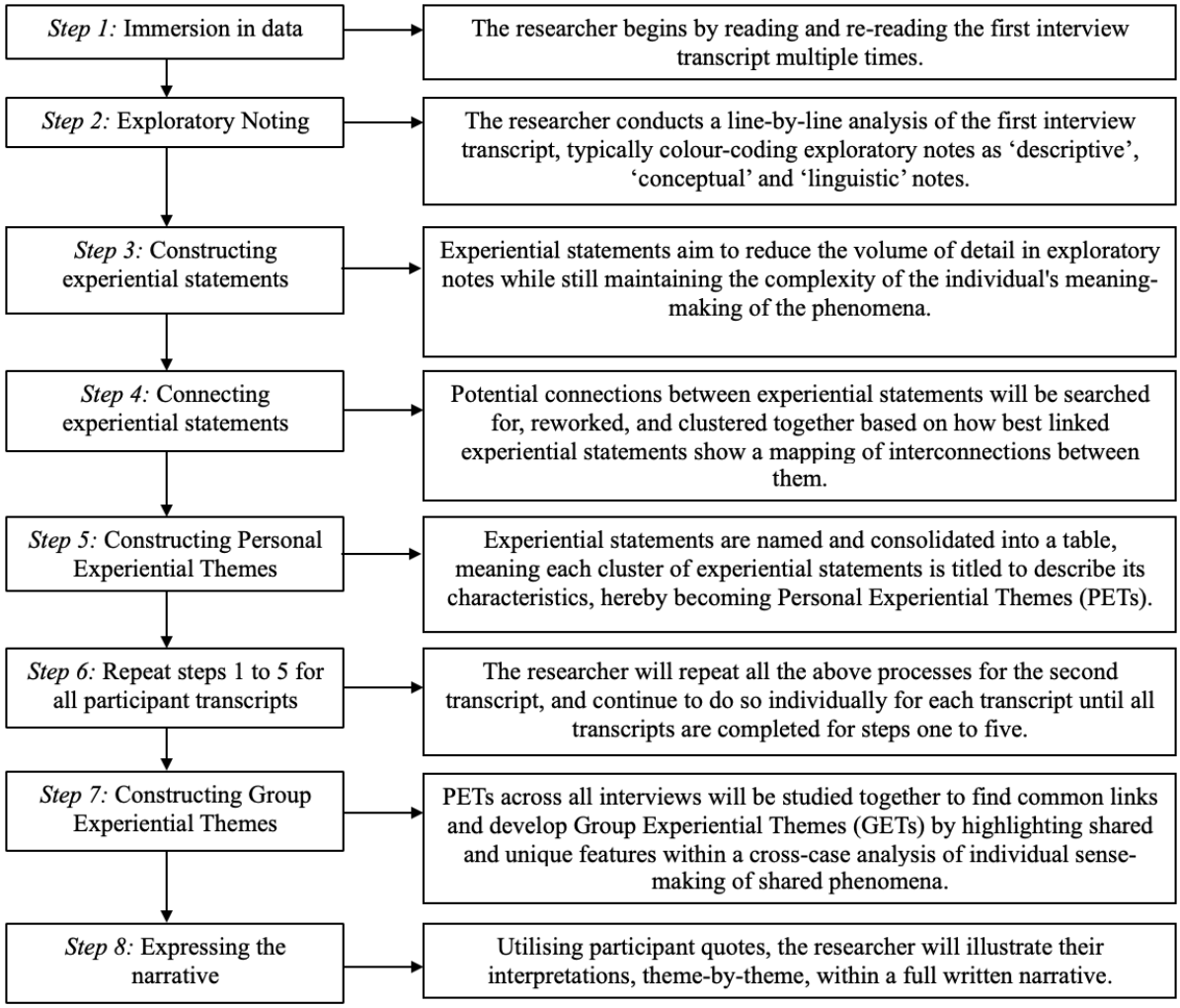
something that I focused on. Something I was more interested in was not whether microdosing psychedelics changed the obsessive-compulsive experiences as a 'yes' or 'no' factual basis, but participants' individual sense-making of how microdosing psychedelics may have changed the obsessions and compulsions. Looking back at how I felt during the interviews now, I remember more strongly a feeling of wanting to rush to the questions which asked participants to explain the mechanisms behind how they believed psychedelics changed these experiences, if at all. I remember feeling motivated that the first couple of participants had explained in depth some possible reasons for how they believed psychedelics changed their obsessions and compulsions, and I wanted to talk to further participants about specifically the same mechanisms but did not want to guide their answers in any way, as it was important for this research to remain neutral and balanced.

Within IPA studies, a closer role between the data and the primary author is required. In the context of bias, the author's personal positioning in relation to the topic area can never be eliminated entirely, however, it was endeavoured to be appropriately managed throughout the entirety of this study process. To manage my personal positioning within the topic area, I attended supervision with three research supervisors and one peer researcher, as well as monthly IPA analysis peer support groups. For further description on the content and benefits of using research supervision and the IPA support group, please see the paragraph headed as 'Supervision and peer-support groups' below on page 79.

The conduction of Interpretative Phenomenological Analysis. Before commencing the analysis of participant transcripts, the primary author read and made notes on how to best conduct an IPA utilising *Interpretative Phenomenological Analysis: Theory, Method and Research* (Smith et al., 2022). Please see Figure 1 for a brief description of each of the eight steps to conducting an IPA, as described by Smith et al. (2022).

Figure 1.

The eight steps to conducting Interpretative Phenomenological Analysis, as described by Smith et al. (2022).



Please see Appendices 8 to 11 for a detailed description and visual examples of how these steps to conducting an IPA were operationalised in the current study.

Supervision and peer-support groups. Throughout the analytical process, the primary author used reflexive supervision with three research supervisors and one peer conducting a study within a similar topic area. These monthly supervision sessions aimed to gain practical, directive advice from supervisors on how to best procedurally conduct this

study, to keep track of study activities still to be completed within the timeframes available for this research project, and to reflect collaboratively as a team regarding participant quotes or broader findings to gain other perspectives and develop insights into the quotes and primary author's interpretations.

The primary author also engaged in a regular IPA support group attended by peer researchers and facilitated by the University of Birmingham. This group aimed to develop the coherence and interpretation of the analysis by sharing anonymised excerpts of participant transcripts. The group offered curious questions and reflections from outside the study and, therefore, offered unique perspectives on the interpretation of participant data in order to further the analysis.

Participants

The primary author did not learn the names of the participants to protect their anonymity; therefore, pseudonyms are used throughout this report.

To protect participant confidentiality, this study utilised web-based instant messaging instead of the more traditional transcribing of visual and audio recordings of face-to-face semi-structured interviews with participants. The longest interview conducted with a participant for this study was 2 hours and 15 minutes, and the shortest interview was 1 hour and 15 minutes. The average length of participant interviews for this study was 1 hour and 33 minutes. Therefore, no participants were interviewed for less than one hour. Therefore, participants of this study were engaged in the interview for enough time to be able to create depth of conversation and thoughtful reflections regarding the research topic. The primary author had some initial concerns that this unique data collection method may miss some in-person nuances of participants, such as inflexions in the voice or body language of each participant. However, this concern was spontaneously counteracted by many participants,

who used capital letters in the text to show their emphasis on specific points made, used ellipses and exclamation points to represent the more subtle relationships to their expressed thoughts and mood on subject matters, and agreed to continue the interview over the hour they had initially agreed to talk with the primary author, with participants citing they would prefer to talk for longer in order to accurately express their opinions on the topics discussed. Therefore, this primary author does not believe much subtly was missed from using this data collection method, as ultimately, it was the participants who found creative solutions to the potential of lost nuance within the text-based interview style.

Eight people participated in this study, which falls within the four to ten recommended number of participants to include in a study using IPA (Smith et al., 2009). All participants were recruited from Reddit. Please see Table 2 for an overview of participant age, gender, highest level of education, and employment status.

Table 2.

Participant age, gender, education and employment status.

Participant ID	Age	Gender	Highest level of education	Employment status
Jonathon	31	Male	Bachelor's degree	Self-employed
Alice	32	Female	Bachelor's degree	Full time
Heather	25	Female	DipHE	Part time
Aaron	38	Male	Master's degree	Full time
George	42	Male	MSc	Full-time
Louise	45	Female	Postdoctoral	Full-time
Chris	43	Male	Master's degree	Retired

Patrick	53	Male	Bachelor's degree	Unable to work due to illness

Table 2 shows that the age range between participants was 25 to 53, with an average age of 38.6. Of the eight participants, five were male, and four were female. All participants had previously engaged with higher education, with the majority (87.5%) holding a bachelor's degree or above. Six of the eight participants were currently in part- or full-time employment or were self-employed. One participant was retired, and another was unable to work due to physical illness.

Table 3.

Participant diagnostic status of OCD and any relevant mental health comorbidities.

Participant	**Did the participant ever receive an official diagnosis of OCD**	**Comorbidities**
Jonathon	Yes	Health anxiety, chronic fatigue syndrome and ADHD
Alice	Yes	MDD, GAD, Insomnia
Heather	No	ADHD
Aaron	Yes	Anxiety and depression
George	Yes	Insomnia and anxiety
Louise	No	Anxiety and depression
Chris	No	PTSD and MDD
Patrick	Yes	Complex PTSD, MDD, anxiety and suicidal ideation

Note. Attention-deficit/hyperactivity disorder (ADHD); Major depressive disorder (MDD); Generalised anxiety disorder (GAD); Post traumatic stress disorder (PTSD)

Table 3 shows that five participants (62.5%) did report having received an official OCD diagnosis from a mental health professional. Comorbidities of mental health conditions varied among participants, with anxiety, trauma and depression conditions most common as comorbidities.

Table 4.

Participant's common obsession-based themes, the length of time they have experienced obsessive-compulsive experiences, and the frequency of these experiences.

Participant	Obsession-Based Themes	Length of time experiencing obsessions and compulsions	Frequency of experiencing obsessions and compulsions
Jonathon	Scrupulosity, contamination, existential and other egodystonic intrusive thoughts	18 years	Daily
Alice	NR	19 years	NR
Heather	Existential (particularly regarding death)	"Since childhood"	Daily
Aaron	External perceptions of internal self, safety for self and children	"As long as I can remember."	Daily
George	Self-deprecating thoughts and memories with repeated actions	"Since childhood"	NR
Louise	Romantic relationship focused obsessions	NR	Fluctuations in line with hormonal imbalances
Chris	Existential obsessions, death anxiety, organisation, counting,	17 years	Daily

	rumination over past events linked to combat		
Patrick	Intrusive memories of childhood abuse; intrusive thoughts of feeling stuck in life	10 years	Daily

Note. NR = not reported.

Table 4 shows that seven of the eight participants commented on their specific themes of intrusive thoughts, which varied between participants. Furthermore, all participants who reported their length of time experiencing obsessions and compulsions (n=7) had experienced these typically since childhood. Six participants reported the frequency of experiencing these symptoms, with five reporting daily experiences.

Table 5.

Participant use of psychedelics, including dosage and legality status in their current country of residence.

Participant	Psychedelics used	Dosage	Legal status
Jonathon	Psilocybin and amanita mushrooms	0.05g (psilocybin)	Legal
Alice	Psilocybin and LSD	NR	NR
Heather	Psilocybin	0.1g	Illegal
Aaron	Psilocybin	0.25-0.3g	Illegal
George	Psilocybin and LSD	0.25g (psilocybin)	Illegal
Louise	Psilocybin	0.5g	Illegal
Chris	Psilocybin	0.1g	Illegal

Patrick	Psilocybin	0.55-0.8g	Decriminalised

Note. NR = not reported.

Table 5 shows that all participants used psilocybin to microdose, with two participants using psilocybin and LSD to microdose. The dosage of microdoses ranged from 0.05g to 0.8g, with one participant not disclosing their specific dosage when using psilocybin or LSD. The reported dosages align with the Fadiman (2011) protocol for microdoses of psilocybin. Finally, five participants reported psychedelics are illegal in their country of residence, with one person not reporting on legality, one person reporting psychedelics are illegal but decriminalised in their country, and one person reporting psychedelics have legal status in their country.

Results

This study constructed three overarching themes from participant interviews: 1. The powerful nature of obsessive-compulsive experiences; 2. Microdosing psychedelics was perceived to ease obsessions and compulsions; and 3. Positioning microdosing psychedelics within other therapeutic contexts. Subthemes were also constructed for all three overarching themes. Some quotations from participants may have been edited for length and clarity; quotations edited for length are shown through a […] symbol. Please see Table 6 for a list of themes and subthemes included as results of this study, alongside which participants contributed to each theme.

Table 6.

Themes and subthemes constructed to form the results, alongside which participants contributed to each.

Theme Number	Theme Name	Contributions
1.	The powerful nature of obsessive-compulsive experiences	All participants
1.1.	*Obsessive-compulsive experiences are an ever-present "living nightmare".*	*All except Aaron, Louise and Patrick*
1.2.	*Obsessive-compulsive experiences are in control of the person*	*All except Chris and Patrick*
1.3.	*Obsessive-compulsive experiences become fused with identity*	*All except Heather, Aaron and Louise*
2.	Microdosing psychedelics was perceived to ease obsessions and compulsions	All participants
2.1.	*Microdosing psychedelics reduces the frequency or distress of obsessive-compulsive experiences*	*All participants*
2.2.	*Microdosing psychedelics reduces over-arching anxiety and restructures thinking*	*All participants*
2.3.	*Microdosing psychedelics develops more objective insights into obsessive-compulsive experiences, separating these from the identity*	*All except Alice and Patrick*
2.4.	*Microdosing psychedelics helps to let go of the need for control*	*All except Chris and Patrick*
3.	Positioning microdosing psychedelics within other therapeutic contexts	All participants
3.1.	*Microdosing psychedelics as a therapeutic medicine*	*Jonathon, Alice, Heather, George*

3.2.	*The current psychological paradigm is both helpful and harmful to people with obsessive-compulsive experiences*	*All except George, Louise and Chris*
3.3.	*Microdosing psychedelics is best used cooperatively with other therapeutic tools*	*Alice, Heather, Louise, Chris*

Theme 1. The powerful nature of obsessive-compulsive experiences.

All participants described the nature of their obsessions and compulsions, using these as a frame through which they made sense of their later comparisons of the role microdosing psychedelics had on their obsessive-compulsive experiences.

1.1. Obsessive-compulsive experiences are an ever-present "living nightmare".

Linking to Table 4, seven participants described experiencing obsessions and compulsions for years, typically since childhood. Furthermore, seven of the eight participants described their obsessive-compulsive experiences to be ever-present in their minds and diminish their ability to be present when completing a task or engaging in a social situation. Aaron described:

They [obsessions] *never go away. I'm able to turn them down a bit, but there's always something that pops into my head that I then start to focus on […] I'm not fully present in the moment and all of my focus on the task/conversation at hand is out the window* (Aaron, lines 123-127).

Furthermore, four participants chose to describe their obsessive-compulsive experiences through words used in various cultures as an attempt to reflect severe mental distress. For example, George stated, "I just thought I was secretly a crazy person" (line 138), and Alice, Jonathon and Chris used the words "bizarre" (line 386), "mad" (line 138), and "irrational" (line 215) respectively to describe the nature of their obsessive-compulsive experiences. These quotes highlight the profound changes that obsessive-compulsive experiences can have on a person's mindset, making them question their perceptions of

reality and confidence in their psychological stability. The use of these words may also reflect participants' wider understandings of psychological unwellness and how their individual experiences of obsessions and compulsions may be positioned within this, suggesting that for these four participants, broader ideas of what constitutes psychological wellness did not fit with their experiences of obsessions and compulsions.

Jonathon likened the power of his obsessive-compulsive experiences to God: "OCD WAS GOD" (line 1144). Jonathon's use of this metaphor suggests his understanding of obsessions and compulsions was omnipresent, omniscient, or omnipotent. Following this statement, Jonathon switched his metaphor to describe obsessions and compulsions as a demon instead, clarifying the negative connotations:

OCD, in terms of how I experienced it, WAS a DEMON or the DEVIL or whatever you want to call it […] the way it would trick me over and over again […] it was so clever and it diabolical in terms of the way it would pervert my thoughts and intentions […] it was this all-encompassing living nightmare that I had become numb to (Jonathon, lines 1150-1164)

Jonathon also described being "fooled" (line 574) by his intrusive thoughts repeatedly, suggesting he viewed his obsessions and ruminations as manipulative and could "trick" him into repeatedly believing the fears and doubts centred in obsessive rumination cycles. Jonathon's words "devil", "demon", and "diabolical" suggest the sense that Jonathon perceived the experiences as cruel-natured, and his use of the phrase "all-encompassing living nightmare" exemplifies the depth and breadth in which obsessions and compulsions negatively affected his life.

Therefore, all participants described their experiences of obsessions and compulsions within a strong negative context, with participants citing these experiences as lasting years

and often experienced daily. This suggests a powerful and ever-present nature of experiencing obsessions and compulsions, which is expanded on further within the next subtheme to present participant views that obsessive-compulsive experiences are in control of the person experiencing them.

1.2. Obsessive-compulsive experiences are in control of the person. Six participants spoke about feeling their obsessive-compulsive experiences were in control of them rather than them feeling in control of their obsessions and compulsions. For example, George stated, "The OCD symptoms have always been the ones in control" (line 319), and Jonathon reported, "I was totally at its mercy" (line 1072). Alice described previously attempting to control her obsessive thoughts through questioning and dissecting them:

It's like a very draining time intensive conversation with myself... why are you having this thought, I thought you were over this… maybe it's true, maybe it's not, is Gd punishing me and all that, so that's ocd in itself (Alice, lines 322-327)

Here, Alice describes a laborious, cyclical thought pattern she experienced with her obsessive thoughts, dissecting the reality of the thoughts to find evidence for any 'truth' behind her distressing obsessions, which may have been in an attempt to gain some control over them.

While Heather also described feeling a lack of control over her obsessive thoughts, she also expanded on this idea of control with obsessive-compulsive experiences to explain how she understood that compulsions serve as a false sense of control over distressing, intrusive, obsessive thoughts:

I also learnt that the compulsions are often an attempt to try to soothe ourselves by giving us a false sense of control. When actually this perpetuated the problem for me because I couldn't control my own brain and thinking patterns. (Heather, lines 195-197)

Here, Heather suggested that obsessions and compulsions are a false sense of control over foundationally uncontrollable concepts (for example, Heather's common theme of thoughts about death). This may add to the powerless-powerful dichotomous dynamic between participants and their obsessive-compulsive experiences, described in subtheme 1.1, as, through Heather's description, compulsions can be understood to seem like a strategy which alleviates obsessive experiences, but is conceptualised across cognitive-behavioural psychological literature as an avoidance strategy which solidifies and maintains the anxiety processes driving the obsessive-compulsive cycle (e.g., Taylor et al., 2007).

Therefore, participants provided six accounts of feeling obsessive-compulsive experiences as more in control than themselves. From this, it is suggested that participants made sense of these experiences as something which could feel overpowering and even, at times, inescapable. Therefore, it can be understood why some participants continued to explain that these experiences began meaning something important about their identity, as further described in the next subtheme.

1.3. Obsessive-compulsive experiences become fused with identity. Five participants commented on how obsessive and intrusive thoughts had become deeply intertwined with themselves and formed core parts of their identities.

Jonathon explained how his internal thinking 'voice', or inner monologue, had been taken over by the obsessive 'voice': "the internal monologue voice which was also the OCD voice" (lines 714-715). This illustrates that, for Jonathon, there was no separation between his typical thinking voice and the inner voice of obsessive-compulsive experiences; the two had become the same. Furthermore, Alice recounted the first time she realised she was experiencing obsessions and compulsions:

I had [OCD] *from 13 so I didn't know what it was like to not be this way, I went into the woods and finally was able to write down what I was feeling, and then I put it into google and it was OCD and I weeped, because I realized it wasnt me* (Alice, lines 193-196).

Here, Alice reported that because she had been experiencing obsessions and compulsions for many years, she believed that the egodystonic intrusive thoughts were genuine parts of her personality. Alice describes feeling overcome with emotional relief when she first realised her obsessive-compulsive experiences could be questioned and separated from herself through an explainable mental health diagnosis.

Therefore, linking all subthemes from Theme 1, obsessive-compulsive experiences were described by participants as psychologically all-encompassing, powerful and controlling, with obsessions and compulsions threatening a person's internal confidence and safety, causing frequent fear, dread and uncertainty and cultivating complex relationships with the self, due to egodystonic thoughts fusion with the identity.

Theme 2. Microdosing psychedelics was perceived to ease obsessions and compulsions

All participants reported microdosing psychedelics to reduce their obsessive-compulsive experiences, and all participants theorised how they believed microdosing also eased the distress attached to obsessions and compulsions. Throughout this theme, participants' sense-making of how microdosing psychedelics reduced their obsessive-compulsive experiences is linked back to Theme 1 subthemes to show related symptom change.

2.1. Microdosing psychedelics reduces the frequency or distress of obsessive-compulsive experiences. All eight participants reported their views that microdosing psychedelics helped their obsessive-compulsive experiences by either reducing the frequency of or anxiety attached to these experiences. This subtheme relates to subtheme 1.1., in which

participants potently described their experiences of obsessions and compulsions as frequent and distressing.

All eight participants reported a stark, positive contrast in how they felt after microdosing psychedelics in terms of their obsessive-compulsive experiences. For example, Patrick said:

Mainly that it has brought a calm to the storm that was continuously raging inside. Angry thoughts started to drift away. I'm not frantic always as before. I am comfortable in thought more often. […] My calm, natural self has come back (Patrick, lines 196-204).

With Patrick, there was a sense of renewed or newfound peace within himself throughout his interview, suggesting a profound, positive change in himself compared to when he experienced obsessions and compulsions before microdosing psychedelics.

Furthermore, Chris and Jonathon reported an immediate change in the frequency of their obsessive-compulsive experiences after microdosing; however, Louise reported, "The first dose I felt very anxious but without obsessive thoughts. The anxiety decreased progressively. In the fourth dose I felt very calm during the day of the intake and the rest days" (lines 138-139). Therefore, for Louise, the effects of microdosing were not immediate, but an accumulative effect of microdoses was observed to manage her obsessive-compulsive experiences best.

Chris and Jonathon reported their obsessions and compulsions returned after some time of not microdosing psychedelics, with Jonathon explaining:

The experience of getting better with microdosing has been 3 steps forward, 2 steps back, over and over again. I make very fast strides under the influence of the drug, then, once it wears off and/or I take a break, some, but usually not all, of the OCD comes back and I consequently I reach a new plateau of wellness and then I repeat the cycle. I've just kept

doing that for nearly 3 years, and the OCD has been getting less and less and less and less (Jonathon, lines 371-379)

Therefore, while all eight participants reported that microdosing psychedelics helped to reduce their obsessive-compulsive experiences, citing a newfound ability to engage in relaxed thought and experiences of calmness, they also commented on how it may be necessary to 'top up' these positive results with psychedelic microdoses, as repeated microdoses may show most beneficial experiences and long breaks may mean that some obsessions and compulsions return. Participants also offered theories on how they believe microdosing psychedelics helped to reduce their obsessive-compulsive experiences.

2.2. Microdosing psychedelics reduces over-arching anxiety and restructures thinking. All eight participants theorised how microdosing has helped their obsessive-compulsive experiences, with four participants (Alice, Heather, Louise, and Chris) directly suggesting microdosing helped to reduce the anxiety attached to obsessive-compulsive experiences. Alice suggested microdosing reduced her "general anxiety which helps to decrease my OCD" (line 309), and Louise stated:

I feel that [microdoses] *are acting on anxiety. I feel more calm and I am less worried about the future. I feel that I don't need to have everything under control, I am more confident and better able to deal with uncertainty* (Louise, lines 201-202)

Throughout her interview, Louise described an increased ability to access a relaxed state of mind after microdosing. In this quote, Louise explains new confidence in better dealing with uncertainties, which in turn reduces her anxiety. Louise accounts for both of these as having a positive effect on reducing her obsessive-compulsive experiences. Furthermore, Chris reported:

I feel less hung up on matters that relate to existentialism and constantly dissecting past events. The thoughts are very much still there, however, my reaction to these thoughts are far less of a direct fight or flight response. In turn my repetitive behaviors hold a bit less meaning to me and therefore I do them less. (Chris, lines 123-126)

Here, Chris describes how he still experiences obsessions and compulsions but now feels less anxiety attached to them, meaning that he feels able to 'put down' the urge to dissect every obsessive thought and complete every compulsion, showing that a reduction in emotional reactivity of attached anxiety to obsessive-compulsive experiences may act as a foundation to reducing the obsessive-compulsive experiences themselves.

Furthermore, Alice, George and Heather spoke about how microdosing psychedelics changed their psychological processing. Alice reported that microdosing psychedelics was "almost like a rewiring" (line 418), allowing her opportunities to perceive previously distressing triggers with a new-found perception. George reported, "I feel like my mind is repairing bit by bit. I have no way to prove it but thats how it feels" (line 361). Additionally, Heather reported:

I haven't had an episode in a long time, and the use [of] *psilocybin has helped me restructure my thinking in a way that rarely causes unmanageable symptoms. I have a more spiritual connection to the changing of the seasons, I appreciate winter (something I used to fear as it was the death of trees), as an important part of the cycle of life* (Heather, lines 165-167)

Heather's primary theme for obsessive thoughts focused around death, and so for Heather to now feel an appreciation for life cycles and to respect the dying and rebirth of nature shows a significant and profound positive change in how she relates to her previous trigger for obsessive thinking, with Heather also citing the psychedelics' perceived ability to

restructure thought patterns as a theory to how microdosing helping to reduce her obsessive-compulsive experiences.

Therefore, half of the participants theorised that microdosing psychedelics eased their obsessive-compulsive experiences by acting on the foundational anxiety which sits at the core of obsessive-compulsive experiences, with three participants further theorising microdosing helped to restructure their thought patterns in ways that no longer firmly attached to previously felt anxiety. This may be linked to the following subtheme, in which participants report microdosing psychedelics as helping to deepen their understanding of obsessive-compulsive experiences.

2.3. Microdosing psychedelics develops more objective insights into obsessive-compulsive experiences, separating these from the identity. Five participants spoke about gaining a deeper insight into themselves and their obsessive-compulsive experiences through microdosing psychedelics, which allowed for more objectivity when experiencing obsessions and compulsions.

Louise, Aaron and Jonathon all described a new, deeper understanding that their obsessions and urges to complete compulsions were inaccurate and untruthful about themselves. Aaron reported, "[I am] able to reason with my OCD and recognize that both my thoughts and compulsions are not rooted in reality" (lines 259-260); Louise said, "My obsessive thoughts are just a product of my emotional discomfort and have nothing to do with reality" (line 191-192); and Jonathon reported, "The psilocybin helped me see reality" (lines 514). These participants all cite that they have been able to understand their obsessive-compulsive experiences as outside of reality after microdosing psychedelics. Linking this with subtheme 1.3., Louise, Aaron and Jonathon may be suggesting that microdosing shifted a core fear that egodystonic obsessive thoughts are genuine parts of their identity, in turn

facilitating deeper-level insights to healing rather than only reducing the frequency of the obsessions and compulsions.

Furthermore, six participants described perceiving microdosing as helping them see themselves as the 'observer' of their obsessive-compulsive experiences instead of the person who must act on them, thereby creating distance from the experience and detachment between the obsessive-compulsive experiences and their identities. This also directly relates to subtheme 1.3., in which participants described feeling that their obsessive-compulsive experiences became closely intertwined with their identities. Jonathon reported:

So now, sure, I still get unpleasant thoughts and even intrusive thoughts but they are NOTHING like they were before it's trivially easy to dismiss them now compared to how it was before, I feel detached from them I can observe them as apart from myself (Jonathon, lines 640-650)

Jonathon's use of the words "detached" and "apart" shows he now feels a separation between the obsessive thoughts and himself and feels able to observe the experiences in a way in which he is not attached to the egodystonic nature of his intrusive thoughts. Jonathon further illustrated this separation from obsessive-compulsive experiences later in his interview, "I am a person with OCD attached now" (line 1038). Here, Jonathan expresses how he now perceives himself as a person with obsessive-compulsive experiences, not a person who *is* the experiences, thereby further untangling and creating distance of these from his identity.

Aaron likened obsessive-compulsive experiences to a busy train station during his interview, reporting that after microdosing, he allows the intrusive thoughts to enter and exit his mind in a more relaxed way:

I'm able to reason with my intrusive thoughts in the sense that I'm able to let those thoughts pass through the station rather than let them get off. As a result I'm able to be and feel more present." (Aaron, lines 196-199).

Therefore, microdosing psychedelics has allowed Aaron to watch his intrusive thoughts pass through his awareness without the need to engage with them, showing an increased ability to observe and 'let go' of previously distressing thoughts and feelings, which in turn may also serve to reduce the attachment of such experiences on the identity. This idea of microdosing helping to 'let go' is discussed further in the next subtheme, which describes participants sense-making of how microdosing psychedelics helped them to surrender the need for control.

2.4. Microdosing psychedelics helps to let go of the need for control. This subtheme directly relates to subtheme 1.2., in which participants described feeling that their obsessive-compulsive experiences were in control of themselves.

Six of the eight participants spoke about how microdosing helped them to let go of their need to control their obsessive-compulsive experiences. For example, Aaron stated, "Letting things be and realize that I'm not fully in control is a big realization I've had since starting microdosing" (lines 226-227). George explained, "I feel like I have learned a new sense of control over the symptoms that I didn't know was possible" (line 287). This suggests that microdosing psychedelics returned the feeling of being in control of the obsessive-compulsive experiences back to participants. Participants did not directly state how the microdosing experience helped them to feel more in control; however, it may be theorised that the above processes of microdosing reducing foundational anxiety, enhancing insights into the self, and separating the obsessive-compulsive experiences from the identity may have

all had an effect on empowering participants to feel more in control of their obsessions and compulsions.

Therefore, throughout Theme 2, participant comments directly linked to their previous reports that obsessive-compulsive experiences felt all-powerful, controlling, and became fused with identity to provide descriptions of how microdosing psychedelics allowed them to feel less anxiety, more resilience against future obsessions and compulsions, to create space between the obsessive-compulsive experiences and their identities, and lessening a need for control.

Theme 3. Positioning microdosing psychedelics within other therapeutic contexts

All participants described believing microdosing psychedelics as igniting therapeutic benefits for their psychological wellbeing. Some participants chose to frame this within broader medical and psychological contexts, describing their experiences with both and comparing these to their experiences of microdosing psychedelics for obsessions and compulsions.

3.1. Microdosing psychedelics as a therapeutic medicine. Half of the participants discussed microdosing psychedelics as situated within a medicinal context. For example, Heather reported, “Microdosing psilocybin has meant that I have gained a perspective about the importance of it as a medicine” (line 266), and Alice stated, “LSD seems to maybe be a version of SSRIs or something, but less severe” (line 337). Participants viewing psychedelics as medicine may suggest that their experiences of microdosing were valued most through psychedelics’ perceived therapeutic effects.

George stated a similar belief to Alice, that microdosing psychedelics holds fewer adverse side effects compared to traditional medication, “This [microdosing] helps regain control WITHOUT drugging my other senses” (lines 261-262). This sentiment was reported by six of

the eight participants in total, suggesting that most participants found microdosing psychedelics more tolerable compared to traditional medication.

These reports of psychedelics holding therapeutic benefits are further discussed within the next subtheme, which details both the helpful and harmful nature of the current psychological paradigm for people with obsessive-compulsive experiences.

3.2. The current psychological paradigm is both helpful and harmful to people with obsessive-compulsive experiences. Four participants reported that microdosing is either similar to engaging in therapy or should be used alongside engagement in therapy. Alice explained her beliefs on microdosing psychedelics as helpful alongside engagement in therapy:

I do have disagreements with the OCD Psychedelic Society I'm in. ERP [Exposure and Response Prevention: an evidence-based psychological intervention] *is absolutely essential in treatment, and I think in the group, it can almost be a way to bypass clinical treatment. Both are needed and I think it's deadly advice to just give microdose etc.* (Alice, lines 505-508)

Therefore, Alice suggested that using both microdoses of psychedelics and ERP therapy together would maximise the benefits of both. However, Alice also presented an opposing view on the usefulness of talking therapy, stating that the current lack of knowledge and treatment of obsessions and compulsions within psychology can prove unhelpful. “I find the psychology world to still be really judgemental and uneducated about OCD” (lines 353-354).

This was supported by Jonathon and Heather, who both commented on experiences and fears of a psychologist misunderstanding obsessions and compulsions and, therefore, misunderstanding their experiences. Heather reported:

I haven't had therapy for OCD. At the time I didn't know what was happening and I think trying to explain it to someone who might not understand might make me feel worse, and exasperated my feeling being wrong or different (Heather, lines 307-309).

Heather reports that the fear of feeling misunderstood by a mental health professional was a barrier for her to seek therapy, which may have caused her to find alternative routes to treating her obsessive-compulsive difficulties, such as microdosing.

Therefore, participants report that microdosing psychedelics holds therapeutic benefits and that the current paradigm of understanding and treating obsessive-compulsive experiences can be both helpful and harmful for some participants. The discussion of using psychedelics in harmony with other therapeutic tools is presented in further depth within the next subtheme.

3.3. Microdosing psychedelics is best used cooperatively with other therapeutic tools.

Four participants commented on how they believe microdosing is used best in conjunction with other therapeutic tools which are not talking therapies. For example, Louise reported:

Yoga and meditation have been very good for me. However, microdosing has given me the plus of being able to understand my OCD more clearly and has given me more calm, I don't really know how to explain this. I also feel that I have regained the ability to laugh, which I didn't have with yoga alone. I also feel more connection with nature taking microdoses. Although yoga also connects me, microdoses is more powerful, I think. (Louise, lines 222-226)

Chris also suggested that microdosing psychedelics is more about how it is used and not something which is an immediate 'cure-all' treatment:

I think approaching them [psychedelics] *as a more of a tool, as opposed to the mentality that they are a magic cure-all, has been very important. I spent a couple of years researching*

their use before I finally pulled the trigger and began using them […] I tried to take a more scientific/analytical approach to their use. So coupled with use, I began practicing mindfulness and even share some of the changes with my therapist, which combined has had a very positive impact. (Chris, lines 224-230).

Here, Chris encapsulates many participants' views that microdosing psychedelics for obsessive-compulsive experiences should be used as a therapeutic tool to engage in deeper-level reflection in order to understand and heal from obsessions and compulsions and should be used with intention and knowledge that psychedelics are not a "magic cure-all" treatment but should be approached with appropriate understanding, patience and self-agency to treat obsessive-compulsive experiences effectively.

Therefore, within Theme 3, all participants described beliefs that microdosing psychedelics hold therapeutic benefits. Participants also expressed their helpful experiences with therapy, but also how the current psychological paradigm may serve to make people with obsessive-compulsive experiences feel othered and negatively judged. Participants also stressed their beliefs that microdosing psychedelics should not be used as the sole tool for therapeutic benefit but should be used in conjunction with multiple other tools which support the treatment of obsessive-compulsive experiences.

Discussion

This study explored how people make sense of microdosing psychedelics in an attempt to help their obsessions and compulsions. Three overarching themes were found from eight participant interviews: 1. The powerful nature of obsessive-compulsive experiences; 2. Microdosing psychedelics was perceived to ease obsessions and compulsions; and 3. Positioning microdosing psychedelics within other therapeutic contexts.

Summary of findings

Participants typically described their experiences of obsessions or compulsions before they began microdosing psychedelics, and this narrative provides an insight into how participants made sense of their obsessive-compulsive experiences as ever-present, powerful and controlling. Participants described their perceptions that microdosing psychedelics was associated with a reduction in the frequency and distress of obsessions and compulsions. Some participants reported immediate and lasting therapeutic effects of microdoses of a classic psychedelic on their obsessive-compulsive experiences. In contrast, others stated that microdosing had an accumulative effect on treating their obsessions and compulsions.

Participants spoke about how they understood the role of microdosing psychedelics in changing their obsessive-compulsive experiences, with many referring to how microdosing helped to reduce the anxiety felt as an undercurrent of their engagement with obsessions, intrusive thoughts, and urges to complete compulsions. Participants felt that microdosing psychedelics helped to heal this deeper psychological wound, which in turn reduced the meanings attached to intrusive thoughts when they arose within the mind after microdosing. Therefore, some participants felt that microdosing did not take away the intrusive or obsessive thoughts but helped them to detach from the meaning or the typical emotional reactivity to these thoughts, allowing participants to 'let go' of the cycle of anxiety, obsessive thoughts, and urges to neutralise the thoughts through completing compulsions.

Systematic reviews exploring microdosing psychedelics for anxiety report that research consistently shows some mixed results, with a general trend towards suggesting microdosing as a promising treatment for anxiety (Lo et al., 2024; Ona & Bouso, 2020; Polito & Liknaitzky, 2022). Research also outlines some potential preliminary theories on why inconsistent reports may be found, detailing that much research cites differences in dosing schedules and psychedelic substances used, with reports of heightened anxiety when

microdosing mainly attributed to dosing inaccuracies when taking higher dosages of psychedelics (Andersson & Kjellgren, 2019; Holze et al., 2021). Therefore, the current research links to literature which suggests microdosing psychedelics reduces anxiety (for the most recent systematic review of both quantitative and qualitative literature on microdosing psychedelics for anxiety, please see Lo et al., 2024), which participants in the current study suggested then had a secondary effect of reducing the frequency and distress related to their obsessive-compulsive experiences.

Furthermore, one participant described observing an accumulative effect of their obsessive-compulsive experiences lessening after multiple microdoses of psychedelics. This is in line with other literature, which states that psilocybin mushrooms require repeated dosing to maintain therapeutic effects on obsessions and compulsions (for a review, please see Graziosi et al., 2024). After reviewing available literature on psychedelic effects on OCD (not specific to microdosing), Graziosi et al. (2024) report that this requirement for repeated psychedelic doses to reduce OCD symptoms is in contrast to psilocybin's impact on other mental health conditions, which shows more immediate and persistent reduction in symptoms in depression, substance use and end-of-life anxiety. The authors suggest that further research with robust follow-up protocols is required to detect any persisting effects of psilocybin on OCD (Graziosi et al., 2024).

Within participant interviews, only Heather and George provided pronounced, direct statements of their disagreement with the criminalisation of psychedelics, given their perceived therapeutic benefits and natural occurrence. Heather was the only participant to offer her socio-political beliefs to expand on her thoughts about criminalising psychedelics. Heather and George's short but impactful statements of disagreement with the illegal nature of psychedelics, paired with all other participants' reports that they found therapeutic relief

from microdosing psychedelics, may provide opposing views to the historical perception of psychedelics as purely 'recreational', and provide support for recent literature reporting motivations for microdosing psychedelics were primarily health and therapeutic-related (e.g., Rootman et al., 2021).

Strengths and limitations of the study

The small sample size of this study means the participant transcripts were analysed in much deeper detail than if this study included many more participants. However, the small sample size also means that this study is limited in its transferability to larger groups, meaning this study may have missing exemplars and does not address all aspects of people's lived experiences of microdosing psychedelics for obsessive-compulsive experiences.

One strength of this study was the use of anonymised and text-based interviews, meaning this research was able to potentially include global participants from countries where psychedelic usage is illegal without fear of identification. This data collection method also allowed participants to think carefully about the questions asked and answered in their own time, which may aid more in-depth reflections or answers more congruent with a person's true feelings or experiences than immediate face-to-face conversation. However, this data collection method means that the primary author may have missed some contextual clues like body language or inflexions in the voice compared to typical face-to-face interviews, as it may be more difficult for the participants to emphasise specific points when typing.

Another strength is the primary author's regular attendance at peer-group workshops during the analysis stage of this study, as well as research supervision with three supervisors and one peer conducting a study within a similar research topic. This primary author presented anonymised data and initial interpretations of data at these meetings, seeking feedback and alternative interpretations from peers and supervisors. These meetings were

used to check the credibility of the primary author's development and interpretation of Personal Experiential Themes (PETs) and Group Experiential Themes (GETs) during the analytical stage and to reflect on the findings with others to demonstrate research rigour.

Similarly, another strength of this study was the primary author's engagement with critical realist ontological and constructivist epistemological positions. Due to the double hermeneutic cycle within IPA, it was important for the primary author to reflect on their thoughts, opinions and biases regarding the research topic. Microdosing psychedelics for obsessive-compulsive experiences is a relatively novel research area, which meant it was important for the primary author to present data from a neutral and balanced point of view. Therefore, the primary author used the peer-group workshops and research supervision described above to monitor and manage their subjectivity. However, it is acknowledged that interpretive research typically includes the author's participation in the analysis, and therefore, subjectivity cannot be entirely eliminated.

Participant ages in this group were relatively varied. However, most participants were of a similar level of education and seven of the eight participants were employed to some extent. The gender split between participants was almost equal but skewed slightly towards male participants. As this study uses a small sample size due to the rationale for using an in-depth analytic approach such as IPA, this study does not attempt to transfer findings across a wider population. Additionally, as IPA typically focuses on a group of people, homogeneous within specific experiences or characteristics (such as people who have microdosed for obsessive-compulsive experiences), participant experiences may likely be similar and hence why commonality in themes may have appeared in this study.

Furthermore, all participants mainly reported positively about microdosing psychedelic experiences for their obsessive-compulsive experiences. No participant disclosed

an impactful nor long-lasting negative experience. At this time, it is unclear why this is the case. When reflecting on the recruitment phase of this study, the primary author does not recall seeing negative discourse online regarding microdosing. Therefore, perhaps people with negative experiences of microdosing are less likely to contribute to pages such as 'Microdosing' on Reddit, or perhaps they may be less likely to volunteer for psychedelic research to not relive the negative experiences again with a researcher. The lack of negative experiences in this study may be addressed in future research that is less exploratory and wishes to be more directive in its exploration of 'negative' or undesired experiences of microdosing classic psychedelics for obsessive-compulsive experiences.

Theoretical Implications and Future Research

This study is the first of its kind to use a qualitative approach and inductive analysis to interpret participant interviews who have microdosed classic psychedelics for obsessive-compulsive experiences. Therefore, this study adds to the minimal current knowledge regarding people's lived experience of using psychedelics in the context of obsessions and compulsions and may act as a basis for future research, both qualitative and quantitative.

This study supports many routes for future research in a similar topic area. For example, further qualitative research on people's experiences of macrodosing psychedelics for obsessive-compulsive experiences may have interesting comparisons of results to the present study and perhaps an ability to tease out the differences in reported experiences between psychedelic usage and obsessions and compulsions.

Furthermore, as reported earlier, this study is one of the first of its kind, and qualitative research provides important contributions to psychological research in novel topic areas. Therefore, this study may assist future, larger Randomised Control Trials (RCTs) by providing exploratory knowledge for future intervention studies.

At the time of writing, no studies are currently published that examine any potential links between psychedelics and anxiety and how this may affect obsessive-compulsive experiences. Therefore, one suggestion for future research would be for these links to be examined, specifically for microdosing, as the results of the current study suggest some possibility that microdosing psychedelics decreases underlying anxiety, which in turn increases distress-tolerance of obsessive-compulsive experiences.

As microdosing psychedelics does not result in any perceptual alteration, it may be viewed as less recreational and more therapeutic broadly within the general population. Further research should be conducted with a sizeable population-level sample to understand current opinions on views comparing microdosing to macrodosing psychedelics to test these suggestions. This could lead to a better understanding of implications for future research and application to clinical settings.

Finally, all participants discussed the inadequacy of either SSRIs or the current psychological paradigm of understanding obsessions and compulsions. Therefore, healthcare research must examine this more precisely as, for the participants of this study, these shortcomings in the current healthcare system were common citations for feelings of 'otherness' from being misunderstood by psychologists and barriers to taking conventional medication due to SSRIs' comprehensive list of adverse side effects.

Conclusion

This study aimed to explore the lived experiences of people who currently or previously microdosed a classic psychedelic to support their obsessive-compulsive experiences. The findings of this study illustrate how participants made sense of their experiences of microdosing psychedelics and their associations of microdosing psychedelics as reducing the frequency and distress attached to obsessions and compulsions. Participants

in this study also reported beliefs that microdosing psychedelics might have similar processes of action to traditional treatments, such as medication and talking therapy. Participants were largely positive about their experiences of microdosing psychedelics for obsessive-compulsive experiences, and further research is needed into this topic to understand any psychedelic processes on obsessions and compulsions more concretely.

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CHAPTER A

PRESS RELEASE FOR THE LITERATURE REVIEW

University of Birmingham News Release

Microdoses of Psychedelics Reported to Lower Anxiety

A recent review found that microdosing psychedelics reduced long-term anxiety, 'unlocked' deeper introspective abilities, and helped to change psychological patterns to rewrite people's ways of relating to anxiety.

A review of currently available qualitative research was conducted by the University of Birmingham and found that doses of psychedelics small enough not to trigger hallucinogenic effects (or 'microdoses') help to reduce anxiety across a variety of conditions, such as General Anxiety Disorder (GAD), Social Anxiety Disorder (SAD), Obsessive-Compulsive Disorder (OCD), Post-Traumatic Stress Disorder (PTSD) and general stress.

This review found four overarching themes: 1. Motivations for microdosing psychedelics; 2. Microdosing psychedelics change experiences of anxiety; 3. Processes of change when microdosing psychedelics for anxiety conditions; and 4. Integrating lessons from microdosing psychedelics into everyday life.

The review found that people felt curious about psychedelics' perceived therapeutic effects, and the most common motivation cited by participants for beginning their journey into microdosing psychedelics was hope for psychedelics to help them experience less psychological distress. This review also suggests that people chose to microdose psychedelics for their anxiety as they experienced difficulties when accessing traditional treatments, therefore feeling a need to find alternative solutions. People who had previously tried more conventional treatments for anxiety, such as Selective serotonin reuptake inhibitors (SSRI) medication, said that they preferred to use psychedelics to manage their feelings of anxiety as

it did not produce a plethora of adverse side effects typically experienced with traditional medication.

Microdosing psychedelics was also reported to 'go deeper' than traditional medication for treating anxiety, with people citing psychedelic usage allowed a deeper level of healing through its ability to uncover 'buried' memories, thoughts and emotions for a new opportunity to think creatively and see new perspectives on what previously caused them to feel anxious. Microdosing psychedelics was also reported to increase people's ability to let go of and accept what they previously found distressing.

However, the review also found that, in a minority of cases, people reported an increase in some general and social anxiety symptoms. This increase in anxiety was sometimes understood as accidental due to dosing inaccuracies, meaning that some people took more than a psychedelic microdose and experienced psychoactive effects which they perceived as undesirable. Other people explained that the mechanism behind how psychedelics open up the mind to uncover previously buried memories, thoughts, and emotions meant that some people felt vulnerable to these newly uncovered raw emotions. Therefore, while some people framed this short-lived increase in anxiety as a necessary therapeutic step to face their anxiety and find new ways to relate to the things that would previously distress them, others described this same experience as anxiety-inducing and framed this as an adverse effect of microdosing psychedelics.

Finally, this review drew on similarities between the findings of microdosing psychedelics for reducing anxiety symptoms and previous research on psychological flexibility (defined as a person's ability to cope with, accept, and adjust to difficult situations[1,2]), suggesting that microdosing and some traditional talking therapies focused on

increasing psychological flexibility may hold similar working mechanisms to reducing psychological distress.

This review was one of the first of its kind as, currently, research exploring microdoses of psychedelics for anxiety conditions remains sparse. This is particularly true for qualitative research, as recent research is typically quantitative and aims to illuminate efficacy ratings due to previously contradictory ideas about the effectiveness of psychedelics for anxiety. Therefore, this review was an important addition to the current understanding of microdosing psychedelics for anxiety conditions as it adds important insights to previously lacking information regarding the motivations, experiences, behaviours, wishes and expectations of people microdosing psychedelics for anxiety conditions.

The review also provided suggestions for future research into similar topic areas, including further research into how psychedelics may enhance a person's ability to reprocess traumatic memories cathartically and a precise investigation into the individual and potentially shared processes of change when comparing microdosing psychedelics with talking therapies which prioritise increasing psychological flexibility as a therapeutic tool.

For media enquiries, please contact Beck Lockwood, Press Office, University of Birmingham, tel: email:

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1. Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. Behaviour research and therapy, 44(9), 1301-1320.

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Notes to editor:

- The University of Birmingham is ranked amongst the world's top 100 institutions. Its work brings people from across the world to Birmingham, including researchers, teachers and more than 8,000 international students from over 150 countries.

CHAPTER A

PRESS RELEASE FOR THE EMPIRICAL PAPER

University of Birmingham News Release

Microdosing Psychedelics Reduces Obsessions and Compulsions

People who have taken low doses of psychedelics say their obsessions and compulsions have gotten better and stayed better over a long time.

A recent study conducted by the University of Birmingham interviewed eight people who had microdosed psychedelics for obsessive thoughts or urges to complete compulsive behaviours and found three overarching themes: 1. The powerful nature of obsessive-compulsive experiences; 2. Microdosing psychedelics was perceived to calm obsessions and compulsions; and 3. Positioning microdosing psychedelics within other therapeutic contexts.

This study reports that participants viewed their obsessive-compulsive experiences as an underlying fear of lacking control and that microdosing psychedelics helped them to let go of this desire for control. Many participants in this study discussed feeling that microdosing psychedelics allowed them to 'let go' of many things which previously made them feel anxious, which in turn made their obsessions and compulsions worse. Participants said they felt more able to let go of a felt need for control, let go of thoughts and feelings that previously caused them distress, and let go of the parts of their obsessive-compulsive experiences which had previously become intertwined with parts of their identity.

This study suggests that obsessions and compulsions were, in part, reduced by alleviating the foundational anxiety which underlies the obsessive-compulsive experiences. This study also suggests that microdosing psychedelics helped people to perceive their thoughts and emotions more objectively to distance themselves from their distressing

reactions to obsessive, intrusive thoughts, which are a central part of obsessive-compulsive experiences.

One participant from the study said, "[I am] able to reason with my OCD and recognize that both my thoughts and compulsions are not rooted in reality" (Aaron).

Participants of the study also reported that microdosing increased feelings of acceptance towards thoughts and situations which they would have previously found anxiety-provoking. This study supports previous literature that suggests microdosing psychedelics decreases anxiety[1]. Participants of this current study reported that a reduction in their overall anxiety levels helped to reduce the frequency and distress experienced with obsessions and compulsions as a secondary effect.

Participants of this study reported that psychedelics should be viewed as more of a "medicine" than recreational drug use, as well as the importance of microdosing psychedelics alongside the use of other therapeutic tools, such as engaging in traditional talking therapy and the use of meditation and yoga.

Another study participant reported, "[microdosing] has brought a calm to the storm that was continuously raging inside" (Patrick).

This study was one of the first of its kind as, currently, only three previous papers specifically investigated microdoses of psychedelics for obsessive-compulsive experiences. This lack of current knowledge can be partially explained by the three decades in which psychedelic research for mental health was stopped due to the global criminalisation of psychedelic substances.[2]

However, with the recent second 'boom' of psychedelic research currently occurring[3], seven clinical trials are presently ongoing which investigate psychedelic usage for obsessive-compulsive experiences. Therefore, this study was an important addition to currently sparse

knowledge about microdosing psychedelic substances with the intention of treating obsessive-compulsive experiences and offered a novel opportunity to develop insights into individual experiences, decision-making processes, and perceived processes of change in relation to microdosing psychedelic substances for obsessions and compulsions.

The study provided suggestions for directions of future research into similar topic areas, including further research into a large-scale exploration of the population's current opinions when comparing microdosing to macrodosing (a dose large enough to produce a typical psychedelic 'trip') to test whether people feel more tolerant of psychedelics being used as a medical treatment when it is sub-hallucinogenic. Furthermore, the study recommends further research into qualitative explorations of macrodoses of psychedelics for obsessive-compulsive experiences to tease out any differences in reported experiences between how psychedelic dosages help reduce obsessions and compulsions to support RCTs by providing exploratory knowledge and understanding of a new and promising research area.

In summary, this study provides important first insights into people's reports that microdosing psychedelics helped to reduce their obsessions and compulsions, and much more research is needed to explore this potential relationship further.

For media enquiries, please contact Beck Lockwood, Press Office, University of Birmingham, tel: email:

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1. Lo, D. F., Zia, H., Rajkumar, P., Thakur, A., & O'Donnell, H. (2024). Modern Psychedelic Microdosing Research on Mental Health: A Systematic Review. The Primary Care Companion for CNS Disorders, 26(1), 51073.

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3. Nutt, D., & Carhart-Harris, R. (2021). The current status of psychedelics in psychiatry. JAMA psychiatry, 78(2), 121-122.

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CHAPTER B

APPENDICES FOR THE LITERATURE REVIEW

Appendix 1

Reflections and observations on the meta-ethnography results and its connections to therapeutic models

Within the initial stages of re-reading and editing the results of this meta-ethnography, I noticed that many of the final result headings and subheadings seemed to align closely with the aims of many talking therapies (e.g., more acceptance of uncomfortable emotions, being in the present moment, having a more flexible relationship with difficult thoughts, and increasing individual autonomy), and more specifically, could be interpreted to map over onto the six points of the ACT Hexaflex (please see Figure 3).

On investigation, it transpired that Steven Hayes (founder of ACT; Hayes et al., 1999) has discussed how his personal experiences with psychedelics influenced and contributed to the development of ACT in the 1980s (Gates & Pilecki, 2022). This was previously unknown to me and came as a surprise. Keeping a reflective diary and close monitoring of my own interpretations (as described in the Methods section) was an essential and crucial process in ensuring that my own biases and predispositions did not influence the interpretations made. Sharing the interpretations, including those regarding the ACT processes, with my supervisors and colleagues provided additional transparency and rigour in the analysis.

CHAPTER B

APPENDICES FOR THE EMPIRICAL PAPER

Appendix 1

Ethics Letter of Approval

Dear Dr Andrew Fox and Ms Charlotte A'Court

RE: Microdosing psychedelic substances to help with obsessive-compulsive difficulties: an Interpretative Phenomenological Analysis

Application for Ethical Amendment: ERN_0490-Aug2023

Thank you for your application for amendment to the above project, which was reviewed by the Science, Technology, Engineering and Mathematics committee.

On behalf of the Committee, I confirm that this amendment has full ethical approval.

Any adverse events occurring during the study should be promptly brought to the Committee's attention by the Principal Investigator and may necessitate further ethical review.

Please ensure that the relevant requirements within the University's Code of Practice for Research and the information and guidance provided on the University's ethics webpages (available at https://intranet.birmingham.ac.uk/finance/accounting/Research-Support-Group/ResearchEthics/Links-and-Resources.aspx) are adhered to.

Please be aware that whilst Health and Safety (H&S) issues may be considered during the ethical review process, you are still required to follow the University's guidance on H&S and to ensure that H&S risk assessments have been carried out as appropriate. For further information about this, please contact your School H&S representative or the University's H&S Unit at healthandsafety@contacts.bham.ac.uk.

Kind regards,

The Co-Chairs of the Science, Technology, Engineering and Mathematics Committee

Appendix 2

Research Advert

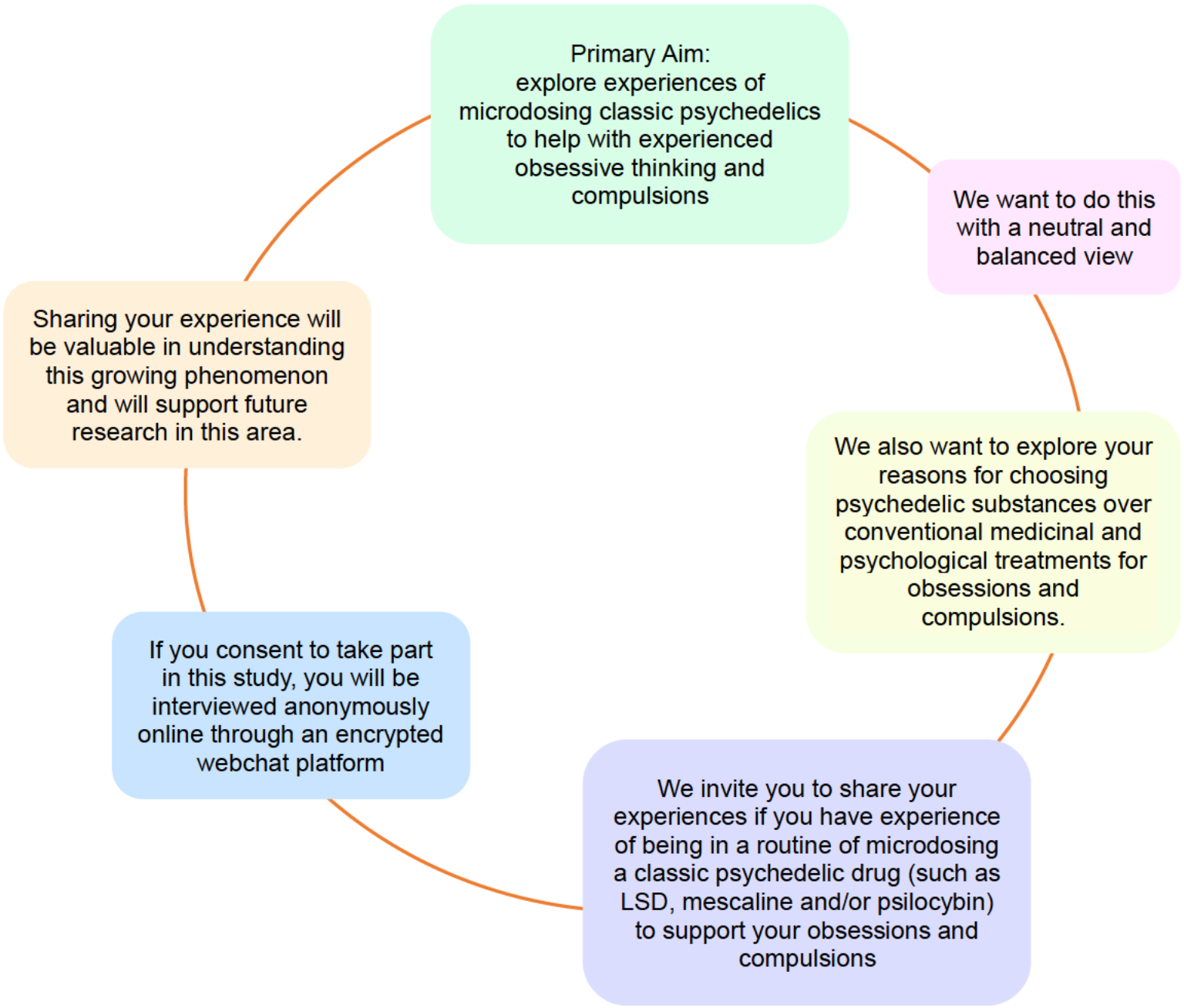
Appendix 3

Participant Information Sheet

Research Title

Microdosing psychedelic substances to help with obsessive-compulsive experiences: an Interpretative Phenomenological Analysis.

What is this research about?



Why do we want to conduct this research?

As microdosing appears to be a growing phenomenon, it is important to research it in order to gain further understanding. This study will aim to do so in a curious and neutral manner by exploring experiences of people who have previously or currently microdose classic psychedelics in order to change their experiences of obsessions and compulsions. This study will take a neutral stance to the use of microdosing psychedelics – neither condoning nor condemning - so that all aspects of the experience can be explored.

Who can take part?
• **Those aged 18 and over**
• **Those who have previously experienced or are currently experiencing obsessions and/or compulsions (definitions of obsessions and compulsions below).**
• **Those with experience of being in a routine within the past year of microdosing at least one psychedelic substance to change their frequency or distress levels of experiencing obsessions and/or compulsions.**
• **Those able to confidently read and write in English**

Definitions of obsessions and compulsions (OCD-UK)	
Obsessions	**Compulsions**
Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and that in most individuals cause marked anxiety or distress.	Repetitive behaviours (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly.
The individual attempts to ignore or suppress such thoughts, urges, or images, or	The behaviours or mental acts are aimed at preventing or reducing anxiety or distress,

to neutralise them with some other thought or action (i.e., by performing a compulsion).	or preventing some dreaded event or situation; however, these behaviours or mental acts are not connected in a realistic way with what they are designed to neutralise or prevent, or are clearly excessive.
The obsessions or compulsions are time-consuming (e.g., take more than 1 hour per day) or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.	

Unfortunately, you will be unable to take part in the study if you are currently taking classic psychedelic(s) to experience full psychoactive effects such as visual or auditory disturbances, currently microdose psychedelics for substance use issues, withdrawal or recreational purposes.

What would taking part involve?

As this study is investigating psychedelic usage, which is illegal in most countries, it is crucial that the researcher maintains your anonymity as a participant. Therefore, if you are interested in participating in this study, it will be required for you to contact the researcher to register your interest with a username which is not linked to your real name and identity. Usernames should be carefully considered as they can infer cultural and ethnic backgrounds.

It is also important you do not contact the researcher or the University of Birmingham in any other manner other than the forum-specific messenger, as this will compromise anonymity. Additionally, if you do happen to over-disclose information in the interview, the researcher will work collaboratively with you to alter certain details of this information when it is stored for analysis.

You will set up a date and time to meet with the researcher via an online end-to-end encrypted webchat platform to talk about your experiences of microdosing psychedelic substances to help with obsessions and compulsions. This interview will last around 60 minutes, and you will have the opportunity to extend the interview or reschedule to another date or time if you wish and feel you have more information to share.

The researcher will delete their social media account (i.e., Reddit account) used to initially communicate with participants two weeks after the last interview is completed. This is to protect participant anonymity and to ensure all data linked to participants is lost. Participant usernames and a fabricated identifier number string will be saved within a password protected document to enable to researcher to identify which transcript belongs to each participant in case you chose to withdraw from the research. The withdrawal period is two weeks post-interview for each participant; therefore your username will be deleted after this time.

Duty of Care

It is possible that during the interview you may disclose some sort of difficulty, or you or another are at risk, which may be of a concern to the researcher.

It is important to consider that this research is being conducted from the United Kingdom (UK), and the interview will not be a forum for help or advice. This is because the research is explorative and is not being completed by a researcher whom is an expert in this field. Furthermore, as the research is being completed in the UK, this may mean there is a time delay in any communication, so the participant cannot rely on the researcher for immediate help or advice.

If you were to disclose some difficulty or risk during the interview, the researcher will signpost to general services or suggest how you may look for local support services. However, the researcher and the University of Birmingham do not endorse any particular service.

What are the possible benefits and disadvantages of taking part?	
BENEFITS	**DISADVANTAGES**
Participants in this study will be able share their story and contribute their experiences and opinions on microdosing psychedelic drugs.	It is important that the participant understands that sensitive topics are likely to be discussed, such as mental health, and the use of illicit substances.

They may feel the benefit of being able to share their experiences, in order to develop public knowledge and also to guide and inform future research.	It is important to take into account personal limitations and levels of distress. The researcher encourages participants to be honest in this regard.
Completing this study using a semi-structured interview will allow participants to tell their own unique story in a manner that supports openness, depth, and what really matters to them.	The participant is encouraged to state whether they do not wish to answer questions, or feel distressed by the questions, without need to give reason for this.
Given that individuals are using forums to research and participate in conversations about microdosing psychedelic drugs, it is possible that they will find the experience of being in this research enjoyable.	Any sign that a participant is becoming uncomfortable or distressed by the questions will result in the interview being paused, and a discussion with the participant can be held to see whether they wish to continue.

Further supporting information

What are your choices about how your information is used?

Following the research interview, you will have a two-week opt-out period for reflection. Within this time, you may contact the researcher on the forum-specific messenger and withdraw your interview entirely, without giving any reason.

The researcher will delete the social media account (e.g., Reddit account) used to initially communicate with participants two weeks after the last interview is completed, to protect anonymity and to ensure all data linked to participants is destroyed. Participant usernames and a fabricated identifier number string will be saved within a password protected document to enable to researcher to identify which transcript belongs to each participant in case participant(s) chose to withdraw from the research. The transcript will be saved with just the fabricated identifier attached. The withdrawal period is two weeks post-interview for each participant. Therefore, the researcher will delete the username from the

password protected document after the allocated withdrawal timeframe to protect participant anonymity.

If you do not wish to carry on with the study, you can withdraw from the research without needing to give any reason. If you choose to withdraw, no further data would be collected or any other research procedures carried out. If you choose to withdraw from the research within two weeks of your completed interview, the researcher will immediately securely destroy all information collected to do with your participation so far throughout the process.

We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

How will we use information about you and keep it confidential?

Once the researcher has finished conducting interviews, the researcher will only have access to your unique identifier key and anonymous interview transcript.

The anonymised data collected during this study will be looked at by the researcher and academic supervisors at the University of Birmingham to ensure that the analysis is a fair and reasonable representation of the data. It may be used in other research projects and parts of the data will be shared with other research students as part of ongoing training and skill development. All data shared will be anonymous.

This research project will be run in accordance with the Data Protection Act (2018). A strict data management procedure will be carried out so that your information is confidential and safe.

What will happen to the results of this study?

- As this interview will take place entirely through the use of an end-to-end encrypted webchat platform, the entirety of the interview will be downloaded directly and will act as the transcript used for analysis. Using an end-to-end encrypted webchat platform means no IP address can be tracked to participants during the download of the webchat content.

- The results of the research will be written up as a doctorate thesis and submitted for publication in an academic journal. Some original quotes from the interviews may be used to back-up themes from the data. No identifying information will be connected with these quotes.
- If you would like to access the results of this research, the finalised paper will be included in the online catalogue of professional theses at the University of Birmingham in 2025.

Further information

This research is being funded by the University of Birmingham and organised by the researcher:

Charlotte A'Court
Trainee Clinical Psychologist, School of Psychology, University of Birmingham.

Contact email:

This research is supervised by the following researchers:

Professor Alexandre Copello, Professor in Psychology

Dr Andrew Fox, Assistant Professor in Clinical Psychology

Dr Rebecca Ryan, Clinical Psychologist

Where can you find out more about how your information is used?

You can find out more about how we use your information at

https://intranet.birmingham.ac.uk/finance/rss/ethics-and-governance/index.aspx

Appendix 4

Consent Form

Research site: University of Birmingham

Study number: ERN_0490

Title of project: Microdosing psychedelic substances to help with obsessive-compulsive experiences: an Interpretative Phenomenological Analysis.

Researcher: Charlotte A'Court (Trainee Clinical Psychologist)

Please declare in your contact with the researcher on the forum-specific instant messenger that you consent to all of the twelve following items:

1	I confirm that I have understood the participant information sheet dated 04/04/2023 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2	I understand that my participation is voluntary.
3	I understand the research will take appropriate steps to protect anonymity but cannot give an absolute guarantee of anonymity.
4	I understand that I am not to contact the researcher, or the University of Birmingham, in any other manner than on the forum-specific online instant messenger.
5	I understand that when signing up to this research project I must do so with a username that does not identify me, and that usernames will not be used in the report.
6	I understand that following the research interview I will have a two-week period from the end of the interview for reflection. Within this time, I may contact the researcher on the

	forum- specific messenger and withdraw my interview entirely or in part, without giving any reason.
7	I understand that any usernames will be immediately deleted once the interview is completed and the two week opt-out period has passed, and the username will be replaced with a made-up identifier that does not identify the participant.
8	I understand that the data collected during this study will be looked at by the researcher and academic supervisor at the University of Birmingham to ensure that the analysis is a fair and reasonable representation of the data.
9	I understand that direct quotes from my interview may be published in any write-up of the data, but that my username will not be attributed to any such quotes and that I will not be identifiable by my comments.
10	I agree that I meet the eligibility criteria for the research.
11	I agree to take part in the above study.

Appendix 5

Common characteristics of obsessive-compulsive experiences (OCD UK, n.d.-c)

A. Presence of obsessions, compulsions, or both:

Obsessions are defined by (1) and (2):

1. *Recurrent and persistent thoughts, urges, or images that are experienced, at some time during the disturbance, as intrusive and unwanted, and that in most individuals cause marked anxiety or distress.*
2. *The individual attempts to ignore or suppress such thoughts, urges, or images, or to neutralise them with some other thought or action (i.e., by performing a compulsion).*

Compulsions are defined by (1) and (2):

1. *Repetitive behaviours (e.g., hand washing, ordering, checking) or mental acts (e.g., praying, counting, repeating words silently) that the individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly.*
2. *The behaviours or mental acts are aimed at preventing or reducing anxiety or distress, or preventing some dreaded event or situation; however, these behaviours or mental acts are not connected in a realistic way with what they are designed to neutralise or prevent, or are clearly excessive.*

B. The obsessions or compulsions are time-consuming (e.g., take more than 1 hour per day) or cause clinically significant distress or impairment in social, occupational, or other important areas of functioning. (OCD UK, n.d.-c).

Appendix 6

Demographic Questions and Interview Schedule

Introduction

Hello, thank you for taking the time to talk with me today in this private webchat. My name is Charlotte and I am currently in training for my doctorate in Clinical Psychology at the University of Birmingham, England.

Before we begin, I am going to send you some information and it is really important for you to read through it carefully before we go into the interview questions. Is this ok?

Response [yes] = move to below.

Thank you. This research aims to explore people's experiences of microdosing classic psychedelics in hopes to help their obsessions and compulsions.

As we will be talking about taking substances which remain illegal in many countries, it is so important we keep your identity completely anonymous throughout this interview. This is why I have asked us to talk over this private, end-to-end encrypted platform. This means your IP address cannot be tracked and therefore you will not be identified.

It is really important you do not tell me any information which could identify you – this includes your name or any other information that could compromise your anonymity. If you do disclose identifiable information during the interview, I will ask whether you would like the message to be immediately deleted and you can resend it without identifiable information included or whether you would prefer to end the interview immediately, effectively withdrawing from the research, and therefore none of the webchat content would be downloaded.

Before we begin, can you let me know if you have read the information above and are happy to proceed?

Response [yes] = move to below.

Great, thank you. The recruitment advert had a link to a University of Birmingham website which has the Participant Information Sheet and Consent Form attached. It is really important you have read both of these documents carefully before we proceed with the interview. Can you confirm if you have read the participant information sheet and agree to each item on the consent form?

Response [yes] = move to below.

Ok, thank you. We can now proceed with the interview, which may last up to 60 minutes. If we need more time after this hour, I will ask whether you would like to proceed or whether you would like to schedule a second time to chat.

You are able to withdraw from this interview, and from the wider study, at any time up to two weeks from today. After two weeks from now, the transcript of this webchat interview will be included in the analysis. Please remember to keep any identifying information about yourself private. Direct quotes from this interview may be used within the written research paper, while of course keeping you completely anonymous. Please do ask me any questions you have throughout.

Are you ready to begin?

Demographic questions

Great. We'll start with some basic information about you. Please answer the questions within the brackets provided without adding any further information to make sure we are continuing to keep you anonymous.

1. What is your age in years?

2. What is your gender identity?

3. What is the highest level of education you have achieved?

4. What is your occupational status? Please respond with one of the options below.

- Full-time employment
- Part-time employment
- Student
- Unemployed
- Retired
- Unable to work due to illness

Questions

Obsessive-Compulsive Experiences

- Do you have, or have you ever had, an official OCD diagnosis by a healthcare professional?
- Can you tell me about your experiences of obsessions and compulsions? If you feel comfortable, what sort of intrusive thoughts and/or compulsions do you experience?
    - *Prompts:* How long has this been going on for? How frequent are the symptoms you experience?

Microdosing experiences

- Please can you tell me what psychedelics you have used to microdose?
- How are you using these when you microdose? Can you tell me what you do?

Microdosing to change obsessive-compulsive experiences

- Has microdosing changed the obsessions and compulsions in any way?
    - *Prompts:* In what way?

- Are things any different now that you have used microdosing for obsessions and compulsions?
    - *Prompts:* In what way?
- Is there anything specific about microdosing psychedelics that you think has changed your OCD experiences?
    - *Prompts:* How about the way you relate to your obsessive-compulsive experiences? Has that changed since microdosing psychedelics?
- Is there anything else you want to tell me about microdosing psychedelics for obsessions and compulsions?

Individual reasons for microdosing

- Have you tried conventional treatments, such as medication or talking therapies, for your obsessions or compulsions?
    - Prompts: (if yes) Can you tell me about those?
- How did you come to microdose psychedelics?
    - *Prompts:* when did you first hear about microdosing? What made you want to try microdosing for obsessions and compulsions?
- What are the pros and cons of microdosing psychedelics versus conventional treatments for the obsessions and compulsions?

Closing

- Is there anything else you would like to discuss in relation to microdosing psychedelics for obsessive-compulsive experiences?
- Do you feel confident your anonymity has been protected as much as possible during our conversation today?

- Are you comfortable and happy with the answers you provided? Is there anything you would like me to omit from the transcript or final analysis of the research?

[if all ok, then send the below]

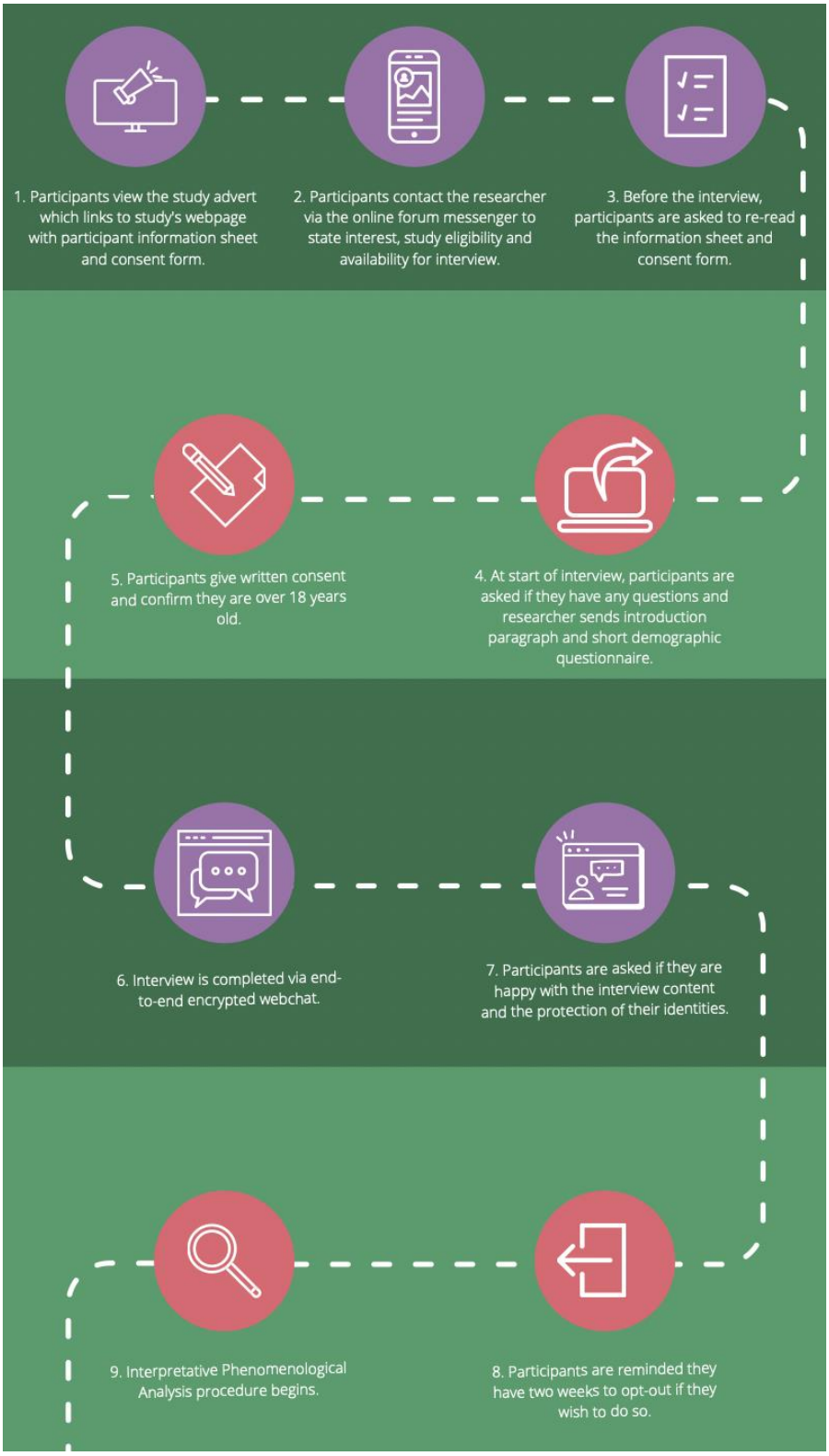
Thank you so much for taking the time to talk with me today. It was really illuminating to talk to you and hear your experiences of microdosing and how this interacts with obsessions and compulsions.

So, next, I will download our anonymous transcript and begin the analysis stage of the research. Research can take a while to write and then publish, so if you would be interested in reading the finished research paper, I estimate it will be available by approximately summer 2025. The research title is “Microdosing psychedelic substances to help with obsessive-compulsive experiences: an Interpretative Phenomenological Analysis.”

Thank you again for taking time to talk to me. If you do not have any final questions for me, I wish you well. Take care.

Appendix 7

Visual Roadmap of Study Procedures



Appendix 8

How the IPA Steps Outlined by Smith et al. (2022) were Operationalised Within the Current Study

For the first step, the researcher read the first interview transcript multiple times to ensure the participant became and remained the central focus during the analysis (Smith et al., 2022).

For the second step, the researcher engaged in a close, line-by-line analysis of the first interview transcript. The researcher made descriptive, conceptual, and linguistic notes, utilising colour coding to distinguish between these three levels of exploratory notes. Descriptive notes consisted of describing the content of what the participant said, such as key objects, events and experiences; conceptual notes consisted of this researcher's curious questions about the data; and linguistic notes consisted of notes specific to the use of language chosen by the participant (Smith et al., 2022).

For the third step, the researcher began constructing experiential statements by producing a concise summary of each of the exploratory notes, maintaining but still reducing in volume what was important for the participant to convey at different points within the transcript (please see Appendix 9 for a transcript extract with an example of this researcher's exploratory noting and experiential statements).

For the fourth and fifth steps, the researcher created a table of all the experiential statements for the first transcript. This allowed an overview of all experiential statements, which helped to examine the different possible connections between the experiential statements. The list of experiential statements was worked down and, in a separate table, the connections were named in a concise summary. These new summary statements of connected experiential statements were each assigned a different colour, with the experiential statements colour-matched to their new summary titles, so experiential statements could be tracked as

they were to be incorporated into new summary statements. These new summary statements became the Personal Experiential Themes (PETs; Smith et al., 2022; please see Appendix 10 for an example of the collation of experiential statements to develop the PETs for one participant).

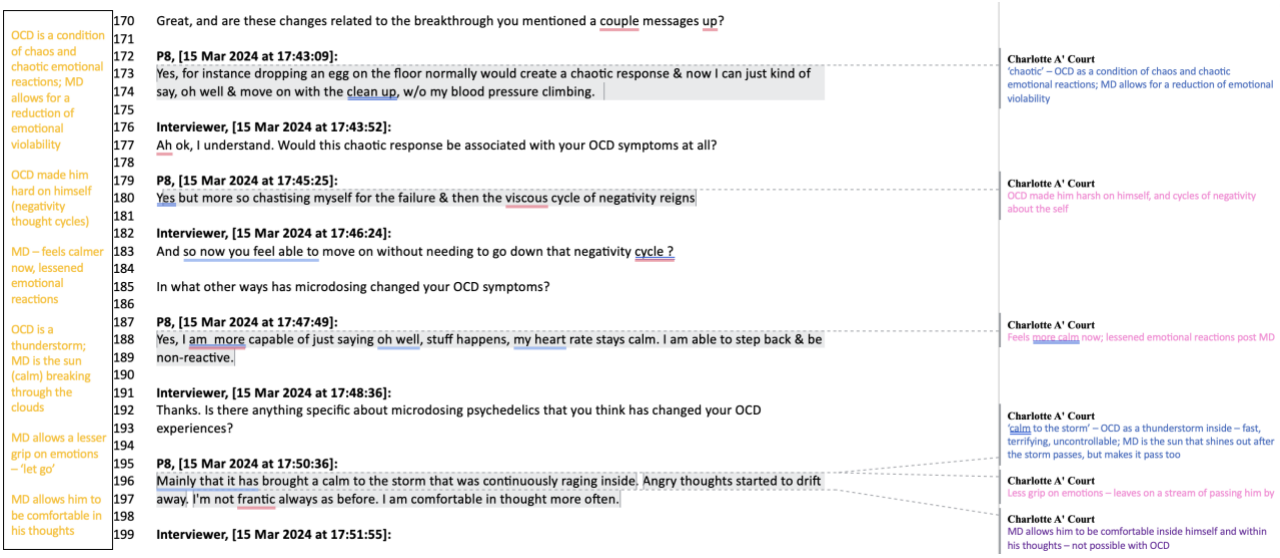
For the sixth step, the researcher moved on to the second participant's transcript and repeated all the above processes, then moved on to the third participant's transcript, and so on. For the seventh step, the researcher printed and cut out each PET from every transcript individually, mixed up all the slips of paper on the floor so they were in a random order, and then individually looked at each PET to begin organising them by their shared features. This step is where this researcher began the interpretative synthesis of the individual interpretative analysis, so the newly organised PETs underpin the larger, broader GETs (Smith et al., 2022; please see Appendix 11 for photographs of this researcher's physical sense-making and collation of PETs into larger, group-order themes - GETs).

This researcher then transferred this physical mapping of PETs clustered to create GETs onto an electronic spreadsheet, so this researcher was able to trace back through each GET, to each included PET, to each PETs included experiential statements, to each statement's exploratory note, to the line number of which specific transcript it originated. Finally, this researcher then utilised participant quotes which illustrated this researcher's interpretation, to develop and write a full narrative within this paper.

Appendix 9

Example of Exploratory Noting and Development of Experiential Statements

The middle section is the transcript with line numbers. The comments on the right are the 'initial notes', which are colour-coded to reflect the type of note created (Descriptive notes – Pink; Conceptual notes – Purple; Linguistic notes – Blue). The left-hand column was used to develop the 'experiential statements' (colour-coded as yellow) within an IPA format.



Appendix 10

Example of Collation of Experiential Statements to Create PETs

Experiential Statements	Line Numbers	Value
Nature of OCD – theme of obsessive thoughts	103	1
OCD is able to fluctuate – up and down with how much it effects a life	105	1
Nature of OCD -compulsions connected with intrusive thoughts	116-118	1
P carries shame and guilt for OCD symptoms	119	2
MD routines – Fadiman protocol	131	3
MD is not a sole helper for OCD – fasting and meditation help too	136	4
MD is not an immediate and infinite helper – slow progression into healing; more microdoses = more healing; accumulative effects of healing w/repeated MD	138-139	5
Benefits of MD – more mental clarity	147	8
Nature of OCD - focus and attention on obsessive thoughts	153-154	1
MD – increases empathy and observer self	165-166	6
Benefit of MD – calmer thoughts (reduces the cycles of anxious thinking)	168	7
Benefit of MD – reduction of night terrors	175-176	8
MD reduces the frequency of obsessive thoughts	183	10
Allows and accepts different outcomes after MD (higher acceptance)	183	11
MD = externalisation and observer stance on OCD thoughts	191-192	6
MD = increase in self-compassion reduces shame	192-193	2
Nature of OCD – triggers for OCD	200-201	1
MD calms anxiety, OCD is anxiety condition (OCD is secondary effect)	201	7
MD holistically calms the mind and body, OCD is a secondary effect of holistic calming	201-202	7
OCD is a condition of doubt and control – MD allows to not need control	201-203	9
Meds for depression made her feel worse	212-213	12
Not just one route to healing (yoga and meditation)	213-214	4
MD more benefits to yoga and meditation like deeper insight and calm	222-223	4
MD = more joy in life (better than yoga)	223-224	8
MD – stronger connection to nature	225	8
MD – more powerful healer than yoga	225-226	4
Self-agency is needed in healing; MD not enough alone	233	4

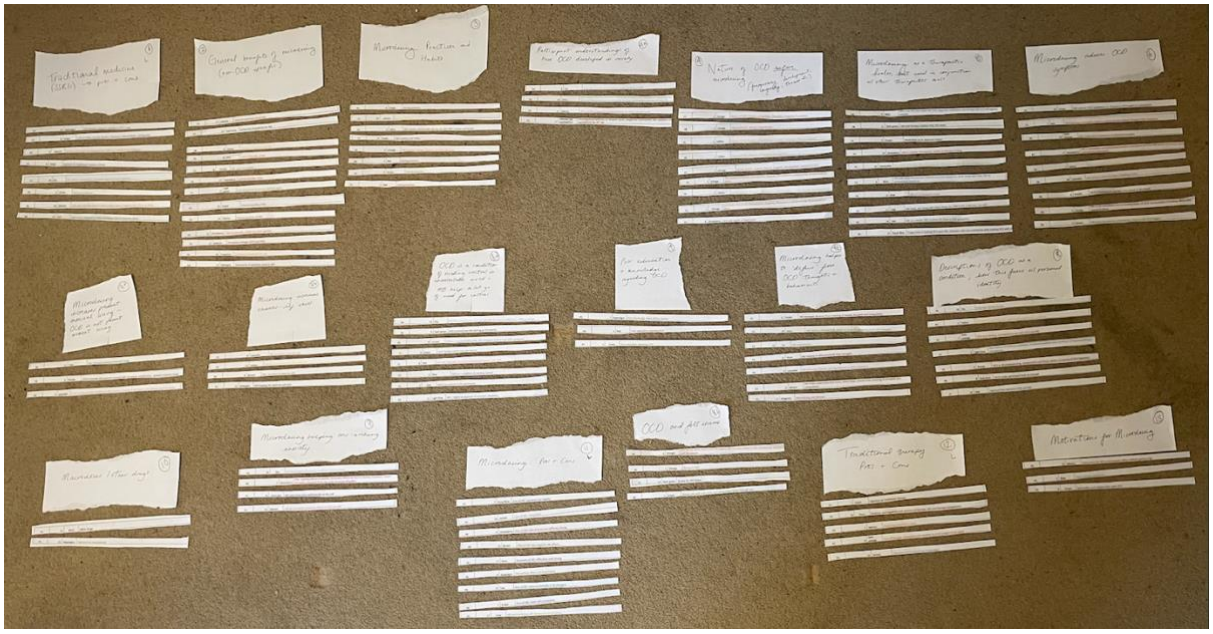
The first picture shows the experiential statements copied from the left-hand column of the transcript for this participant, with their accompanying line numbers, colour-coded and set a specific number ('value') coded to the PET name in the second picture below. For example, the first three experiential statements in the first picture could be grouped together to form the first PET in the second picture.

P	Value	Code	PETs	N of experiential statements included in PET
P6	1	Yellow	Nature of OCD: themes, compulsions, fluctuations	5
P6	2	Green	Shame and guilt with OCD; and taking away shame through MD	2
P6	3	Orange	MD routines; dosage, routines, practical elements	1
P6	4	Blue	MD is not the only helper for OCD: yoga and meditation and fasting help too; self-agency needed	6
P6	5	Purple	MD is not immediate and everlasting helper of OCD: accumulation of healing effects with repeated doses	1
P6	6	Brown	MD - increase in observer self	2
P6	7	Strawberry	MD - caming effects on anxiety, secondary effects on OCD as anxiety condition; calmer thoughts; seperates from the cycle of anxious thoughts	3
P6	8	Red	General benefits of MD	5
P6	9	Dark green	OCD (control) and MD (letting go of control)	1
P6	10	Dark orange	MD: reduction in frequency of obsessive thoughts	1
P6	11	Light blue	MD = higher acceptance of unknown situations	1

Appendix 11

Example of Collation of PETs into GETs

All PETs printed on individual slips of paper and grouped into larger group themes (GETs)



One close-up example of the individual PETs grouped within a larger group theme (GET)