

JOURNEY TO THE CENTRE OF THE MIND:

Psychedelic Treatment of Mental Health in Aotearoa

BY

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Abstract

Examining participants' experiences self-medicating with LSD, psilocybin, and MDMA, this exploratory study sought to determine whether psychedelics have a future in New Zealand mental health treatment. This thesis employed a mixed-methods approach to data collection, by collecting broad-brush quantitative data via a Qualtrics survey, which then informed the qualitative data collection method of semi-structured interviews. Braun and Clarke's (2006) steps of thematic analysis identified key themes from the interview transcripts, including the New Zealand environment, the success of the psychedelic treatment, and the creation of the 'self-therapist'. There appears to be a robust, underground psychedelic community that offers participants support and knowledge around safe psychedelic use. Congruent with international research, study participants reported successful, long-lasting effects of LSD, psilocybin and MDMA, with minimal adverse effects (Bird et al., 2021, Davis et al., 2020, Griffiths et al., 2008, Muttoni et al., 2019). The challenge of accessing legal, conventional mental health treatment meant that participants used psychedelics to craft their own safe treatment method, paying particular attention to set and setting. Overall, participants advocated for psychedelic legalisation in New Zealand and proved to be a valuable source of knowledge for future drug policy. Analysing these results, this study concluded that New Zealand's prohibition of psychedelics fails to prevent individuals from seeking out these substances. Instead, it perpetuates societal and internal stigma and causes individuals to be wary of talking about their psychedelic-treated mental health issues. As psychedelics have been proven to be medically useful and incur minimal harm, they should be rescheduled and enabled in New Zealand drug laws, both as a form of self-medication and as an adjunct to psychotherapy. Lastly, while future research must consider psychedelics through other cultural lenses, any legalisation should be mindful of not appropriating other indigenous groups' use of plant-based psychedelics.

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Glossary

Psychedelic Research Terms in this Thesis

The Knocking: The idea that psychedelics will ‘present’ you with the issues underlying mental health that need to be addressed.

Macrodose: Level of psychedelic dosage where the user feels apparent effects

Microdose: Small enough dose of psychedelics that the effect is sub-perceptual, usually 1/10th to 1/20th of a macrodose

Self-Therapist: an individual who uses psychedelics to improve their mental health and/or well-being on their own, rather than alongside conventional therapy

Substances

Unless stated otherwise, definitions are from the Alcohol and Drug Foundation (ADF) (n.d.)

Ayahuasca is a plant-based psychedelic drink with the active ingredient of DMT. It produces changes in perception and mood, and can facilitate hallucinations.

Cannabis: also known as ‘Marijuana’ or ‘Weed’, typically the dried leaves and buds of the cannabis plant are smoked and has been found to induce relaxation and euphoria. Note: Cannabis is not considered a psychedelic

DMT: (Dimethyltryptamine) is considered a classic psychedelic and is found in various plants. Plants containing DMT are boiled to create Ayahuasca.

Ketamine: a dissociative psychedelic substance, producing visual and auditory distortion and a detachment from reality. Ketamine is legally used by medical practitioners and veterinarians as an anesthetic.

LSD: (lysergic acid diethylamide) also known as ‘acid’, is a synthetic chemical. Considered a ‘classic’ psychedelic, it is known to produce changes in perception and mood, and sometimes facilitates visual and auditory hallucinations.

Mescaline: a classic psychedelic hallucinogen, obtained from several varieties of cacti, such as Peyote, the San Pedro cactus, and the Peruvian torch cactus. Like most classic

psychedelics, mescaline has been found to alter perception and mood, and induce visual and auditory hallucinations. (from Iwanicki, 2018)

MDMA: (Methylenedioxymethamphetamine) also known as ‘ecstasy’. As an empathogen, it increases an individual’s feelings of empathy and compassion towards others.

Psilocybin: (phosphoryloxy-*N,N*-dimethyltryptamine) key ingredient found in ‘magic mushrooms’ and is considered a ‘classic’ psychedelic. When ingested, the body converts psilocybin into psilocin, which has psychoactive properties. Psilocybin can alter an individual’s perception and mood, and sometimes cause auditory and/or visual hallucinations.

Mental Health Disorders

Unless stated, definitions are from the Diagnostic Statistical Manual (DSM) V (n.d.)

ADHD: Attention Deficit Hyperactivity Disorder. A neurodevelopmental disorder defined by impairing levels of inattention, disorganisation, and/or hyperactivity-impulsivity

AUD: Alcohol Use Disorder. A maladaptive pattern of substance use leading to clinically significant impairment or distress, as manifested by 2 or more factors, occurring at any time in the same 12-month period:, e.g. Alcohol is often taken in larger amounts or over a longer period than was intended

GAD: General Anxiety Disorder. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

MDD: Major Depressive Disorder. A common and serious mood disorder. Those who suffer from depression experience persistent feelings of sadness and hopelessness and lose interest in activities they once enjoyed.

OCD: Obsessive Compulsive Disorder. 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

PTSD: Post-Traumatic Stress Disorder. Is an anxiety disorder caused by very stressful, frightening or distressing events. (from NHS, n.d.)

SUD: Substance Use Disorder. Involves patterns of symptoms caused by using a substance that an individual continues taking despite its negative effects.

TRD: Treatment-Resistant Depression. Inadequate response to at least one antidepressant trial of adequate doses and duration. (Fava, 2003)

Te Reo Māori terms:

Unless stated, definitions are from the Māori Dictionary (n.d.)

Hauora: Health

Karakia: To recite ritual chants, say grace, pray, recite a prayer, chant

Pākehā: New Zealander of European descent

Rongoā Māori: Natural remedy, traditional treatment, Māori medicine

Rakau: Trees or plants

Te Tiriti o Waitangi: The Treaty of Waitangi - an agreement between the British Crown and a large number of Māori chiefs, signed in 1840. Today the Treaty is widely accepted to be a constitutional document that establishes and guides the relationship between the Crown in New Zealand (embodied by our government) and Māori. (from Ministry of Justice, n.d.)

Tikanga: The customary system of values and practices that have developed over time and are deeply embedded in the social context

Table of Contents

Abstract	ii
Acknowledgments.....	iii
Glossary	iv
List of Tables	x
List of Figures.....	x
Chapter One: Introduction	1
Psychedelic Research: A New Frontier for Mental Health?	1
Psychedelic Research and Prohibition	2
New Zealand and the ‘Right to Health’	3
Psychedelics in New Zealand	4
Thesis Overview	6
Chapter Two: Literature Review.....	7
Introduction	7
The Psychedelic Literature	7
<i>Microdosing.....</i>	<i>7</i>
<i>Psilocybin Literature</i>	<i>8</i>
<i>LSD Literature.....</i>	<i>12</i>
<i>MDMA Literature.....</i>	<i>14</i>
Set and Setting.....	17
Social Stigma.....	18
Criticisms of Psychedelic Research.....	20
Summary	22
Chapter Three: Methodological Framework	23
Methodology.....	23
<i>Philosophical Underpinnings</i>	<i>23</i>
<i>The Mixed Methods Approach.....</i>	<i>24</i>
Methods	25
<i>Recruitment.....</i>	<i>25</i>
<i>Interviews</i>	<i>28</i>
<i>Prospective Participants that were not Interviewed</i>	<i>29</i>
<i>Survey</i>	<i>29</i>
<i>Ethical Considerations</i>	<i>30</i>
Analysis of Data	31
<i>Analysis of Quantitative Survey Data.....</i>	<i>31</i>
<i>Thematic Analysis of Qualitative Interview Data</i>	<i>31</i>
Personal Challenges.....	33
Practical Limitations.....	34
Strengths and Limitations	35
Chapter Four: Results of the Survey	36
Demographic Information	37
Behavioural Information.....	39
Aspects of Psychedelic Substance Use.....	42

Effects of Psychedelic Use on Participants.....	45
Statistical Relationships.....	48
<i>Gender Identity and Purpose of Psychedelic Treatment</i>	48
<i>Gender Identity and Source of Access</i>	48
<i>Gender Identity and Frequency of Use</i>	48
<i>Gender Identity and Dosage Level</i>	49
Summary	49
Chapter Five: Interview Participants	50
Interview with Pete.....	50
Interview with Ralph	50
Interview with Tony	51
Interview with Fred	51
Interview with Oliver.....	51
Interview with Chris	52
Interview with Julie	52
Interview with Erin.....	52
Interview with Anne	53
Interview with Susan	53
Interview with Michelle.....	53
Interview with Laura	54
Chapter Six: The New Zealand Environment	55
The Current New Zealand Context.....	55
<i>Prior Attitudes and Usage of Psychedelics</i>	55
<i>Drug Classifications</i>	57
<i>Mental Health, Covid-19 and Psychedelics</i>	58
Social Support	61
<i>Friends</i>	61
<i>Psychedelic Community</i>	62
<i>Family</i>	65
<i>Wider Stigma</i>	69
The Future of Psychedelic Mental Health Treatment	71
<i>Legalisation and Decriminalisation</i>	71
<i>Eligibility and Parameters</i>	76
<i>Perceived Barriers to Psychedelic Mental Health Treatment</i>	81
Summary	84
Chapter Seven: The Success of the Treatment	85
The Effects of Psychedelics.....	85
<i>Psychedelics for Specific Mental Health Issues</i>	85
<i>Adverse Effects</i>	87
<i>The Enduring Effects of Psychedelics</i>	90
Therapeutic Elements of Psychedelic Treatment.....	93
<i>Introspection and Confrontation of Issues</i>	93
<i>Change of Perspective and Fear Response</i>	95
<i>Mood Elevation</i>	99
<i>Prosociality</i>	101
Spirituality and Psychedelics.....	102

<i>The Knocking</i>	104
Summary	108
Chapter Eight: The Self-Therapist	110
The Struggling New Zealand Mental Health System	110
<i>Conventional Therapy</i>	112
<i>Conventional Medication</i>	115
Crafting the Method of Psychedelic Therapy	119
<i>Participants are Well-Researched</i>	119
<i>How Participant's Access Psychedelics</i>	120
<i>Deciding the 'Right' Psychedelic</i>	122
<i>Preference for Macrodosing vs. Microdosing</i>	124
<i>Psychedelics and Conventional Therapy</i>	127
<i>Reduction in Use of Psychedelics - 'Drop-off rate'</i>	129
Preparation for Psychedelic Sessions	130
<i>Determining a Safe Dose</i>	130
<i>Testing Psychedelic Substances</i>	131
<i>Preparing for 'Bad' Trips</i>	132
Set and Setting	134
<i>Set: the Importance of Intention</i>	135
<i>Set: Caution Around Negative Mindsets</i>	136
<i>Setting: Nature</i>	137
<i>Setting: Music</i>	139
Summary	140
Chapter Nine: Discussion and Concluding Remarks	141
Prohibition of Psychedelics Does Not Work for Self-Therapists	143
Psychedelics Need to Be Rescheduled and Enabled in Drug Laws.	144
Psychedelics Should Be Available for Both Self-Medication and as an Adjunct to Psychotherapy.	145
Psychedelic Research Must Consider Diverse Cultural Approaches.	146
Going Forward: Concluding Remarks	148
References	150
Appendices	182
<i>Appendix A: Ethical Approval</i>	182
<i>Appendix B: Recruitment Flyer</i>	183
<i>Appendix C: Social Media Posts</i>	184
<i>Appendix D: Participant Information Sheet (Interviews)</i>	185
<i>Appendix E: Participant Consent Form (Interviews)</i>	187
<i>Appendix F: Participant Interview Guide</i>	188
<i>Appendix G: Participant Information Sheet (Survey)</i>	190
<i>Appendix H: Participant Survey Questions</i>	191
<i>Appendix I: List of Support Services Offered</i>	193
<i>Appendix J: Analysis – Codes</i>	194
<i>Appendix K: Analysis - Initial Themes</i>	206
<i>Appendix L: Analysis - Final Themes</i>	219

List of Tables

Table 1: Interview Participants Overview	27
Table 2: Participants Purpose for Psychedelics	86

List of Figures

Figure 1: Age of Survey Participants	37
Figure 2: Location of Survey Participants	38
Figure 3: Gender Identity of Survey Participants	38
Figure 4: Survey Participant's Most Commonly Used Psychedelic Substance	39
Figure 5: Survey Participant's Most Common Mental Health/Wellbeing Purpose	40
Figure 6: Measure of Survey Participant's Current Use of Psychedelics for Mental Health/Wellbeing Purposes	41
Figure 7: Survey Participant's Frequency of Psychedelic Substance Use	42
Figure 8: Survey Participant's Dosage Level of Psychedelic Substance	44
Figure 9: Survey Participant's Method of Access	45
Figure 10: Measure of Positive Effect of Psychedelics on Mental Health/Wellbeing.....	45
Figure 11: Measure of Negative Effect on Mental Health/Wellbeing	46
Figure 12: Measure of the Side Effects of Psychedelic Use	47

Chapter One: Introduction

Psychedelic Research: A New Frontier for Mental Health?

Despite a history of international prohibition, psychedelic-assisted therapy is becoming an emerging paradigm as an alternative form of mental health treatment (Rucker et al., 2022). Psychedelics refer to substances with compounds that can induce psychological, emotional and cognitive effects (Krediet et al., 2020). While psychedelics do have some effect on the areas associated with negative emotion processing (serotonin system, thalamus, anterior cingulate cortex), the benefits appear to come primarily from how the subject experiences the drug (Entheos, n.d., Preller et al., 2019, Sheline et al., 2009). This introspection seems to allow for more permanent changes in mental health that do not rely on repeated sessions (Preller et al., 2019, Schmid & Liechti, 2018, Sheline et al., 2009).

This thesis will focus on the psychedelic substances LSD, psilocybin and MDMA due to their relative availability in New Zealand. While LSD, psilocybin and MDMA compounds are different, a systematic review of the research has shown that the results are often comparable (Breeksema et al., 2020). According to a 2020 meta-analysis, participants in trials of psilocybin, LSD and MDMA often report feelings of insightfulness, introspective experiences, greater emotional depth, and altered self-perception (Breeksema et al., 2020). These subjective experiences seem to facilitate improvements in participants' mental health, particularly when mediated with therapy (Breeksema et al., 2020). It is important to note that most of these studies advocate for psychedelics to be used as an adjunct to psychotherapy (De Gregorio et al., 2021a).

International prohibition has meant that psychedelic research is still significantly limited, particularly for LSD, which remains a Schedule 1 substance¹ (Class A in New Zealand) (Hall, 2021, Police, n.d.) Funding for psychedelic research is primarily philanthropic (for example, the Beckley Foundation <https://www.beckleyfoundation.org>) as the pharmacological industry refuses to endorse alternative medicine (Hall, 2021). Nevertheless, the research is overwhelmingly positive, with most studies reporting high success rates (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020, Griffiths et al., 2016, Hall, 2021, Ostuzzi et al., 2018). These studies consistently find that psychedelic drugs can produce perceptual changes in the user without clinically significant adverse effects

¹ Schedule 1 substances are defined as drugs with no currently accepted medical use and a high potential for abuse (United States Drug Enforcement Administration, n.d.)

(Entheos, n.d., Muttoni et al., 2019, Goldberg et al., 2020, Gorman et al., 2020, Hall, 2021). Several studies have also demonstrated low toxicity and limited abuse potential (Goldberg et al., 2020, Chi & Gold, 2020, Yaden & Griffiths, 2021), and that psychedelics have faster and more enduring effects than conventional treatments (Carhart-Harris, 2016, Griffiths et al., 2016, Ostuzzi et al., 2018).

Psychedelic Research and Prohibition

While initial studies in the 1950s demonstrated their health benefits, LSD, MDMA and psilocybin soon became embroiled in the War on Drugs (Entheos, n.d., Goldberg et al., 2020, Hall, 2021). By the early 1970s, the US and UK governments classified psychedelics as ‘Schedule 1’ substances, which defined them as having no accepted medical use and a high potential for abuse, significantly restricting further research (United States Drug Enforcement Administration, n.d.). By classifying psychedelic use as ‘criminal’, prohibition aims to deter public use. This theory of deterrence rests on the idea that individuals, when deciding whether to engage in crime, will weigh up the arrest's risks with the crime's rewards (MacCoun, 1993). Crime deterrence theory has continuously been disproven (MacCoun, 1993). Indeed, a 2014 report by the UK Home Office found no correlation between the punitiveness of drug laws and the extent of recreational drug use. In theory, the motivation behind substance prohibition is that illicit substance use is considered harmful to users. Therefore, prohibition will deter people from using these substances and consequently harming themselves (Barnett, 2009). In practice, the consequences of substance prohibition are often much more harmful (Barnett, 2009). According to the John Hopkins-Lancet Commission on Public Health and International Drug Policy (2016), prohibition laws have contributed to *‘lethal violence, communicable disease transmission, discrimination, forced displacement, unnecessary physical pain, and the undermining of people’s right to health’* (Lacobucci, 2016). There are several reasons why prohibition is harmful.

Firstly, prohibition means that illicit substance users are inherently criminal. Those with convictions find it incredibly difficult to find employment or receive financial aid, which only encourages a criminal career (Borden, 2013, Coyne & Hall, 2017). Furthermore, prohibition poses financial harm, as scarcity raises the costs of drugs. This high cost is due to the illegality of the substance. While these substances are not typically expensive to produce, the ‘risk’ factor of illegal production and distribution increases prices (Borden, 2013). Secondly, Goldstein’s (1985) tripartite model, although heavily criticised (Hutton 2022,

Stevens, 2011) indicates a connection between drug misuse and crime. One aspect of the model is ‘systemic crime’, which can be linked to prohibition. Goldstein (1985) asserts that the competition of drug markets in an illegal environment can encourage involvement in crime. For instance, grievances - such as failure to pay drug debts - cannot be resolved legally, so are settled with violence instead. Additionally, prohibition allows organised crime to flourish (Borden, 2013). Underground markets for illicit substances create a source of employment e.g. drug dealing, which is attractive to some social groups because they can earn more money in the illicit drug market than in minimum-wage jobs. For many, the legal repercussions are not a deterrent, as arrests can be seen as a mark of ‘respect’ among peers (Borden, 2013). Thirdly, prohibition means substance harm reduction measures are difficult to enact (Coyne & Hall, 2017). For instance, in many US states, it is illegal to buy needles and syringes without a prescription, which encourages substance users to share and reuse their syringes and needles, increasing the chances of contracting HIV/AIDS and hepatitis (Coyne & Hall, 2021).

Despite a revival of international interest in psychedelic-assisted therapy, continued prohibition restricts the research of this alternative mental health treatment in a New Zealand context. Therefore, exploratory studies such as this can help shed light on how and why New Zealanders are resorting to psychedelic self-medication to treat their mental health.

New Zealand and the ‘Right to Health’

Within the debate around psychedelics, it is worth considering what is meant by ‘health’, as well as what is meant by peoples’ ‘Right to Health’. According to the World Health Organisation (WHO) (2017), the Right to Health encompasses ‘*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*’ (p153). WHO’s International Covenant on Economic, Social and Cultural Rights (ICESCR) refers to the Right to Health as the idea that ‘*the highest attainable standard of health is a fundamental right of every human being*’ (Office of the High Commissioner for Human Rights [OCHR], 2000). This is recognised by the New Zealand government's ratification of the ICESCR, which obligates them to comply with the standards in the convention. Additionally, the Right to Health is protected by the New Zealand Bill of Rights Act (1990) and the Hauora (health) principle of Te Tiriti o Waitangi, meaning that the government guarantees all citizens access to healthcare (Reid & Robson, 2007).

The UN (OCHR, 2000) states that there are four elements to the Right to Health. Firstly, healthcare must be available to all citizens; countries must have well-functioning public hospitals, medical facilities, and programs. Secondly, accessibility; the public must be able to access health facilities without discrimination, both physically and financially. Thirdly, acceptability; health care must be sensitive to cultural beliefs, age and gender. Lastly, quality; healthcare must be of a high quality (Office of the High Commissioner for Human Rights, 2000).

The New Zealand government is struggling to meet the Right to Health needs of the public (Officer et al., 2022, Rucklidge et al., 2018). A 2018 government report, 'He Ara Oranga', concluded that 20% of New Zealanders are living with mental health issues at any given point (Government Inquiry into Mental Health and Addiction, 2018). Despite a subsequent 1.9 billion funding allocation to the mental well-being budget, a 2022 follow-up report, 'Te Huringa', identified that New Zealand continues to have a mental health crisis. The primary issues with meeting this public need are long wait times, difficulty accessing services, and overall poor quality of services. Indeed, a 2018 report by Rucklidge et al. found that 30-50% of New Zealanders seeking mental health treatment do not receive any help at all. Additionally, the strain on the mental health system has been severely impacted by Covid-19 (Officer et al., 2022). The toll of lockdowns saw an increase in overdose and self-harm hospital admissions, as well as ambulance call-outs (Officer et al., 2022). Some advocates have argued that the restrictions on psychedelic research could be ethically considered a violation of human rights, as it prevents people from accessing possible health benefits from psychedelic therapy (Dos Santos et al., 2021). Fundamental to this thesis is the idea that peoples' Right to Health and well-being ought to take priority over psychedelic substance prohibition governed by outdated drug laws that are no longer 'fit for purpose'.

Psychedelics in New Zealand

While other countries are making strides in psychedelic research, New Zealand seems to be falling behind. The United States, the United Kingdom, Canada, Brazil and Spain are among some of the leaders in psychedelic field research (Inserro, 2019). In contrast, the New Zealand government does not acknowledge the potential of psychedelics for mental health treatment and has made little attempt to fund exploratory research (Inserro, 2019).

Following the widespread international prohibition of psychedelics, New Zealand quickly followed suit, introducing the Misuse of Drugs Act in 1975 (MoDA)

(Legislation.govt, n.d.). Currently, psilocybin and LSD are classified as ‘Class A’ substances - ‘very high risk’. MDMA is classified as ‘Class B’ - ‘high risk’ (NauMai New Zealand, n.d.). According to the New Zealand Police (n.d.), the maximum penalty for supplying or manufacturing a Class A substance can be life imprisonment and 14 years for a Class B substance. However, the psychedelic field has argued that the high-risk classifications of psychedelics are not proportionate to their level of harm (Goldberg et al., 2020). Indeed, Nutt et al.’s (2007) scale of harm ranks LSD, psilocybin and MDMA as having low levels of physical and social harm, as well as low potential for dependence. Comparatively, legal substances such as alcohol and tobacco rank as much more harmful. Despite the harsh legal consequences, psychedelic use appears to be quite common in New Zealand, with 53,700 people estimated to be using classic psychedelics in 2016 (McFadden Consultancy, 2016). It is possible that the future of New Zealand psychedelic research is promising. Indeed, one Auckland University study, led by Dr Suresh Muthukumaraswamy, is underway, examining the effects of LSD microdoses on depression (Auckland University, 2021).

Given the prevalence of psychedelics already in New Zealand (McFadden Consultancy, 2016) and their potential for improving mental health (Bird et al., 2021, Davis et al., 2020, Griffiths et al., 2008, Muttoni et al., 2019), research into psychedelics is crucial. This thesis aims to identify whether there is a future for mental health-related psychedelic research in New Zealand. As an exploratory analysis of the prevalence of psychedelic use in New Zealand, this study will examine the effect of psychedelics on participants’ mental health and well-being. This will be contextualised in the New Zealand environment and how the current mental health system has led participants to self-medicate with a Class A substance. The following questions were developed to guide the research:

1. What experiences have New Zealanders had in using psychedelics for mental health purposes?
2. Why did New Zealanders choose to use psychedelics for their mental health and well-being?
3. What type of environment allows New Zealanders to feel comfortable accessing Class A substances?

Thesis Overview

Eight chapters make up this thesis. Following this introduction, Chapter Two will examine the literature on psychedelics in depth. This will provide a theoretical framework for the research methodology and analysis chapters. The review will outline the progress of psilocybin, LSD and MDMA studies, as well as the influence of set and setting and social stigma. An investigation of the current criticisms of psychedelic research will be included, as these are important to consider ahead of any potential future legalisation in New Zealand.

Chapter Three will outline the methodology of this thesis. This will include a discussion around why a mixed-methods approach was selected and the practical considerations, such as recruitment and ethical considerations. The method of data analysis - thematic analysis - will be outlined using Braun and Clark's (2006) steps.

On the foundation of this methodology, Chapters Four through Eight will analyse the salient themes in the data. Chapter Four will describe the survey results, including elements such as demographic information of survey participants and some of the significant patterns in the data. This broader analysis will then be used as a backdrop for the following qualitative analysis chapters. Prior to these qualitative analysis chapters, Chapter Five will describe each interview participant, providing a backdrop for the thematic analysis of the interview data. Chapter Six will focus on the New Zealand Environment, including how participants feel about the current New Zealand context, their social support networks, and the future of psychedelic mental health treatment. Understanding this environment will then lead to Chapter Seven, which will evaluate the effectiveness of the participants' self-medication with psychedelics. This will include the general effects of psychedelics, the treatment's specific elements, and the link to spirituality. Finally, Chapter Eight will consider how participants have become 'self-therapists' in the context of the New Zealand psychedelics environment and the success of psychedelic treatment. This chapter will discuss the struggling New Zealand mental health system and how this led to participants crafting their own method of psychedelic therapy. The preparation for psychedelic sessions and adherence to set and setting will further demonstrate the participants' role as a self-therapist.

To conclude the thesis, Chapter Nine will focus on a broader discussion of the themes identified, including the type of future psychedelic therapy has in New Zealand mental health treatment. Following this, this thesis will discuss possible ways forward.

Chapter Two: Literature Review

Introduction

To contextualise participants' experiences in the greater psychedelic research, this study must first outline the literature to date. This will provide a framework for the thesis to further build on. Firstly, this section will briefly discuss the limited studies on psychedelic microdosing. Following this, numerous key mental health studies on psilocybin, LSD and MDMA will be outlined and critiqued – these substances are focused on in this thesis due to their prevalence in New Zealand. The literature review will then examine the importance that psychedelic studies place on set and setting and how they can influence the outcome of treatment. This chapter will also investigate the prevalence of social stigma surrounding psychedelics to determine whether this could affect any future psychedelic legalisation in New Zealand. Lastly, criticisms of psychedelic research will be outlined, to provide a more critical discussion. Overall, this chapter aims to situate this thesis within the broader context of psychedelic research.

The Psychedelic Literature

Microdosing

To preface this literature review, it is important to mark the distinction between macrodosing and microdosing. Unless stated otherwise, the studies outlined in this chapter refer to macrodosing, as this is currently the predominant method of psychedelic treatment. Macrodoses are the level of psychedelic dosage where the user feels apparent effects. Comparatively, microdosing is an alternative form of psychedelic treatment to address physical or mental health and well-being issues and is a small enough dose that the effect is barely perceptible (Kartner et al., 2021). A microdose of a psychedelic is typically between 1/10th and 1/20th of a macrodose and should not produce any visual effects (Fadiman & Korb, 2019). Observational and anecdotal reports have suggested a positive effect on mood and productivity (Johnstad, 2018, Polito & Stevenson, 2019, Rosenbaum et al., 2020). A review of online self-reports found that users also reported increased energy and creativity at work and improved interpersonal relationships (Fadiman & Korb, 2009).

Psilocybin, LSD and MDMA have all gained popularity among microdosers. A 2021 study by Rootman et al. examined the effects of psilocybin microdosing on self-medicating individuals, a subset of which had mental health issues. The study found that, when microdosing, this subset exhibited lower levels of depression, anxiety and stress compared to the control group. Congruent with this, a 2018 international survey examined participants who microdosed psychedelics, finding that the primary motivation (40%) was to improve mental health, followed by personal development (31%) and cognitive enhancement (18%) (Lea et al., 2020). Microdosers primarily used psilocybin (55%) or LSD (48%). Results of the survey found three key outcomes for participants; improved mood and anxiety, enhanced connectedness to others and the environment, and cognitive enhancement (Lea et al., 2020). The researchers concluded that people microdosing mainly do so as a form of self-therapy for their mental health and well-being. However, there is some concern that the effects of psychedelic microdosing are placebo-based (Entheos, n.d.). A 2021 study by Kaerter et al. (2021) measured participants' self-reported well-being while on a 4-week microdosing regime and their baseline expectations before the trial. While the results showed an increase in emotional stability and a reduction in anxiety and depressive symptoms, the positive baseline expectations were also shown to be significant predictors of these results. Kaerter et al. (2021) concluded a considerable placebo effect (Kaerter et al., 2021). This does not confirm that microdosing is placebo-based, however it does indicate that further research is needed in this area.

Psilocybin Literature

Psychedelic-assisted therapy research has predominantly focused on psilocybin (phosphoryloxy-*N,N*-dimethyltryptamine), a 'classic' psychedelic that, when ingested, appears to increase self-awareness and create deeply meaningful experiences (Aday et al., 2020, Davis et al., 2020). Psilocybin is a chemical produced by 190 mushroom varieties, nine native to New Zealand (NZ Drug Foundation, 2012). Similar to other psychedelic plants (such as Peyote and Ayahuasca), psilocybin has been used for spiritual purposes by Central and South American native groups for centuries (Rucker et al., 2022). While the substance became widely prohibited in the early 1970s, there has recently been a renewal of international interest in psilocybin studies (Gill et al., 2020). In 2018, it was granted 'Breakthrough Therapy' Status by the US Food and Drug Association (FDA), which allowed for further research to be done on its effects on Treatment-Resistant Depression (TRD) and

Major Depressive Disorder (MDD) (Bird et al., 2021, Goldberg et al., 2020). So far, trials have shown encouraging potential for psilocybin treatment of anxiety and depression in end-of-life care (Griffiths et al., 2016, Ross et al., 2016), Obsessive Compulsive Disorder (OCD) (Moreno et al., 2006), alcohol dependence (Bogenschutz et al., 2015), tobacco addiction (Johnson et al., 2014), MDD (Carhart-Harris et al., 2021, Davis et al., 2020) and treatment-resistant depression (TRD) (Carhart-Harris et al., 2016, 2018a). Furthermore, several studies have demonstrated that psilocybin has low toxicity and limited abuse potential (Gable, 2004, Johnson et al., 2018, van Amsterdam, 2011, Yaden & Griffiths, 2021). Psilocybin does not appear to exacerbate mental health issues (Johansen & Krebs, 2009), nor is it associated with any adverse long-term neurological effects (Studerus et al., 2011).

Psilocybin is an agonist for several serotonin receptors, including 5-HT_{1a}, 5-HT_{2a}, and 5-HT_{2c} (Daniel & Haberman, 2017). It is a powerful agonist at the 5-HT_{2a} receptor, located in the thalamus, an area of the brain responsible for sensory input. This means that psilocybin can decrease thalamus activity and affect sensory perception. Much of the psilocybin research on mental health is related to abnormalities in sensory perception, such as depressive and anxiety disorders (Daniel & Haberman, 2017). Studies have suggested that psilocybin can also reduce amygdala activity, an area of the brain responsible for emotions and emotional behaviour (Kometer et al., 2012, Rucker et al., 2019). In a functional magnetic resonance imaging (fMRI) study by Kraehenmann et al. (2015), psilocybin sessions reduced participants' amygdala reactivity to negative and neutral stimuli. This suggested that psilocybin may affect emotional processing in addressing the negative, cognitive and emotional biases found in Major Depressive Disorder (MDD) and Treatment-Resistant Depression (TRD) patients. In support of this, a 2019 meta-analysis of seven clinical trials found that administering psilocybin as a treatment was associated with a significant decline in depression and anxiety symptoms (Thomas et al., 2019). Due to this, psilocybin has shown promise in treating mood disorders like MDD and TRD (Davis et al., 2020).

Psilocybin is a 'disruptive' treatment, meaning that a single dose can evoke an immediate clinical response in the patient, sustaining benefits for at least six months. This is unlike other TRD and MDD treatment forms, which require weeks of ongoing treatment and daily administration (Davis et al., 2020, Hall, 2021). Overall, studies on conventional medicine for end-of-life anxiety and depression, as well as TRD and MDD, have shown limited success (Ostuzzi et al., 2018). They have been found to increase suicide ideation, lower libido, and contribute to weight gain (Davis et al., 2020). In comparison, psilocybin appears to have very few adverse effects. Evidence of this is shown in a 16-year longitudinal

study by John Hopkins University, which examined psilocybin therapy for 250 volunteers and subsequently found no significant adverse effects (Carbonaro et al., 2017). Results like this have been repeatedly demonstrated across the research (Davis et al., 2020, Griffiths et al., 2016, Ross et al., 2016, Rucker et al., 2022, Studerus et al., 2011).

MDD is considered a significant public health issue, which, according to the World Health Organisation (WHO), affects more than 300 million people globally (WHO, 2019). The risk of mortality for those with MDD is 1.7 times higher than the general population (Walker et al., 2015). Treatment of MDD varies depending on the severity, but typically milder forms of the disorder are treated with psychotherapy only, whereas moderate to severe forms often need the inclusion of conventional medication (Bird et al., 2021). A 2020 clinical trial by Davis et al. found that not only could psilocybin reduce depressive symptoms in patients with MDD, but that this effect was sustained, with 71% of participants feeling the effects 4-weeks post-session. To highlight the difference between conventional medication, Davis et al.'s (2020) results were four times more effective than the average psychopharmacological depression treatment study (Fournier et al., 2010). Additionally, successful results have been found in psilocybin studies on TRD (Carhart-Harris, 2016, Chi & Gold, 2020). TRD refers to patients whose depressive symptoms do not improve, despite at least two sets of conventional treatments. TRD occurs in approximately one-third of those diagnosed with MDD and has been correlated with an increased risk of suicide (Bergfield et al., 2018, Bird et al., 2021). Similar results on MDD and TRD have been replicated in multiple psilocybin studies (Bird et al., 2021, Goldberg et al., 2020), indicative of psilocybin's potential for treating mood disorders.

Numerous studies have also suggested that psilocybin-assisted therapy may be beneficial for end-of-life anxiety (Griffiths et al., 2016, Grob et al., 2011, Ross et al., 2016). Most of this research focuses on terminal cancer patients, who often develop chronic depression and anxiety associated with existential distress (Griffiths et al., 2016). The development of this mood disorder has been shown to have negative effects on cancer outcomes, such as decreased adherence to treatment (Arrieta et al., 2013, Colleoni et al., 2000), extended hospitalisation (Prieto et al., 2002), lower quality of life (Arrieta et al., 2013, Skarstein et al., 2000) and increased suicidality (Shim & Park, 2012). These factors increase the patient's risk for an earlier death (Arrieta et al., 2013). One of the most influential psilocybin studies was by Griffiths et al. (2016), who examined 51 cancer patients with anxious and depressive symptoms. Participants showed a significant decrease in both the clinician and self-rated measures of depression and anxiety, a reported increase in quality of

life and meaning, and decreased death-related anxiety (Griffiths et al., 2016). These results were sustained even at the 6-month follow-up, with 80% of participants continuing to show a clinically significant decrease in symptoms. Multiple other end-of-life anxiety studies have demonstrated the same level of efficacy (Grob et al., 2011, Holland et al., 2014, Ross et al., 2016). Interestingly, across several of these studies, participants' subjective spiritual experience of the psilocybin session appeared to be highly correlated with their positive clinical response (Griffiths et al., 2016, Ross et al., 2016).

While psilocybin research has been primarily focused on the treatment of mood disorders, there are some studies demonstrating its efficacy for treating Alcohol Use Disorder (AUD) and Substance Use Disorder (SUD) (Bogenschutz et al., 2015, Garcia-Romeu et al., 2014, Johnson et al., 2014). For AUD, psilocybin appears to instill a readiness to change alcohol habits (Bogenschutz et al., 2015, Kargbo, 2020). This is demonstrated by Bogenschutz et al. (2015), who found that, after a psilocybin session, AUD participants showed a significant decrease in alcohol use, with a 27.2% decrease in days spent drinking. Similar positive results have been found for tobacco cessation. Johnson et al. (2014) examined the relationship between psilocybin treatment and tobacco cessation in participants who had failed previous treatment methods. The results concluded that psilocybin is an effective treatment for tobacco addiction, with 80% of participants remaining abstinent at the 6-month mark. Of interest, a participant's mystical or spiritual experience during the psychedelic session has been associated with an improved clinical outcome (Bogenschutz et al., 2015, Garcia-Romeu et al., 2014, Johnson et al., 2014). Overall, for both alcoholism and tobacco addiction, results were not only successful but also sustained (Bogenschutz et al., 2015, Garcia-Romeu et al., 2014, Johnson et al., 2014). While studies in this area are relatively limited, the possibility that psilocybin can be an effective form of treatment for AUD and SUD is encouraging.

Psilocybin studies have not been isolated to mental health treatment, with successful results having also been found for treatment-resistant cluster headache and migraine patients (Andersson et al., 2017). A 2021 study by Schindler et al. on people suffering from frequent migraines found that after two sessions of microdosing there was a more significant reduction in migraine days in comparison to the placebo-controlled group. Like AUD and SUD studies, this area of research is still minimal, but initial results are encouraging. Perhaps due to the illegal nature of psilocybin, people who suffer from cluster headaches and migraines turned to microdosing psilocybin as a last resort, when conventional treatment has failed them (Andersson et al., 2017).

LSD (Lysergic acid diethylamide) is considered a ‘classic psychedelic’ and has been found to induce profound, personally meaningful introspection with long-lasting positive effects on mental health (Muttoni et al., 2019, Schmid & Liechti, 2018). Like psilocybin, it is considered a ‘classic’ psychedelic (De Gregorio et al., 2021a). LSD was first synthesised for medical research in 1938 by Albert Hoffman and was introduced as a psychiatric drug in 1947 (Dyck, 2005). The renewal of interest in psychedelic therapy has seen several clinical LSD studies emerge in the last few decades, albeit far fewer than psilocybin and MDMA. Modern LSD studies have focused primarily on end-of-life anxiety (Gasser et al., 2014, Gasser et al., 2015) and Alcohol Use Disorder (AUD) (Krebs & Johansen, 2012). While prohibited in most countries (including New Zealand), LSD-assisted psychotherapy is currently offered in Switzerland for compassionate use to a select number of patients who are determined on a case-by-case basis (Liechti et al., 2017). In January 2022, the FDA cleared an optimised form of LSD (created by MindMed²) for phase 2b clinical trials for anxiety treatment (Morris, 2022). These clinical trials will focus on Generalised Anxiety Disorder (GAD) and other brain-based disorders (Morris, 2022). Of note, LSD is not considered to be an addictive substance (Fantegrossi et al., 2008) and contemporary studies although limited have identified no acute or chronic adverse effects (Gasser et al., 2014, 2015).

With similar psychopharmacological properties to psilocybin, the therapeutic rationale behind using LSD is that it binds to the human serotonin receptors (5-HTs) and is a potent 5-HT_{2a} receptor agonist (Liechti et al., 2017). Several possible explanations exist for how LSD’s effects on certain brain regions may benefit psychotherapy. Recent mice studies have found that LSD’s binding to the serotonin 5-HT_{2a} receptors activates a glutamate receptor and a cellular protein called mTORC1 (De Gregorio et al., 2021b). Combining these factors promotes social cohesion, which De Gregorio et al. (2021b) argue would amplify empathy and prosociality in human users. LSD has also been shown to significantly lower levels of amygdala activity, which means that, like psilocybin, it can reduce an individual’s fear response (Muller et al., 2017). Other neuroimaging studies have suggested that LSD can alter the integration of sensory perceptions and thereby reduce the ruminative and rigid thinking observed in certain psychiatric disorders (De Gregorio et al., 2021a). Furthermore, LSD-induced perceptual distortions, such as hallucinations and illusions, seem to mimic the positive symptoms of some psychotic disorders, such as Schizophrenia, which may be

² Psychedelic medicine biotech company, based in New York

beneficial in examining the neuronal basis of psychotic disorders (Chapman, 1966, Geyer & Vollenweider, 2008, Hoch et al., 1952). Due to the findings of these studies, researchers have predicted that LSD could be used as a catalyst during psychotherapy (De Gregorio et al., 2021a, Muttoni et al., 2019, Schmid & Liechti, 2018).

Studies have shown that LSD can increase insightfulness, introspection, mindfulness, and the chance of an emotional breakthrough (Muttoni et al., 2019, Schmid & Liechti, 2018). LSD's effect on amygdala activity may also reduce avoidance of therapeutic exercises and traumatic memories (Wolff et al., 2020, Ziefman et al., 2020). Indeed, early studies observed that LSD could enhance awareness and facilitate the recollection and release of emotional memories (Sandison, 1954, Schmeige Jr., 1963). Modern research has reinforced this, such as a 2016 study by Dolder et al. that examined the effects of LSD on emotional processing and social behaviour. This study found that LSD positively altered the participants' method of processing emotional information - such as traumatic memories - by decreasing the fear response (Dolder et al., 2016). Additionally, this could be useful for strengthening the relationship between a therapist and their patient, referred to as the 'therapeutic alliance' (Dolder et al., 2016, Feduccia & Mithoefer, 2018b). The effects of LSD appear to enhance participants' emotional empathy and prosociality, as well as openness and trust with others (Dolder et al., 2016, Schmid et al., 2014). In this way, it can be similar to the effects of MDMA (Dolder et al., 2016).

The limited research on LSD has shown that it effectively treats end-of-life anxiety. This is demonstrated by a 2015 longitudinal study by Gasser et al. (2015), which found that LSD continued to produce effects for terminally-ill participants over 12 months. Participants consistently reported insightful and introspective experiences, as well as a reduction in anxiety (77.8% of participants) and a subsequent improvement in life quality (66.7% of participants) (Gasser et al., 2015). It is theorised that LSD can have this effect on terminally-ill patients because it can enhance a person's emotional trust and situational understanding, as well as restructuring their perspective on themselves and the world (Gasser et al., 2015). Additionally, LSD is thought to facilitate access to deeper emotions and encourage the confrontation of anxieties (Gasser et al., 2015, Reiche et al., 2018).

There is a strong need for an alternative form of AUD treatment. According to Garcia-Romeu et al. (2019), approximately 70% of people with AUD treated with conventional therapy relapse within the first year. Comparatively, modern studies have successfully proven that LSD can affect the alcohol habits of people with AUD. A 2012 meta-analysis of six AUD trials found that LSD significantly reduced the chances of alcohol

misuse (Krebs & Johansen, 2012). 59% of LSD patients in these studies had improved outcomes at the initial follow-up mark compared to 38% of those in the control groups. The limited LSD studies make it difficult to determine how LSD can produce such desired outcomes for people with AUD. However, one possible explanation can be found in LSD studies from the 1950s and 1960s. These early studies attempted to treat AUD with intense, single-dose LSD therapy sessions, reporting ‘unprecedented’ rates of recovery (Dyck, 2005). It was hypothesised that the reaction to LSD was similar to an alcoholic’s ‘delirium tremens’ (DT), a severe symptom of alcohol withdrawal that can include shaking, confusion, and hallucinations (Conrad & Schneider, 1992). Studies believed that the fear that accompanies DT is often the motivation for AUD patients to seek help. Therefore, an LSD simulation of the effects of DT may similarly drive AUD patients to seek treatment without the same physical toll of DT (Dyck, 2005). Indeed, future research wishing to address the gap in LSD AUD studies should consider the similarity to DT.

MDMA Literature

Like psilocybin, MDMA (3,4-Methylenedioxymethamphetamine, also known as ecstasy) has made significant progress in modern psychedelic therapy (Bird et al., 2021). MDMA is a psychedelic derivative amphetamine that is non-hallucinogenic; rather it works to increase empathy and induce euphoria by affecting the serotonin transporter (Chi & Gold, 2020, Cloitre, 2009, Entheos, n.d.). Unlike psilocybin and LSD, it is considered an entactogen rather than a ‘classic’ psychedelic (De Gregorio et al., 2021a). Notably, in research, clinical MDMA is considered different to recreational MDMA in terms of purity and administration methods (Sessa et al., 2019a).

The renewal of interest in psychedelic research has shown MDMA to be particularly useful for treating Post-Traumatic Stress Disorder (PTSD) (Mithoefer et al., 2011, 2018). Additionally, some studies have demonstrated efficacy with Alcohol Use Disorder (AUD) (Sessa et al., 2019b) and social anxiety in autistic adults (Danforth et al., 2018). In 2017 the FDA designated MDMA ‘breakthrough therapy’ status for PTSD psychotherapy treatment (Bird et al., 2021). Following numerous clinical trials conducted by Multidisciplinary Association for Psychedelic Studies (MAPS), MDMA is projected to be reclassified in the US as a prescribed PTSD medicine in 2022 (Entheos, n.d.) Interestingly, as PTSD and MDD are often comorbid, some research suggests that psilocybin has the potential to be used alongside MDMA therapy (Gross et al., 2012, Keane et al., 2007).

In MDMA-assisted therapy sessions, the effects generally last 4-8 hours (Bird et al., 2021). MDMA is believed to serve as a catalyst for psychotherapy by reducing a patient's fear response to anxiety-inducing stimuli (Feduccia & Mithoefer, 2018, Young et al., 2017). Across the research, MDMA enhances feelings of empathy and decreases feelings of fear and distress, allowing the participant to more easily access emotional trauma (Feduccia & Mithoefer, 2018b; Johansen & Krebs, 2009, Sessa et al., 2019a). It can increase feelings of bonding and interpersonal trust with others, which may help to improve the therapeutic alliance (Feduccia & Mithoefer, 2018b; Johansen & Krebs, 2009, Sessa et al. 2019a). Several studies have demonstrated that the ability of MDMA to induce empathy and compassion for one's self and others can lead to improved self-awareness and reduce denial of substance misuse (Jerome et al., 2013, Sessa et al., 2019b). Unlike classic psychedelics, MDMA typically only alters cognition slightly, so there is no fogging of consciousness, and users clearly remember their experience (Krediet et al., 2020).

Side effects of MDMA may include tightness of the jaw, anxiety, headaches, and fatigue (Feduccia et al., 2019, Mithoefer et al., 2011). However, so far there has not been any evidence to suggest any significant adverse effects (Bird et al., 2021, Mithoefer et al., 2011, Ot'alora et al., 2018) and overall studies indicate that it is well tolerated (Mithoefer et al., 2011, Mithoefer et al., 2018, Ot'alora et al., 2018). Of note, this only refers to the typical 125mg therapeutic dosage (or lower) that has been used in the trials, and therefore results of recreational MDMA studies may differ (Bird et al., 2021). While there have been deaths with recreational MDMA, these have mostly been linked to the illicit underground drug market, polydrug use (Jones et al., 2011) or the behaviours and environment associated with a 'party drug' (Mithoefer et al., 2016).

PTSD is often a chronic condition, with conventional treatments producing only a 20-30% remission rate (Howard & Stern, 2016, Isper & Stein, 2012). Furthermore, exposure therapy - a common technique for PTSD psychotherapy - can be emotionally difficult, leading to high withdrawal rates (Goetter et al., 2015, Mott et al., 2014). The revival of psychedelic therapy has found that MDMA can offer a more successful alternative form of PTSD treatment. Since 2000, studies conducted on MDMA-assisted therapy have focused on treatment-resistant PTSD in veterans and sexual abuse survivors in the US, Canada and Israel (Cloutre, 2009, Entheos, n.d., Mithoefer et al., 2019). The rationale behind using MDMA for PTSD is that it can enhance the psychotherapeutic process by affecting fear extinction and memory consolidation (Feduccia & Mithoefer, 2018a), less rigid thinking styles (Carhart-Harris, 2015), and prosociality by strengthening the therapeutic alliance (Dumont, 2009).

Similar to how psilocybin operates, neuroimaging studies suggest that MDMA may reduce amygdala activity and increase frontal cortex activity, which can balance out the dysregulation that may follow from a traumatic experience (Carhart-Harris et al., 2015, Gamma et al., 2000). Other studies have found it modulates the neural circuitry involved in processing traumatic memories (Dumont et al., 2009, Feduccia & Duvauchelle, 2008, Feduccia & Mithoefer, 2018a). The first randomised placebo-controlled MDMA trial for PTSD was by Mithoefer et al. (2011). The study examined 20 participants with chronic PTSD who had been resistant to previous psychotherapeutic and pharmacological treatments. Two months after the MDMA session, 83% of participants no longer met the criteria for PTSD, compared to 25% of those placed in the placebo group. These results have been replicated in several studies and promise a new frontier for PTSD therapy (Mithoefer et al., 2018, Mithoefer et al., 2019, Ot'alora et al., 2018).

The success of MDMA for PTSD Treatment has meant that the field has focused nearly entirely on this area of research. Therefore, studies on the effects of MDMA on other disorders, such as AUD, are limited. In the UK, there is emerging research on the effects of MDMA on Alcohol Use Disorder (AUD) (Sessa et al., 2021). Indeed, the research institution 'Awakn Life Science' has recently completed a trial investigating the potential for MDMA therapy on those suffering from AUD (Sessa et al., 2021). Results of the 2-year study demonstrated that MDMA therapy led to a significant decrease in alcohol consumption and generally improved psychosocial functioning. The lack of MDMA research on other psychiatric disorders indicates a gap in the literature, however, the recent reclassification of MDMA as a PTSD treatment demonstrates that the academic field is beginning to accept MDMA as a therapeutic asset. Hopefully, this will encourage future research for MDMA in other areas, such as AUD.

In part, MDMA clinical research has had these limitations because of concerns about the 'comedown' period, also known as 'Blue Mondays' (Sessa et al., 2022). A comedown is a decline in the mood and cognition of the user in the following days of an MDMA dose (Sessa et al., 2022). So far, this effect has been observed among recreational users and has been anecdotally attributed to serotonin depletion, although this theory has not been tested (Sessa, 2019). However, a recent study by Sessa et al. (2022) has concluded that there is no evidence of this comedown in clinical MDMA doses. The study, which examined MDMA therapy on participants with AUD, found no effect on mood, sleep or desire for further MDMA consumption. Sessa et al. (2022) theorised that comedowns previously associated with MDMA are more likely due to confounds in the research and that the attention to set and

setting in clinical environments may account for the discrepancy between results.

Furthermore, in an earlier study by Sessa (2019), he states that the comedown observed with recreational MDMA is likely due to users taking the substance late at night in party settings, thereby often missing sleep, dancing for long periods, combining with other substances (primarily alcohol) and going without food.

Set and Setting

Coined by Zinberg (1984), numerous studies have theorised that set and setting can significantly affect clinical outcomes in psychedelic sessions (Gukasyan & Nayak, 2021, Noorani, 2021, Carhart-Harris et al., 2018b). Set refers to the mindset of the participant; their personality, expectations, and intentions (Zinberg, 1984). Setting is defined as the physical, social and cultural environment where the psychedelic-assisted therapy session is taking place (Zinberg, 1984). Researchers have suggested that psychedelics may act as amplifiers of the user's consciousness; therefore, preparation, intention and environment can play a role in shaping the experience (Gukasyan & Nayak, 2021, Zinberg, 1984). Set and setting are often offered as an explanation as to why the same psychedelic substance can induce different responses in its users (Gukasyan & Nayak, 2021, Hartogssohn, 2016, Zinberg, 1984). In fact, Carhart-Harris et al. (2018b) believe that the therapeutic outcome of psychedelics is 'fundamentally reliant on context' (p725).

While set and setting studies are limited, they are promising. Research on set has suggested that if a user has certain personality traits, such as absorption, openness, and acceptance, they are more likely to have a positive experience (Aday et al., 2021). In particular, openness may allow participants to have a more mystical-type experience, which has also been linked to positive clinical outcomes (Garcia-Romeu et al., 2014, Lafrance et al., 2021). Studies on setting have theorised that location is crucial because it can reinforce the participant's expectation that the session will be healing for their mental health. Additionally, the right setting can provide safety and confidentiality, making the user more comfortable and possibly strengthening the therapeutic alliance (Gukasyan & Nayak, 2021). Noorani (2021) states that the ideal setting for a psychedelic experience is a 'living room-like setting', in which the environment is welcoming, neutral, and comfortable, rather than clinical. MDMA studies have particularly taken setting into account, and sessions are often in comfortable, quiet and neutrally-furnished rooms with relaxing music (Krediet et al., 2020, Mithoefer et al., 2016). However, according to a 2022 meta-analysis by Golden et al., while there is a

positive association between setting and clinical outcome, there is a lack of consistency regarding which specific elements of the setting are beneficial. The only substantial research on this area are the numerous studies demonstrating how music plays a critical role in creating a calm and reflective environment (Barrett et al., 2018, Kaelen et al., 2015, Preller et al., 2017).

Despite the lack of direct supporting evidence, modern studies have emphasised the ‘preparation’ of the participant. This involves the participant having an already-established and supportive relationship with at least one therapist, but often two (Krediet et al., 2020, Mithoefer et al., 2016). The therapists will facilitate the introspection and, for PTSD therapy, will guide the participant through visiting memories (Krediet et al., 2020). Preparation sessions are given beforehand, and debriefing sessions are provided afterwards (Mithoefer et al., 2016). This level of intensive support is unusual compared to conventional mental health treatments but is indicative of a strengthened therapeutic alliance (Carhart-Harris et al., 2018b). This method of therapy will likely be expensive in the short term, however, the lasting positive impact on the mental health system would likely be worth the cost.

Social Stigma

Sociologist Erving Goffman (1963) defines stigma as when an individual is ‘disqualified from full social acceptance’ (p154). He identifies that ‘drug addicts’ are historically a highly stigmatised group, and are sometimes treated as second-class citizens. While studies have demonstrated that psychedelics have a low propensity for addiction, stigma surrounding use still prevails (Bonomo et al., 2019, Gukasyan & Nayak, 2021). Indeed, the social stigma surrounding psychedelic substances is present in both academia and the public (Gukasyan & Nayak, 2021, Puspanathan, 2017). Puspanathan (2017) asserts that much of the public and the medical field are still relatively ignorant of the positive effects of psychedelics and the efficacy of psychedelic studies. Public knowledge is often tainted by historical moral panics and unsubstantiated anecdotes of negative psychedelic experiences with little empirical support (Puspanathan, 2017). A significant challenge for psychedelic research is associated with social stigma relating to recreational use, typically riddled with confounds, such as impurity of substance, combination with other substances (i.e. alcohol) and incorrect dosages (Halpern et al., 2004).

Klerman (1972) coined the term ‘Pharmacological Calvinism’, which is the social tendency to mistrust certain drugs, particularly those that make you feel good. This is

particularly common in Western societies, where, combined with the ongoing addiction epidemics such as the opioid crisis, research institutions and the public can be wary of any potential benefits found in psychedelic studies (Gukasyan & Nayak, 2021). While there are currently no studies on the effect of this social stigma on psychedelic users, some assumptions can be made from the significant stigma surrounding general substance use. A meta-analysis by Yang et al. (2017) found that substance users encounter the highest amount of stigma compared to other psychiatric disorders. Research has shown that the public's stigma surrounding substance use has been shown to negatively impact users' mental health and facilitate internalised stigma (Birtel et al., 2017). For instance, a 2017 study by Birtel et al. found that substance users' perceived social stigma was associated with lower self-esteem, poor sleep, and higher rates of depression and anxiety.

Social stigma of psychedelics primarily stems from the public's fears of psychedelics addiction potential, toxicity, and the potential to exacerbate existing mental illnesses, such as schizophrenia. There is currently no evidence to support the relationship between classic psychedelics and an increased risk of other mental illnesses (Johnsen & Krebs, 2015). Mahmood et al. (2022) suggest that public association between psychedelics and schizophrenia may be due to the similarities between psychedelic side effects (i.e. auditory and visual hallucinations) and certain schizophrenia symptoms. Concerns surrounding addiction potential and toxicity in psilocybin, LSD and MDMA studies have largely been debunked (De Gregorio et al., 2021a, Johnson et al., 2018, Yaden & Griffiths, 2021). For example, a common concern of psychedelic treatment is the potential for abuse, particularly regarding MDMA and the early case studies of possible MDMA 'addicts' (Jansen, 1999). However, modern clinical trials have found that subjects often will not continue to use MDMA after their clinical sessions (Mithoefer et al., 2018). These fears may in part, be due to the moral panics surrounding psychedelic substance use in the early 1960s (DiPaolo, 2018, Goode & Ben-Yehuda, 1994).

Unfortunately, social stigma surrounding psychedelics has significantly hindered research. Although there is currently no research on psychedelic social stigma in New Zealand, several Australian researchers have attributed the lack of Australian studies to public social stigma (Bright & Williams, 2019, Gardner et al., 2019). Bright and Williams (2019) suggest that there is entrenched conservatism in the Australian research community, where research institutions - particularly universities - are reluctant to be involved in 'controversial' psychedelic research for fear of tarnishing their reputation. Furthermore, many Australian research institutions depend on competitive government funding, which is unlikely

to approve funding grants for controversial research (Bright & Williams, 2019). While the lack of New Zealand research makes it difficult to determine whether psychedelic social stigma is similarly prevalent in New Zealand, some parallels can be made. Most New Zealand research institutions and universities rely on government funding, which is unlikely to approve grants that involve giving study participants Class A substances (Birchell, 2021). Additionally, the recent failure of the 2020 cannabis referendum to pass suggests at least some substance-related stigma is present in New Zealand society.

However, in recent years the War on Drugs has been criticised and the increasing number of successful psychedelic studies have also challenged societal stigma (Puspanathan, 2017). Several recent studies have indicated that there is growing support among the public for psychedelic-assisted therapy. In a study by Wildberger et al. (2017), 35% of American college students agreed that psychedelics could be helpful in therapy for depression, with 39% saying the same for anxiety. 84% of the sample supported further research. Users of mental health services have also shown to be interested in the potential of psychedelics. A 2021 Irish study by Corrigan et al. found that the majority of mental health users surveyed (72%) supported psilocybin as medical treatment. Younger people with previous experience with psychedelics or non-religious beliefs were more likely to hold favourable views on psychedelic therapy. The shift in public attitudes is indicative of the growing support for psychedelics as an alternative form of mental health treatment, although, before any form of legalisation occurs, it is important to consider the criticisms of this emerging field.

Criticisms of Psychedelic Research

The revival of interest in psychedelic-assisted mental health therapies has been met with scrutiny and scepticism (Gukasyan & Nayak, 2021). Noorani and Martell (2021) caution that the hype around psychedelic research may be premature. The renaissance in psychedelic interest has partially been so enthusiastic due to the rising need for mental health treatments and the issues with conventional medication (Noorani & Martell, 2021). Noorani and Martell (2021) speculate that there may be confirmation bias in researcher interpretation of results because of this excitement and the general desire to prevent a return to total psychedelic prohibition. They warn that we should anticipate more adverse side effects and negative clinical outcomes of psychedelic treatment as the participant pool is widened due to growing interest and more widespread research. Indeed, because studies on the recreational

use of psychedelic substances have induced adverse reactions in some users, there has been concern that psychedelic clinical outcomes will be difficult to predict (Aday et al., 2021). However, aspects like set and setting, and appropriate dosage have made clinical trials relatively safe, although further understanding of these aspects of psychedelic therapy is needed (Aday et al., 2021). Another issue is that there is currently only a limited number of Phase 3 controlled trials, which partially explains why psychedelic-assisted therapy is not yet a standard treatment pathway in New Zealand or overseas.

Additionally, the methodology of psychedelic studies has drawn some criticism. Psychedelic studies often have small, self-selected samples (Noorani & Martell, 2021), typically consisting of white, highly educated participants (Gukasyan & Nayak, 2021). Furthermore, psychedelic studies have struggled to include placebo-controlled conditions (Gukasyan & Nayak, 2021). Double-blind placebo-controlled trials are often considered the gold standard in academic research. 'Placebo-controlled' refers to where one group of participants is given the psychedelic dosage, and another group of control participants is assigned a placebo substance dosage - i.e. aspirin - designed to have no effect, in order to limit placebo responses. 'Double-blind' is when neither the participant or the researcher knows which group is receiving which dosage, in an effort to minimise researcher and participant bias. Unfortunately, this method is challenging in psychedelic macrodosing research as, because psychedelics have such a powerful effect, both participants and researchers can often recognise which is the placebo substance (Gukasyan & Nayak, 2021). While some trials have tried to remedy this by using niacin, which can induce somatic symptoms, the participant preparatory sessions, typically before the psychedelic session, often mean that participants can still recognise the difference (Gukasyan & Nayak, 2021). This is an ongoing issue for psychedelic research.

There has also been criticism of the perceived mystical nature of some psychedelic experiences. Numerous international studies have found participants' perceived mystical or spiritual experience to be associated with improved clinical outcomes (Garcia-Romeu et al., 2014, Lafrance et al., 2021, Roseman et al., 2019). Lafrance et al. (2021) suggest that classical psychedelics may invoke spiritual experiences, which can predict better emotion regulation and result in lower anxiety, depression, overall mood, and disordered eating. According to Garb and Earleywine (2022), there is doubt in the scientific community about the validity of these mystical experiences, as they are often challenging to study in controlled environments. Some sceptics have speculated that the link between perceived mystical components and positive clinical outcomes is fake (Majic et al., 2015). In response, it could

be argued that these critiques come from a strictly western perspective and that indigenous cultures have used plant-derived psychedelics for thousands of years for traditional religious, healing, and mystical practices (Gardner et al., 2019).

Although these critiques are important to bear in mind, alongside that psychedelics will not suit all patients with mental health problems, there is growing evidence about the efficacy of psychedelic therapy that is hard to ignore. This thesis aims to contribute to these debates by exploring New Zealander's experiences of using psychedelics to improve their mental health and well-being

Summary

A review of the psilocybin, LSD and MDMA literature demonstrates the overwhelming success of numerous studies for treating a range of mental health issues (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020, Griffiths et al., 2016, Hall, 2021, Ostuzzi et al., 2018). However, the history of psychedelic prohibition has meant that this field is still relatively new and there are still several large gaps in the research, particularly around microdosing, set and setting, and social stigma. Research has found that psychedelics could be valuable in treating a range of mental health needs. Psilocybin may be beneficial for mood disorders, such as Major Depressive Disorder (MDD) (Davis et al., 2020) and Treatment-Resistant Depression (TRD) (Carhart-Harris et al., 2016, 2018a). In contrast, LSD has shown promise for end-of-life anxiety (Gasser et al., 2014, Gasser et al., 2015) and Alcohol and Substance Use Disorders (AUD, SUD) (Krebs & Johansen, 2012). Comparatively, MDMA can help people with Post-Traumatic Stress Disorder (PTSD) and is set to be reclassified as PTSD medication in late 2022 (Entheos, n.d.). What appears to set psychedelics apart from conventional medication is their ability to alter a user's perspectives (De Gregorio et al., 2021a), so that they can come to terms with their trauma or terminal illness (Wolff et al., 2020, Ziefman et al., 2020), and reflect on the roots of their issues (Gasser et al., 2015).

With this literature as the foundation, this thesis aims to explore psychedelics in a New Zealand context. Aside from Dr Suresh Muthukumaraswamy's LSD microdosing study in Auckland, (Auckland University, 2021), the bulk of psychedelic research has been conducted internationally. Understanding the experiences of psychedelic users in a New Zealand setting will be necessary for any future psychedelic treatment policy. Overall, this study hopes to contribute to the beginning of New Zealand's renewed interest in psychedelic research.

Chapter Three: Methodological Framework

This study sought data on New Zealander's personal experiences using psychedelic substances for mental health and well-being, as well as assessing the potential for a future of psychedelic mental health treatment in New Zealand. This thesis aims to shed light on an area of research currently not being sufficiently examined in New Zealand and to hear perspectives from a neglected population. The psychedelic substances considered were LSD, psilocybin, and MDMA. While other psychedelic substances such as Ketamine and Ayahuasca have also shown promise in the mental health field (Breeksema et al., 2021, Chi & Gold, 2020, De Gregorio et al., 2021a, Sarris et al., 2021), LSD, psilocybin, and MDMA were chosen due to their comparative accessibility in the New Zealand context. A mixed methods design was employed to collect data by combining a qualitative and quantitative approach. This chapter explains the underlying theoretical and methodological framework of this research.

Methodology

Philosophical Underpinnings

Psychedelic-assisted therapy is an emerging field of study, however, the long-standing prohibition of LSD, MDMA, and psilocybin has meant that it is still a significantly under-researched area, particularly in New Zealand. While the overarching goal of this study was to build on the psychedelic-assisted therapy literature, the methods were chosen to prioritise the needs of participants. This study required the majority of participants to discuss their previous or current mental health issues, which meant that it was crucial to have a sensitive methodological approach. Therefore, interviews were chosen as the primary method of data collection to foreground the voices of participants (Heap & Waters, 2019, Mooney, 2014). Doing so is particularly important when studying a vulnerable or marginalised population because it empowers participants to control their narrative and supports self-agency (Mooney, 2014). The ability to talk one-on-one with participants meant that the nuances and details of people's experiences were better understood, rather than the generalising of issues that can occur with using a solely quantitative method approach (Heap & Waters, 2019, Mooney, 2014). This study also acknowledges that New Zealand's Class A status of psychedelics (and Class B for MDMA) meant that participants were asked to be forthcoming about their illegal

activity. Understandably, some people may have felt uncomfortable discussing their use of psychedelics for their mental health face to face, and therefore the addition of a secondary data collection method, in the form of a survey, allowed for the inclusion of participants seeking anonymity. Furthermore, the survey was able to collect broad brush data to reveal some of the critical issues around the use of psychedelics that could be used to inform the interview questions (Heap & Waters, 2019). With this philosophy underpinning the research, a mixed methods approach was chosen to be the most appropriate form of data collection.

The Mixed Methods Approach

A mixed methods design combines components of quantitative and qualitative methods into one coherent approach. Heap and Waters (2019) stress that it is not a blending of quantitative and qualitative methods; rather, each component is selected based on what is best suited for the research. This allows for a more comprehensive understanding of the subject, for example, surveying may reveal significant statistics about a data set, but the interviewing can give the context behind those statistics (Heap & Waters, 2019). Therefore, with a mixed methods approach, more is able to be accomplished within a single project. Overall, a mixed methods approach was chosen because the strengths of the qualitative components compensate for the weakness of the quantitative components and vice versa. The survey resulted in a broad-brush view of the issues related to psychedelics and mental health, while, comparatively, interviewing gave a more in-depth understanding of the participant's experiences and attitudes. The survey provided an initial data set highlighting some of the key issues around psychedelics and mental health, e.g., dosage, adverse effects, and access. These served as a basis for the interviews that, in turn, revealed more detailed nuances around issues not captured by the survey, e.g., the spiritual side of psychedelic substance use, set and setting, and types of stigmas. The survey was also used as a recruiting tool for this niche area as it was unknown whether traditional methods of advertising for interviewees, such as posters and via social media, would be sufficient.

Qualitative data collected by interviews was chosen as the primary method of data collection and was supplemented by the quantitative data collected by surveys. Qualitative data is associated with the social sciences and is often more in-depth data than that gathered in surveys (Heap & Waters, 2019). The questions asked are more open-ended than quantitative methods, meaning that qualitative methods can often balance out some of the impersonal aspects of quantitative data, by exploring the context and participant's perspective

(Heap & Waters, 2019). For this thesis, qualitative data was collected by interviewing a small number of participants, either in-person or via zoom or phone, depending on the participant's preference and whether they had internet access. This provided a more contextual understanding of the motivations and attitudes surrounding psychedelic drug use as participants were able to elaborate and provide details on their experiences.

The addition of quantitative data collection as a secondary data collection method was a way of engaging with a higher number of participants, given the under-researched nature of psychedelics and mental health in the New Zealand context. Quantitative data is focused on numerical data and is a standard method used in the natural science disciplines (biology, physics, chemistry) (Heap & Waters, 2019). A common form of collecting quantitative data is through surveys where the questions are standardised so that all respondents are presented with them in the same manner. For this research, quantitative data were collected using a Qualtrics survey. Some advantages of quantitative methods are that they can eliminate subjective judgements by the researcher, which may occur in interviews, and that they can reach more members of the population (Heap & Waters, 2019).

Methods

Recruitment

The target research participants were New Zealanders above 18 years old who had used psychedelic drugs for mental health or well-being purposes. Recruiting participants was a surprisingly easy step in this study. I was initially concerned that it would be difficult to recruit people for interviews due to the illegality of the substances being examined. Even with the interviews being fully confidential, I wondered whether some participants would still be reluctant to come forward. I was also worried about the number of survey respondents. Despite my concerns, 296 people filled in the survey. 110 people volunteered to be interviewed, recruited from the survey, flyers, online social media advertisements, and existing contacts. 12 of these 110 volunteers were selected to be interviewed.

After the Human Ethics Committee (HEC) granted ethical approval, participants were primarily recruited via two methods: community flyers (Appendix B) and online social media posts (Appendix C). Online social media posts on Facebook were chosen as they would be able to reach the highest number of people from across New Zealand. Furthermore, they allow for anonymity as participants are able to respond in the privacy of their own homes.

Participants were initially recruited through the Facebook communities ‘Psychedelics New Zealand’ and ‘Dic Veals,’ which consisted of approximately 3,000 members and 11,000 members, respectively. A prospective participant later recommended posting in the Facebook groups ‘Kiwiburn’ and ‘Wellington Burner [official]’, with 9,300 and 2,500 members, respectively. These are both online communities of New Zealanders who have attended or wished to attend the local ‘burn’ festivals. ‘Burn’ festivals are replications of the United States’ festival ‘Burning Man’ and are known to encourage a wide range of psychedelic substance use. The social media posts in these two communities spurred the highest number of survey respondents and long comments-sections debating the potential benefits of psychedelic substance use. Near the end of the data collection, when there were approximately 130 survey respondents, I paid for a one-off post on the Facebook group ‘Vic Deals’. This group is a larger, earlier version of ‘Dic Veals’ and has over 170,000 members from across New Zealand. Along with these social media posts, community flyers were distributed as an extra measure for maximising engagement. These flyers were placed in cafes and retail shops around the Wellington CBD, with permission from the staff. A high number of cafes had community notice boards to place the flyer. According to Qualtrics, 48 survey respondents were recruited through the flyer’s QR code, and 248 were recruited through the links on the social media posts.

Two interview participants were recruited via existing contacts. One of the participants had been contacted by a family friend who had heard about the research. This interview unintentionally led to a snowball-sampling recruitment method, in which the participant passed my contact details on to someone they believed would be interested. The snowball-sampling method is where one participant is able to recruit other participants and is often a valuable method for illicit substance research, as sometimes recruiting a sample can be difficult.

Due to the large amount of interest in the study, I was able to be selective about who was interviewed. As this was a study looking at people who had experience with either LSD, psilocybin, or MDMA, it was important to have a relatively balanced number in each of those groupings. Many prospective interviewees reached out over email, finding my details either from the social media post or the flyers. Often these volunteers would describe which psychedelic substances they had experience with, and for those that did not, I responded asking for details (albeit only if they were comfortable). I made an initial selection of participants with the aim to get a balanced range of LSD, psilocybin, and MDMA users. At this point, most of my prospective interviewees were female and had experience with LSD,

so to balance out the sample demographics, I contacted all of the survey participants who had expressed a desire to be interviewed at the end of the survey. They had done this by listing their email address. I asked these survey respondents whether they felt comfortable enough to tell me which psychedelic substance they had experience using for mental health and well-being. From the pool of those who replied, I selected my remaining participants based on gender (I needed more males) and psychedelic substance (I needed more psilocybin and MDMA users) in order to have a range of interviewees. The selected sample of participants is shown in the table below:

Table 1: Interview Participants Overview

Name	Psychedelic Substance	Age
Pete	LSD, psilocybin	male
Ralph	LSD, psilocybin, MDMA	male
Tony	Psilocybin	male
Fred	MDMA	male
Oliver	Psilocybin	male
Chris	Psilocybin	male
Julie	LSD	female
Erin	LSD	female
Anne	MDMA, psilocybin, LSD	female
Susan	LSD	female
Michelle	LSD	female
Laura	Psilocybin	female
Total	7 LSD, 6 psilocybin, 3 MDMA	6 female, 6 male

There were several obstacles during the recruitment process. The first obstacle was that posting in Vic Deals incurred a fee of \$170. I was eager to use the Facebook group as I firmly believed that Vic Deals would lead to a high number of respondents, but I did not have the personal funds. I initially attempted to negotiate with the Vic Deals sales representative, to see if as a student they would waive the fee for me, but this approach was unsuccessful. My supervisor suggested that I apply for a Faculty Research Grant from Victoria University

of Wellington, which I successfully did and was subsequently able to pay the Vic Deals fee. A second recruitment obstacle was that approximately ten prospective participants who had reached out requesting an interview did not answer any of my follow-up emails. I am unsure of why they did not respond, but it could be that they either forgot or had a change of mind. A third obstacle was the difficulty in recruiting interviewees who had experience using MDMA for mental health or well-being. I found this strange as MDMA has had comparatively the most progress in the medical field and is set to be reclassified as a prescribed PTSD medicine in the US (Entheos, n.d.), although the Covid-19 pandemic has made it difficult to get high quality MDMA (KnowYourStuff, 2021).

Ideally, this research would also have included an exploration of the beliefs of palliative care workers in New Zealand. End-of-life anxiety is a common issue among those in palliative care, and numerous international studies have shown psychedelics (particularly LSD and psilocybin) to have a positive effect (Gasser et al., 2015, Griffiths et al., 2016, Ross et al., 2016). I believed it would be interesting to interview staff at a local hospice and determine their attitudes towards the future of psychedelics as a mental health treatment in palliative care. Unfortunately, issues with recruiting prevented me from interviewing this group. The idea of the research was warmly received, however, with New Zealand under Covid-19's red-alert level, the hospice was unable to accommodate my research.

Interviews

The primary method of data collection was qualitative data collected from transcripts of semi-structured interviews with members of the public who had experience using psychedelic substances for mental health or well-being purposes. As the interview discussed sensitive topics, it was important to develop a feeling of safety and non-judgment with the participants. This was achieved by building a rapport with the participant before beginning the interview and, in some cases, over email prior to the meet-up. Any questions they had were answered before starting. Two interviews were conducted in a private meeting room at Victoria University of Wellington, nine interviews were in public cafes, and one interview was over Zoom. Bar the zoom interview, all participants were given a description of myself for identification. Interview duration varied between 30 minutes and two hours, depending on the extent of the participants' answers. With the participant's consent, a phone app was used to audio record the interviews, and these audio recordings were later transcribed for thematic analysis.

Interviews were the chosen qualitative data collection method because the research discussed a complex and sensitive subject. This component of the mixed methods approach allowed a better understanding of the context behind some of the survey data. It also revealed some themes not included in the survey, such as set and setting. All interviews followed a similar, semi-structured question guide. This allowed for flexibility and the development of themes while still covering a pre-decided list of topics. Questions were constructed with my supervisor's guidance, to ensure that they were concise, simple, and without bias.

Prospective Participants that were not Interviewed

Several participants expressed concern over the potential for police involvement mentioned on the participant information and consent forms (Appendices D and E). One prospective participant decided to withdraw from the study as they were concerned about the confidentiality of the research. While this prospective participant understood that the risk of police involvement was low, they felt that any links between their name and illegal activity could jeopardise their career. This prospective participant was apologetic and re-asserted their belief in this line of research. To balance out my sample, I had to turn down several people who emailed to volunteer for an interview. I also had a relatively high number of people requesting to interview after completing all my interviews, likely because the survey remained live for an extended period.

Survey

Quantitative data was collected via an online Qualtrics survey as a secondary data collection method. The survey was responded to by people from around New Zealand who had experience using psychedelic substances for their mental health or well-being. A survey is a series of questions designed to gather data from participants (Heap & Waters, 2019). When constructing the survey, language was simple and concise, while confusing and biased wording was avoided. The survey did not begin with complex or sensitive questions and instead inquired about the participant's recreational experience with substances and other rapport-building questions, building up to more sensitive issues (Appendix H) . Survey interest was maintained by using the question type (multi-choice or open-ended) that would be easiest for the respondent to answer (Heap & Waters, 2019). The survey was open for three months, between the 22nd of December and the 30th of March. There was a total

number of 296 responses. The survey took approximately 10 minutes to complete, depending on the speed and extent to which respondents answered the questions. Respondents were presented with an information sheet at the beginning of the survey, which explained the study and assured anonymity. On completion, 94 of the 296 survey respondents volunteered to be interviewed. Overall, this was an efficient method of gathering a large amount of ‘broad brush’ data within an allocated time frame and involved minimal administration once the survey was made live.

Ethical Considerations

Ethical approval by the HEC was granted prior to data collection (Appendix A). The topic of this thesis is particularly sensitive, as it involves a vulnerable population and two heavily-stigmatised subjects - mental illness and substance use. As an interviewer, I was conscious of taking a sensitive and non-judgemental approach, and discussed how best to do so with my supervisor prior to the data collection phase.

This thesis acknowledges that possession of psychedelic substances is against the law and can incur up to a \$1000 fine and 6 months imprisonment. This is why it is imperative that participants give informed consent and that any information given remains confidential. Interview participants were provided with an information sheet and a consent form (Appendices D and E). These documents assured participants that they could withdraw from the study at any point. During transcription, pseudonyms were assigned to each interview participant for confidentiality. Any contact information received online, from the flyers, or through the survey was kept confidential. In addition, survey participants were provided with an information sheet (Appendix G), letting them know that their information would remain anonymous.

I was aware that the survey or interview questions might prompt participants to recall traumatic events or feelings linked to their experiences with mental illness. The interview information sheet (Appendix D) made participants aware that they could choose not to answer any questions, that the audio recording could be switched off if they wished, and that they could stop the interview at any time. I also verbally summarised these key points to interview participants prior to turning on the audio recording. The survey participants could choose a ‘prefer not to say’ option on any of the sensitive questions. At the end of the interview, I provided each participant with a list of support services (Appendix I).

Analysis of Data

Analysis of Quantitative Survey Data

An analysis of the survey data was conducted using the statistical analysis tool available on Qualtrics. The purpose of the survey was to gather an initial broad brush of data about psychedelics in New Zealand to inform interview questions. Additionally, the survey gathered interview participants, who had the option to volunteer to be interviewed at the conclusion of the survey. The survey was intended to supplement the qualitative interviews, which were the main method of data collection. As the survey was a secondary method of data collection, the presentation of survey results was in the form of descriptive statistics, rather than complex statistics. This involved generating graphs of the most salient points in the data and summarising the patterns presented. The survey analysis chapter is divided into five sections; demographic information, the behavioural information, aspects of psychedelic substance use, the perceived effect of using psychedelics for mental health, and statistical relationships between gender and other variables. The descriptive conclusions drawn from the survey data laid the foundation for the subsequent qualitative data analysis.

Thematic Analysis of Qualitative Interview Data

As a novice researcher, I decided to use thematic analysis to analyse interview data, using Braun and Clark's (2006) guide. Thematic analysis involves reflectively identifying and organising the patterns of meaning in a data set (Braun & Clark, 2006). Braun and Clark (2006) argue that thematic analysis is a useful method of analysis for large sets of data that can otherwise be vague or complex. Following their guide, patterns in the transcripts were identified, and the themes important to answering the research questions were determined. The analysis in this thesis followed the six phases of Braun and Clark's (2006) approach:

1. Familiarise yourself with the data

The aim of phase 1 is to become familiar with the data content and begin to notice the key themes. In this phase, I immersed myself in the data by reading and re-reading the interview transcripts. I simultaneously listened to the audio, and as I read the transcripts, I took notes and highlighted items relevant to my research questions.

2. Generate initial codes

In this phase, the data were systematically coded. The ‘codes’ are the labels for a feature of data that is potentially relevant to the research questions. As this was an early phase, the codes did not need to be fully explained as long as I, the researcher, understood them. I coded data even if I was unsure about its relevance, and some data had multiple codes. In total, 407 codes were generated (Appendix J).

3. Search for themes

In phase three, the analysis began to take shape, and codes were condensed into initial themes. This was an active process, meaning themes were self-generated; they did not ‘appear’ out of the codes. This involved reviewing the coded data and identifying similar areas. Some codes began to fit into clusters. The relationship between the themes was considered, along with how the themes would eventually fit together to answer the research questions. In total, 79 initial themes were generated (Appendix K).

4. Review potential themes

In this phase, the themes developed in phase 3 were reviewed. To do this, initial themes were checked against the codes to determine whether they did the data-set justice. Some initial themes were discarded or re-organised under another theme. This phase was crucial to the shaping of the analysis. Themes ought to have a singular focus and should be related (but not overlapping) to avoid repetition, however, they may build on one another. Following Braun and Clark’s (2006) advice, the theme’s usefulness was considered, along with whether the theme had enough supporting data. This phase led to three final themes (Appendix L).

5. Define and name themes

To define the themes, I considered what was specific about each theme. As suggested by Braun and Clark (2006), this was tested by summarising each theme in a few sentences. Extracts, such as quotes and examples, were selected from the data to analyse and set out the theme. The names of each theme were chosen to be informative and concise.

6. Produce the report

This final phase is the production of the report, which is in the form of three chapters, one theme per chapter. The chapters are structured logically and build on the previous

chapters, with a focus on answering the research questions. The first is ‘The New Zealand Environment’ (Chapter Six), followed by ‘The Success of the Treatment’ (Chapter Seven), and lastly, ‘The Self-Therapist’ (Chapter Eight).

Personal Challenges

At times, collecting data for this research has been emotionally, physically, and academically draining. Lack of experience interviewing meant that I scheduled seven interviews in the first week of data collection, which was challenging and not a decision I will make in future research. Both the surveying and the interviewing required a significant amount of administration tasks, which became hectic, notably as it coincided with the New Zealand government enacting a ‘traffic light’ system in response to COVID-19. The survey involved several drafts and discussions with my supervisor on the best questions to ask - ones that would help answer all the research questions and be brief enough that participants would complete the survey (Heap & Waters, 2019). Posting in social media groups also meant that I received several people messaging me personally, primarily interested to know whether the final report would be made available to the public. The administration of organising and meeting with participants, the interview itself, and the subsequent transcribing was altogether time-consuming and tiring. Academically, sticking to my planned time schedule became stressful, particularly as my paid work obligations picked up at this point. This likely worsened my physical and emotional well-being. As a method of coping, I attempted to commit to doing work only on weekdays and used my weekends to focus on spending time with my friends and family. While enjoyable, the interviews could be very emotionally taxing. Almost all of the interviews discussed the participant’s mental health issues (one focused solely on well-being), which could be challenging to hear. Anne's interview, in particular, involved a highly traumatic event that elicited an emotional response from both her and I during the interview. I was still rattled post-interview, so I took a long walk to decompress. Nonetheless, all of these interviews reflected positive experiences with psychedelic substances and only reinforced my desire to contribute to this area of mental health treatment in New Zealand. The bravery of the participants to be so vulnerable toward a stranger demonstrates their belief in psychedelic substances positively affecting mental health and well-being.

Several times I encountered this stigma when telling others about my thesis topic. The majority of people whom I discussed my thesis with were interested and encouraging,

however, there were a few who displayed very dismissive attitudes. It was clear from their tone and the remarks these people made that they believed psychedelic-assisted therapy was a pseudo-science or a sort of ‘hippie’ fad. Despite this, I did not encounter any stigma around perceived toxicity or addictiveness of psychedelic substances.

Practical Limitations

There were several practical limitations to this thesis. While these limitations restricted the generalisability of the study, it is important to note that there is minimal research on psychedelic mental health treatment in New Zealand, and therefore this thesis is primarily an exploratory study. One limitation of the study is that it focuses only on LSD, psilocybin and MDMA in an effort to avoid having too broad a scope. While I believe this was the right decision to make, I also think that the research is limited by its exclusion of ketamine. A meta-analysis of ketamine studies by Breeksema et al. (2020) demonstrates that ketamine can have positive effects on mental health. Ultimately, ketamine was excluded because LSD, psilocybin and MDMA were thought to be more accessible in New Zealand.

The other practical limitations of this research are based on the homogeneity of the sample. Firstly, for both the interviews and the surveys, the majority of participants fell into the 18-24 and the 25-34 years age bracket (25% and 51% for surveys, respectively). Only one survey participant was over the age of 55. This could be due to several reasons. In New Zealand, the younger population has significantly higher reports of mental illness than the older population (Ministry of Health, 2018). These younger populations may have more accessibility to illicit substances, and they may also have more of an open mind in seeking out alternative forms of mental health treatment. It would have been beneficial to this thesis to have more input from older populations, especially the 75+ range who may be dealing with end-of-life anxiety. There is significant research on the effects of psilocybin on end-of-life anxiety, and it would have been interesting to explore this area further. This makes the failure to interview workers in palliative care another practical limitation of the study. Secondly, the sample consisted mostly of pākehā participants; ten out of 12 interviewees and 69% of survey respondents identified as NZ/European. Only 8.3% of survey respondents identified as Māori, compared to 17% of the general population (Stats NZ, 2021a). Similarly, only 2.4% of the survey sample identified as Pasifika, compared to 8% of the general population (Stats NZ, 2021b). There is potential for future research to explore the experiences of these two

populations, particularly as already marginalised groups. Doing so would be integral for understanding the future of psychedelic-assisted therapy in New Zealand.

Strengths and Limitations

The research design of this study had several methodological strengths and limitations. One strength of the mixed-methods approach was that it allowed for individuals to choose their level of involvement and anonymity. Participants could choose to fill in the survey only or to add their details to put themselves forward to be interviewed. This was considered to be the most appropriate way of gathering interviewees from this often marginalised population. Those that wanted to give more insight into their psychedelic use and chose the option to be interviewed, provided the study with a deeper understanding of psychedelic use in a New Zealand context.

Psychedelic studies have often had issues with small sample sizes (Noorani & Martell, 2021) and so a survey sample of 296 is a positive outcome of this research design. The ability to share experiences anonymously may have encouraged a higher number of people to participate.. Another strength of this design is that the early implementation of the survey guided the direction of the interview questions. As there is limited New Zealand research on psychedelic use for mental health, having the survey responses as a guide meant that the interviews could be structured around areas important in a New Zealand context.

A limitation of the survey design was that the sample was self-selected. Individuals chose to participate in the survey or interviews and this may have skewed the types of answers given. This thesis acknowledges that only those with positive or fairly positive experiences may have felt motivated to share their perspectives and contribute to the psychedelic research field. However, , for an MA study of this scale, a self-selected sample was the best method of recruitment that would be sensitive to those who used psychedelics for mental health related issues. Additionally, the practical limitation of a homogenous sample demonstrates this study's issue with recruitment. The recruitment method led to the majority of participants being based in Wellington. The recruitment process included the distribution of flyers around local cafes and retail shops, which would have skewed the sample. This was particularly an issue for the interview participants. The location of survey participants was more varied, with 54.5% located outside of Wellington. This was likely due to the ease of completing an online survey from any location. Comparatively, prospective

interview participants from non-Wellington locations were not able to see the flyers, and those who saw the social media posts may have felt that arranging a zoom interview would be inconvenient.

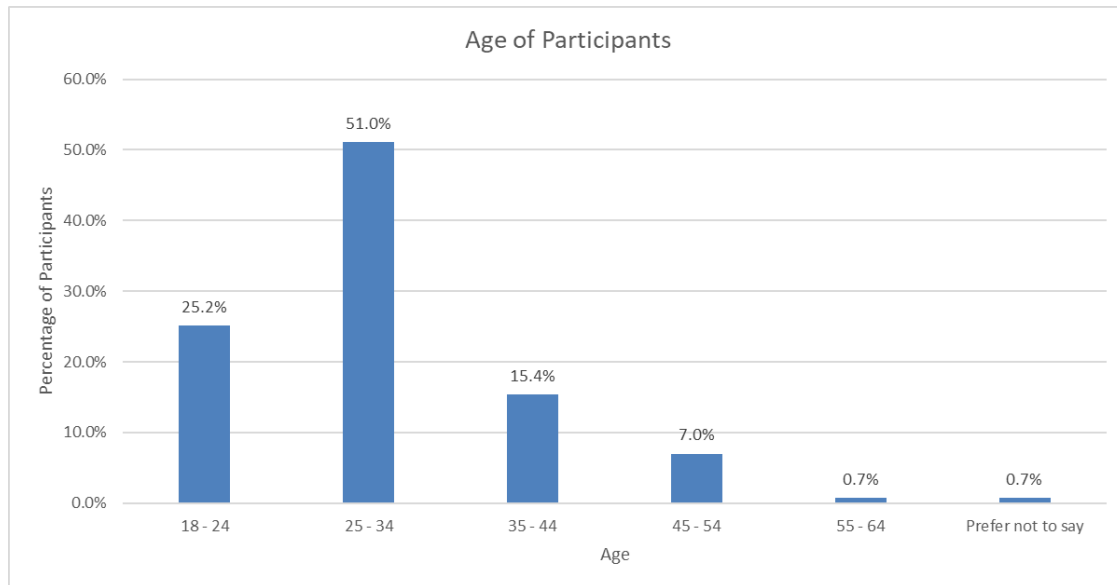
Chapter Four: Results of the Survey

Using the results of the survey data, this chapter will provide a broad overview of the sample alongside participant's experiences using psychedelics for mental health and wellbeing purposes. The survey was 'live' for 15 weeks and had 296 responses, which indicates that the use of psychedelics in New Zealand may be relatively common. The purpose of the survey was to collect 'broad brush' data so as to highlight some of the key issues about psychedelics, which were then used to structure the interview questions. Additionally, the survey allowed for participation from people seeking to share their experiences with full anonymity. Using Qualtrics-generated graphs to illustrate the most salient elements of the data, this survey found that an overwhelming number of respondents had positive experiences with psychedelic substances, which were used to treat a range of mental health and wellbeing needs. Negative experiences and side effects tended to be mild or otherwise temporary and were primarily attributed to issues with set and setting. This chapter will be divided into five sections. Firstly, it will describe the demographic information of the participants, including their age, geographic location, and gender identity. Secondly, this chapter will outline behavioural information of the participants, such as the most used psychedelic and most common treatment purpose. Thirdly, it will discuss aspects of psychedelic substance use, such as the frequency of use, dosage level and access to the substance. Fourthly, this chapter will evaluate the effect that psychedelics had on the participants, whether it was positive or negative, and whether any side effects were noticed. Lastly, it will examine whether there are any statistical relationships between variables in the data. The results of this chapter will lay the foundation for the following three analysis chapters that follow.

Demographic Information

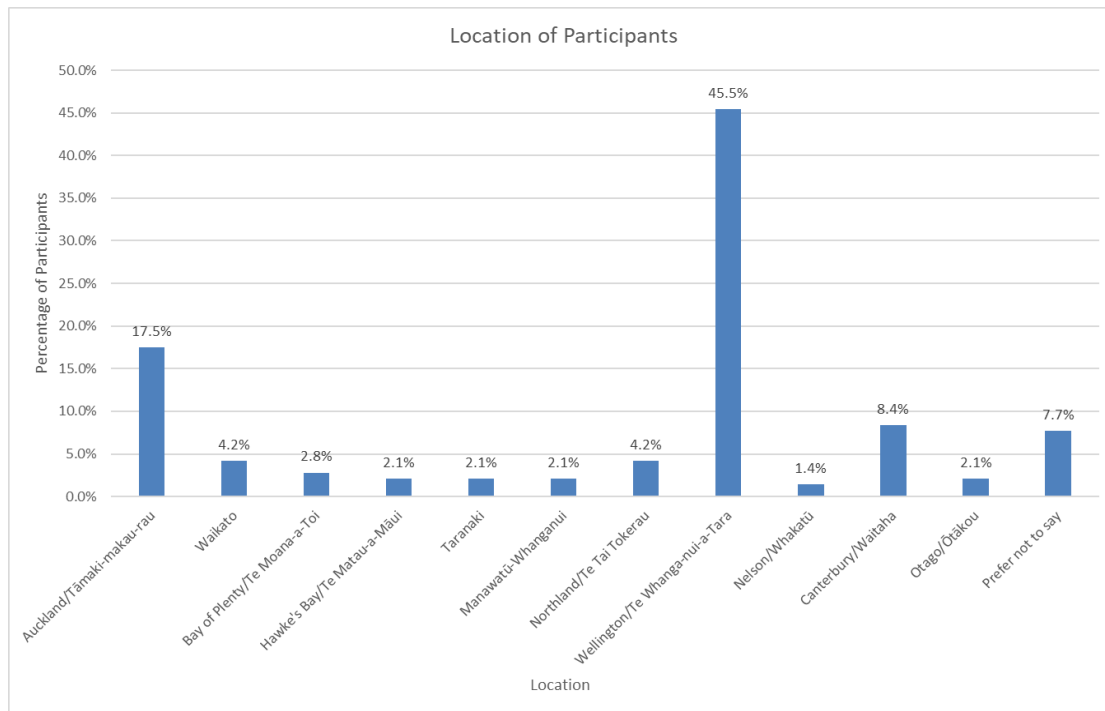
For the question ‘*Can you tell me your age?*’, 143 participants out of 296 responded. Of those who responded, most were aged between 25-34 (51%, n = 73), with fewer participants in the over 45 age categories (8.4%, n=11) (Figure 1).

Figure 1: Age of Survey Participants (n=143)



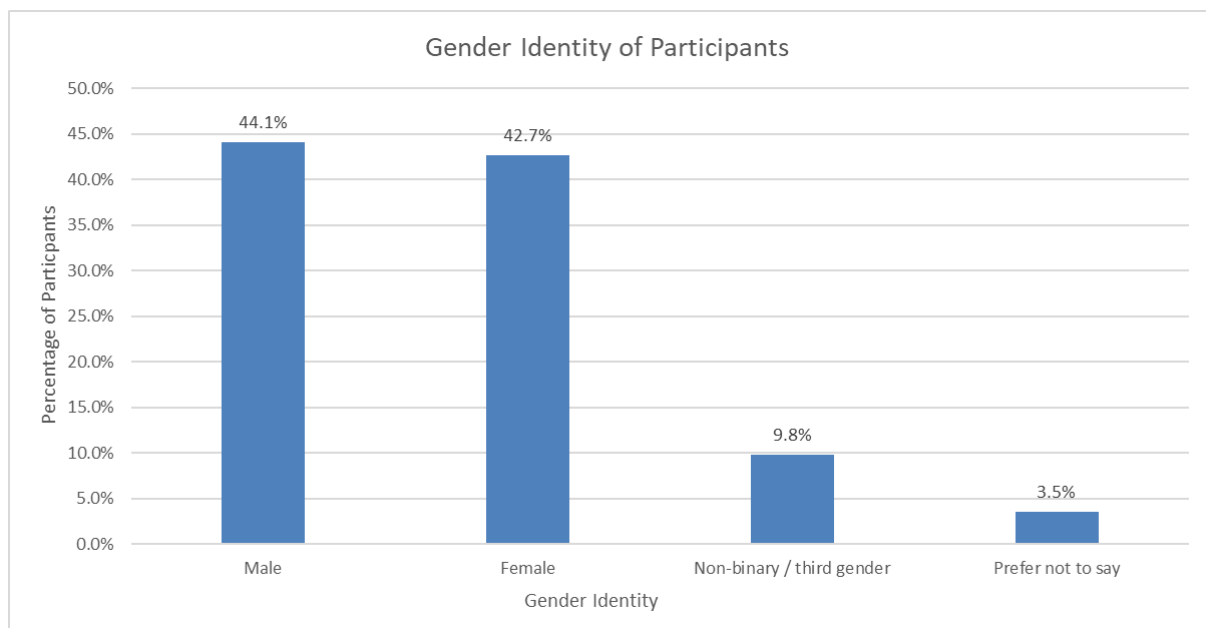
For the question ‘*Can you tell me what area you are from?*’, 143 participants out of 296 responded. Of those who responded, 63% (n=90) lived in the two main urban areas of New Zealand; Wellington and Auckland, with the remaining participants spread over a variety of geographic locations, as shown in Figure 2:

Figure 2: Location of Survey Participants (n=143)



For the question 'Can you tell me your gender identity?', 143 out of 296 survey participants responded. Figure 3 demonstrates that there was a similar ratio of those who responded who identified as male (44.1%, n=63) and female (42.7%, n=61):

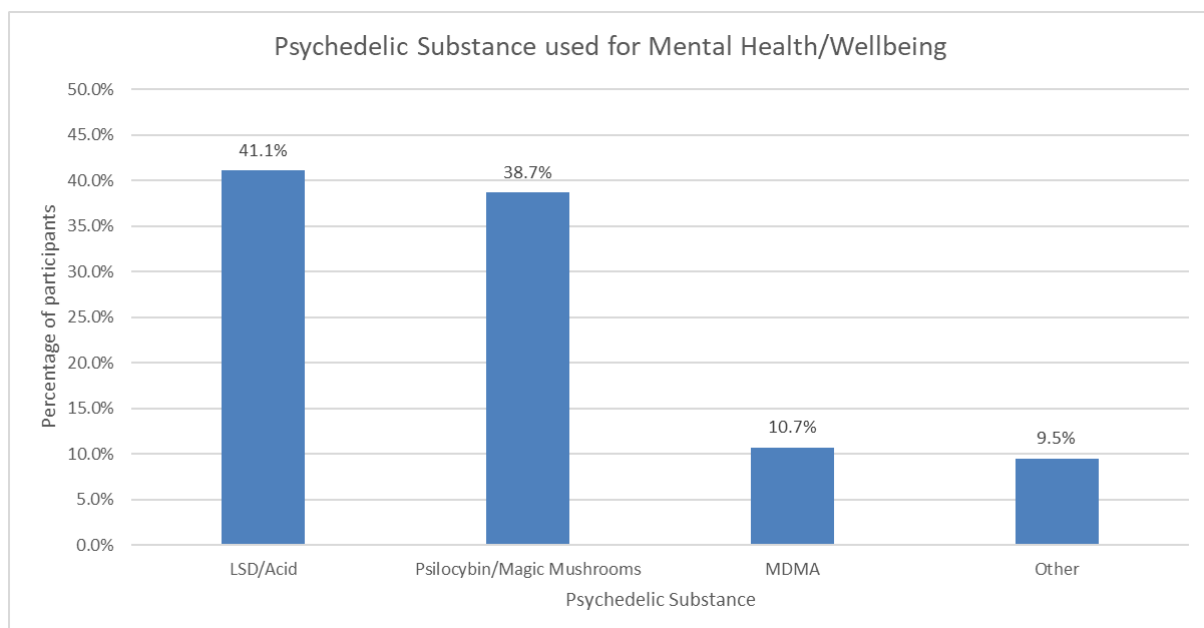
Figure 3: Gender Identity of Survey Participants (n=143)



Behavioural Information

For the question *‘What is the main psychedelic substance that you have used for mental health/well-being?’* 168 out of 296 survey participants responded. As Figure 4 shows, as the most commonly used psychedelics to treat mental health/wellbeing, LSD and Psilocybin had an almost equal percentage of those who responded, at 41.1% (n= 69) and 38.7% (n= 65), respectively. MDMA was far less prevalent, accounting for only 10.7% (n=18) of those who responded.

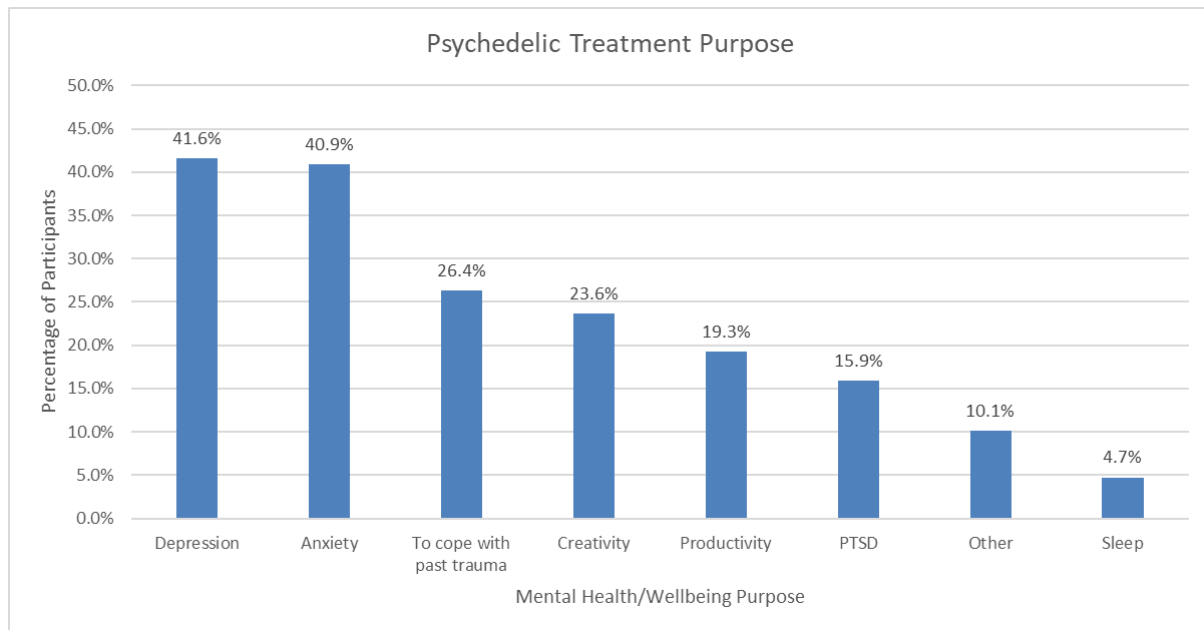
Figure 4: Survey Participant's Most Commonly Used Psychedelic Substance (n=168)



Of note, 9.5% (n=16) of those who responded selected ‘other’ as the main psychedelic substance that they used for mental health/well-being purposes. When asked to elaborate, these ‘other’ substances were primarily ayahuasca (3.6%, n= 6) and ketamine (2.4%, n= 4). This suggests that there are other areas of psychedelic substance use in New Zealand that future research could usefully examine.

For the question, *‘please describe the specific mental health/well-being issue that the substance was used for’*, 168 out of 296 survey participants responded, and were able to select more than one answer. Figure 5 shows that depression (41.6%, n=123) and anxiety (40%, n=121) were the two most common psychedelic treatment purposes noted by participants.

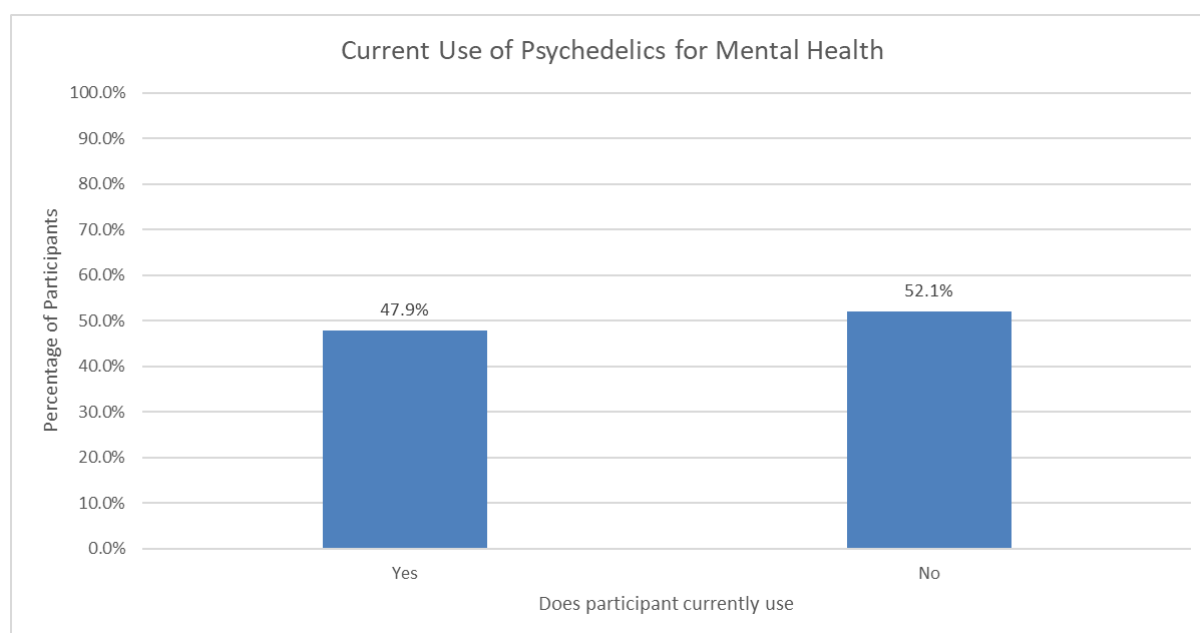
Figure 5: Survey Participant's Most Common Mental Health/Wellbeing Purpose (n=168)



This is consistent with many international studies, which have used LSD and psilocybin to treat mood disorders, such as Treatment Resistant Depression (TRD), Major Depressive Disorder (MDD) and General Anxiety Disorder (GAD) (Carhart-Harris et al., 2016, 2021, Davis et al., 2020, Gasser et al., 2014). Interestingly, 47.6% (n=141) of those who responded used psychedelics for well-being-related reasons (creativity, productivity and sleep), which demonstrates that psychedelics are not only used for mental health and trauma-related purposes. 10% (n=30) of those who responded selected ‘other’ as their purpose for using psychedelics and answers ranged from treating Attention Deficit/Hyperactivity Disorder (ADHD), eating disorders, and a desire to change their perspective on life.

For the question ‘*Do you currently (in the last 3 months) use the psychedelic substance to help with mental health/wellbeing?*’ 169 of the 294 participants responded. Of those who responded, just over half (52.1%) no longer used these psychedelics for their mental health, as shown in Figure 6:

Figure 6: Measure of Survey Participant's Current Use of Psychedelics for Mental Health/Wellbeing Purposes (n=169)



In text boxes provided, 88 participants gave responses as reasons for ceasing use. 32 respondents claimed that psychedelics had helped them to the point that use was no longer necessary.

'[psychedelic use is] No longer required, depression in remission for over 4 years.'

'[I stopped using psychedelics] Because my mental health and responses to triggering situations completely changed after a month-long microdose course of psilocybin and I have never had any debilitating PTSD symptoms and spirals since. This has now lasted almost 2 years.'

Accounting for 23 responses, the second most cited reason was a lack of access to psychedelics, which suggests that survey respondents would continue to use psychedelics if they were able to source them:

'Money, and availability - it's not always consistent that you will be able to purchase or forage for psychedelics.'

'Lack of access to psilocybin due to it being a class A substance in NZ.'

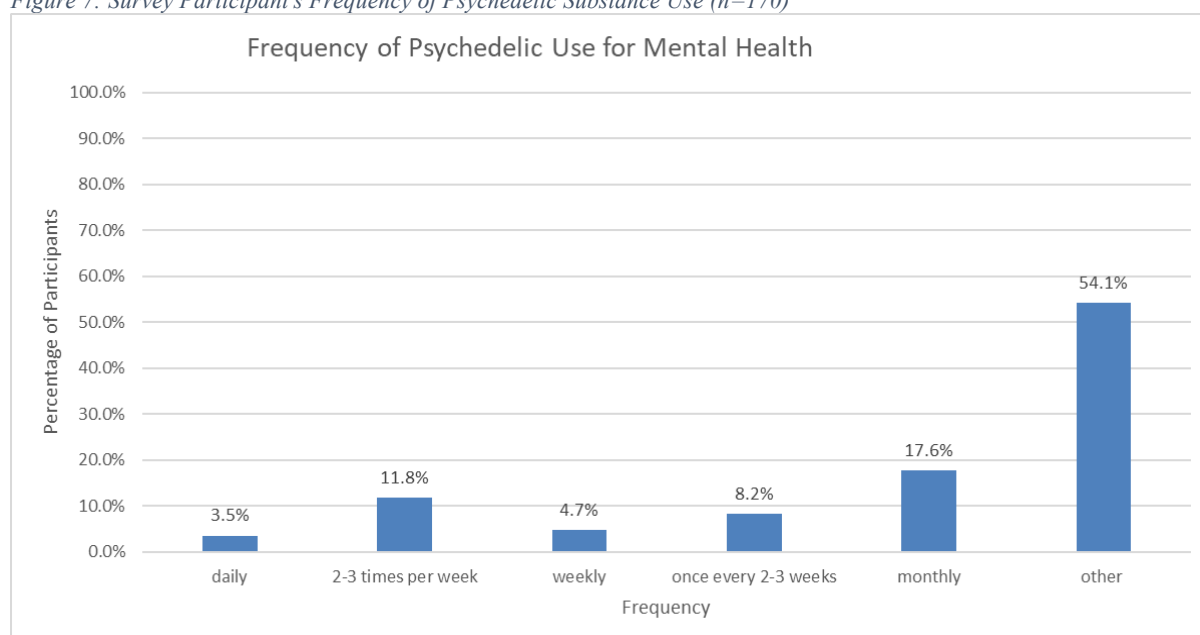
Negative reasons to stop psychedelic use accounted for only a minority of answers (n=8). These negative reasons were primarily having a bad trip or adverse side effects – such as the substance exacerbated existing mental health conditions:

‘I got psychosis after a few bad trips and other trauma. so had to stop because otherwise, I would get more unwell’

Aspects of Psychedelic Substance Use

Of the 296 survey participants, 170 responded to the question ‘How frequently did/do you use the psychedelic?’ Of those 170, the most commonly selected answer was ‘other’ (54.1%, n= 92), as demonstrated in Figure 7:

Figure 7: Survey Participant's Frequency of Psychedelic Substance Use (n=170)



Using the text boxes provided, participants were able to elaborate on their ‘other’ responses. Of the 90 participants who chose to comment, 34 participants stated that they only used psychedelics every few months:

‘Once every 2-3 months or as the need arises.’

‘Every couple of months, it's all a feeling for the right timing, environment, and people I am around’

20 participants stated that they used psychedelics 1-2 times per year:

‘Roughly every 6 to 12 months’

‘Maybe twice a year. I usually ensure I am in an environment that is designed/ thought out for the purpose of taking psychedelics’

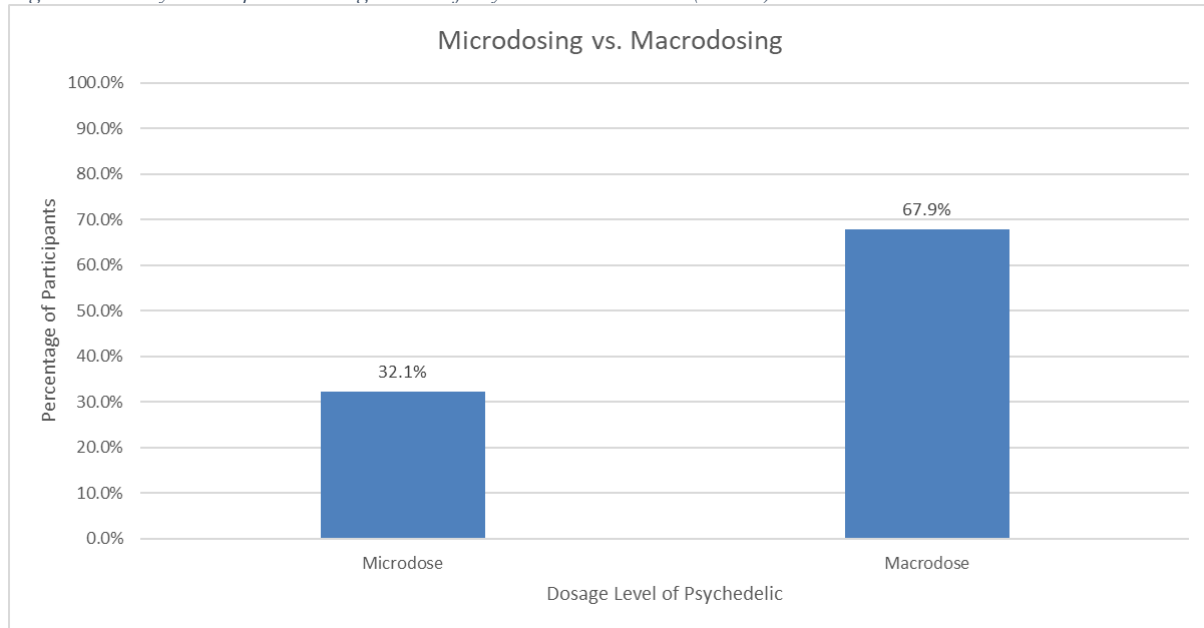
10 participants had only had a singular psychedelic session:

‘One big hero dose of magic mushrooms was sufficient for me’

‘Once only - it felt like being reborn at the time’

For the question *‘When using the psychedelic substance for mental health/well-being purposes, did/do you microdose or take a higher dose?’* 140 out of 296 survey participants responded. In Figure 8, it is clear that the majority of those who responded macrodose (67.9%, n= 95), as opposed to microdose (31.1%, n= 45). Macro dosing refers to the level of psychedelic dosage where the user feels obvious effects. Comparatively, micro dosing is a small, sub-perceptual dosage of psychedelics, typically between 1/10th and 1/20th of a macrodose.

Figure 8: Survey Participant's Dosage Level of Psychedelic Substance (n=140)

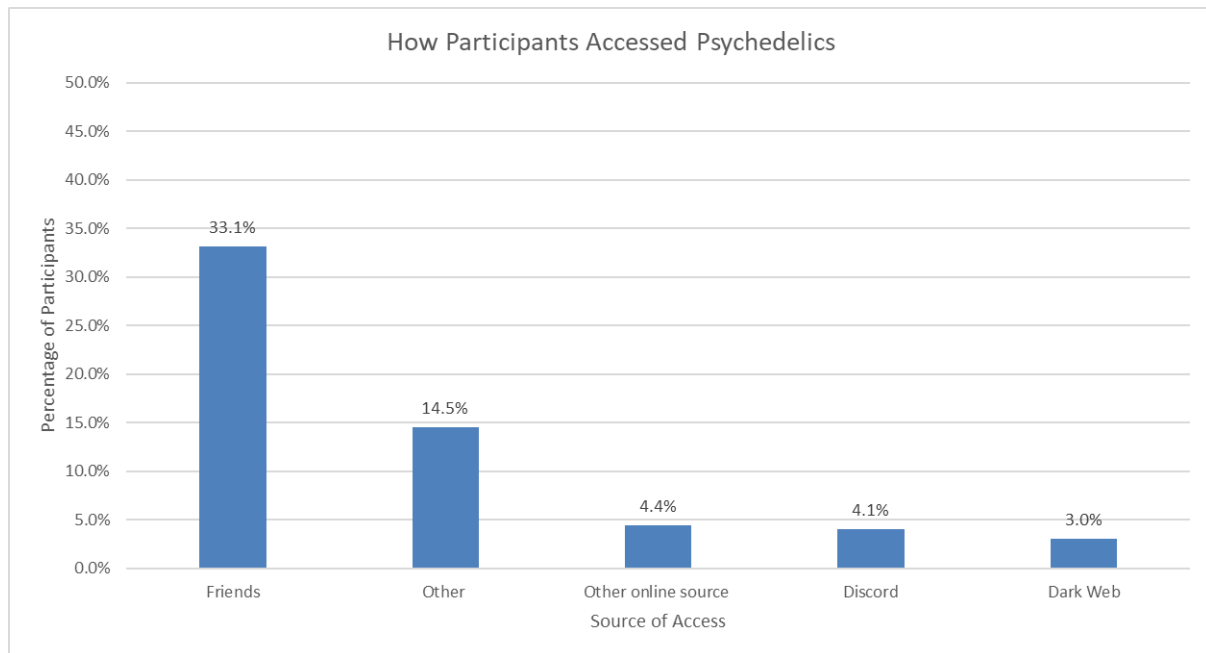


This is consistent with the international research on psychedelics and mental health, which is primarily based on macrodosing studies (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020).

Of the 296 survey participants, 175 responded to the question ‘*how did you access the substance?*’. Of those who responded, methods of accessing psychedelics were most commonly via friends (33.1%, n=98) (Figure 9). Online sources, including, Discord³, the dark web, and ‘other online sources’ accounted for only 11.5% (n= 34) of those who responded.

³ Discord is an instant messaging social platform, where ‘servers’ (forums) can be created for various groups/purposes. Some Discord servers are created with the purpose to buy/sell illicit substances

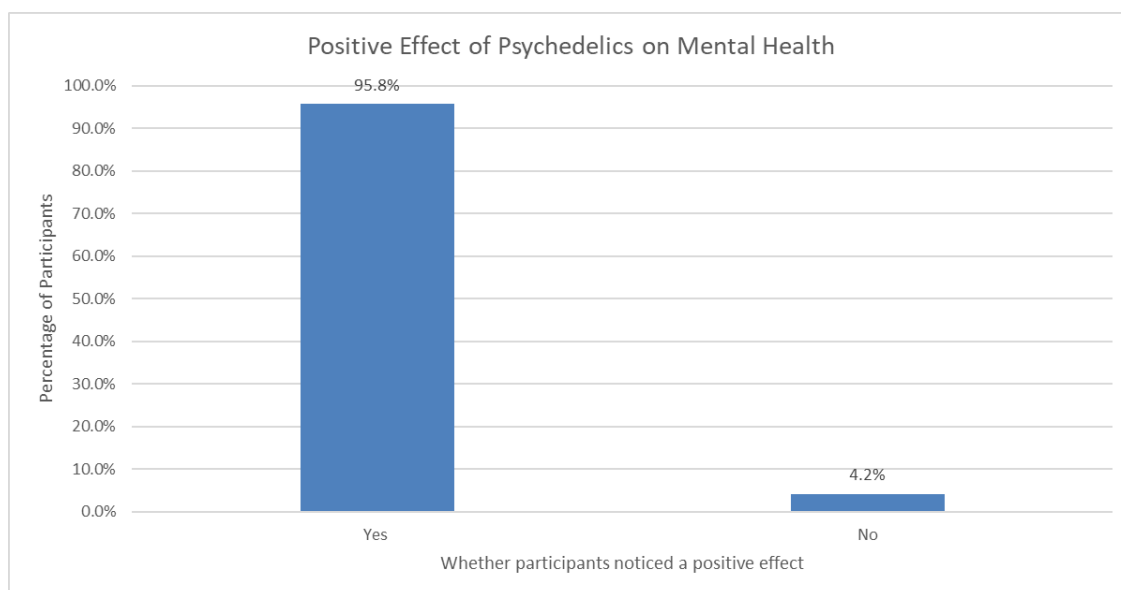
Figure 9: Survey Participant's Method of Access (n=175)



Participants most commonly stated that these 'other' online sources were social media platforms, such as Facebook and Snapchat. 14.5% (n= 43) of those who responded answered 'other' as their source of accessing psychedelics. The most cited means of access under 'other' were foraging and growing psilocybin-containing mushrooms.

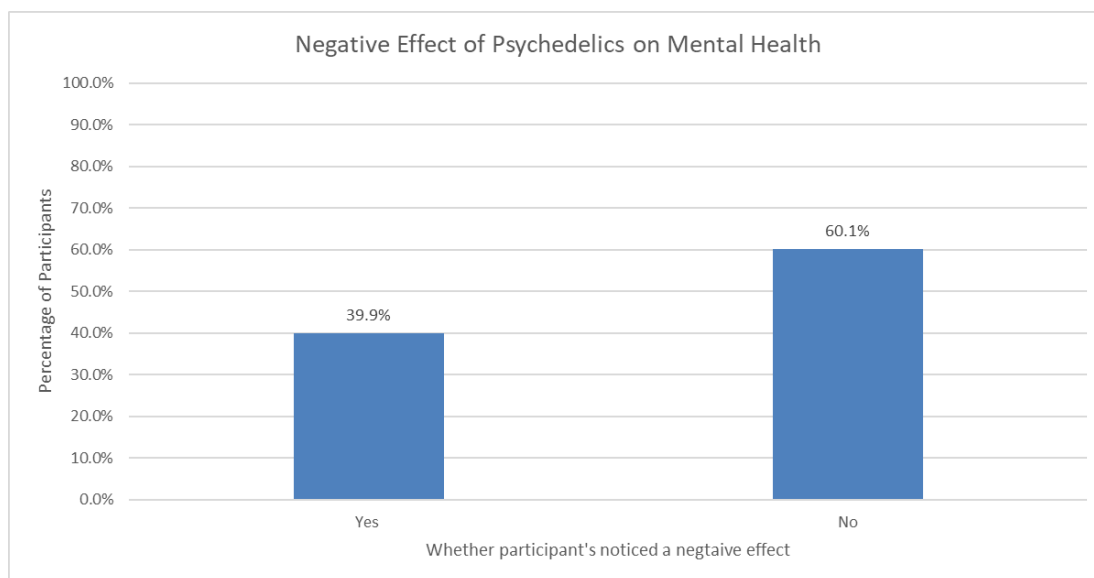
Effects of Psychedelic Use on Participants

Figure 10: Measure of Positive Effect of Psychedelics on Mental Health/Wellbeing (n=142)



For the question *‘Have you noticed a positive effect on your mental health when using this substance for therapeutic purposes?’* 142 out of 296 survey participants responded. The majority of those who responded (95.8%, n=136) noticed a positive effect of psychedelics on their mental health, as shown in Figure 10. However, for the question *‘Have you noticed a negative effect on your mental health when using this substance for therapeutic purposes?’* 39.6% (n=55) of the 138 survey participants who responded also noticed a negative effect of psychedelics (Figure 11). From this, it is clear that a significant proportion of participants felt both positive and negative effects.

Figure 11: Measure of Negative Effect on Mental Health/Wellbeing (n=138)



Some of the most commonly stated ‘negative’ effects on mental health were anxiety during the trip, comedowns from MDMA, and that the session could be emotionally draining:

‘Comedowns from MDMA were awful at times - and felt like I was dealing with a new battle, rather just anxiety’

‘It's mentally tiring because you're essentially working harder so I need to spend a half day resting after a large dose’

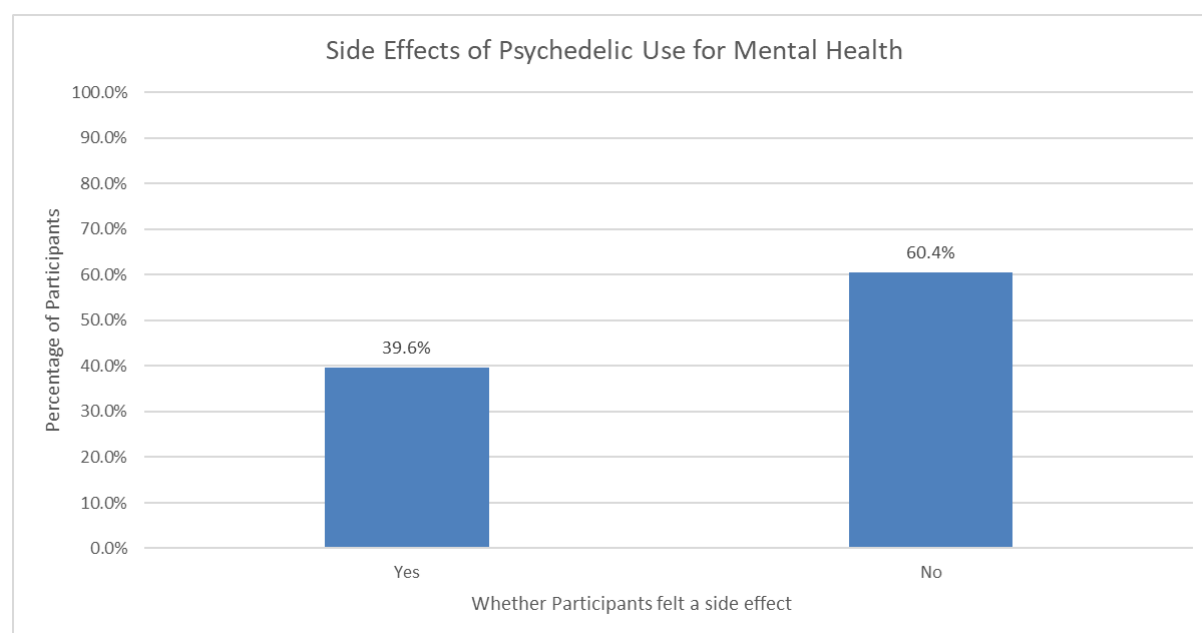
‘I found my mood worsened. I was short-tempered, did not sleep as well and did not achieve the desired flow state. Admittedly I was not

particularly creatively challenged at work at the time - in fact I hated my job. Perhaps if I tried again in a more positive environment I would have enjoyed the experience more.'

Of the 54 respondents that chose to elaborate in the provided text box, 13 participants believed that the negative effects of psychedelics on mental health were due to an incorrect set and setting:

'When not used in the right setting/without the right mindset bad thoughts can take over your trip and cause an unpleasant experience'

Figure 12: Measure of the Side Effects of Psychedelic Use (n=139)



139 out of 296 survey participants responded to the question 'Have you noticed any other side effects from using this psychedelic substance to help with your mental health/well-being?'. While the majority (60.4%, n=84) of those who responded did not feel the side effects of their psychedelic use, a significant proportion (39.6%, n=55) stated that they did (Figure 12). However, on examination of the 55 participants who felt side effects, 78% were positive, stating side effects such as 'happiness' 'productivity' and 'helped with sleep'. 9 survey participants reported adverse side effects, only one of which was severe (induced psychosis). The other 8 responses did not appear to be overly severe and included feeling bloated, poorer memory of pin numbers and difficulty sleeping. In retrospect, the survey

should have included two separate questions on side effects, one that asked whether positive side effects were felt, and another that asked if negative side effects were felt.

Statistical Relationships

There were some interesting differences found between gender identity and purpose of psychedelic treatment, source of access, frequency of use, and dosage level respectively. Of note, only 143 out of 296 participants answered these questions.

Gender Identity and Purpose of Psychedelic Treatment

For purpose of psychedelic treatment, a higher proportion of female respondents (50.8%, n=73) than male respondents (39.7%, n=57) used psychedelics to cope with past trauma. Similarly, a higher proportion of female respondents (39.3%, n=56) than male respondents (17.5%, n=25) used psychedelics to treat diagnosed Post Traumatic Stress Disorder (PTSD). In hindsight, the option to select PTSD should have been removed, as it can fall under the option of *To Cope with Past Trauma*. The ability for survey respondents to choose multiple options meant that it is likely many selected both options, therefore the statistics for each option could not be combined to provide a more succinct analysis. The relationship between gender identity and productivity was also interesting. A higher proportion of male respondents (38.1%, n=54) used psychedelics to improve productivity, when compared to female respondents (19.7%, n=28). A higher proportion of male participants (79.4%, n=113) than female participants (69.9%, n=99) also used psychedelics to treat anxiety.

Gender Identity and Source of Access

For source of access, a higher proportion of female respondents (77%, n=110) than male respondents (60.3%, n=86) accessed psychedelics through their friends.

Gender Identity and Frequency of Use

For frequency of psychedelic use, a higher number of male respondents than female respondents claimed to use psychedelics more frequently. Male respondents were the only

group to use psychedelics daily (4.8%, n=7), and 7.9% (n=11) used psychedelics weekly, compared to female respondents, none of which used daily, and only 1.6% (n=2) used weekly. A higher proportion of female respondents (18%, n=26) used psychedelics monthly, compared to male respondents (11%, n=16).

Gender Identity and Dosage Level

A higher number of male respondents (41.3%, n=59) reported to microdose than female respondents (24.6%, n=35). Comparatively, a higher number of female respondents (73.8%, n=106) reported to to macrodose than the male respondents (55.6%, n=80).

Summary

Overall, the survey found that the sample was primarily between the ages of 18-34 and from Wellington. LSD and psilocybin were the most used psychedelics, and depression and anxiety were the most commonly treated mental health needs. Of importance, most of the sample had positive experiences with their use of psychedelics, with few significant side effects. The relationships between gender identity and purpose of psychedelic use, source of access, frequency of use and dosage level indicate areas for future research. This survey provided several key areas that were examined in interviews, namely method of access, side effects (both adverse and non-adverse), reasons for dosage level, and reasons why participants may no longer be using psychedelics for their mental health.

It is important to recognise the limitations of this survey. In particular, it is difficult to generalise the survey results to the greater New Zealand population, as a high number of respondents found the survey via ‘Vic Deals’, a Wellington-based Facebook group, or from flyers distributed around the Wellington city area. A critique of international psychedelic studies is that samples tend to be homogenous (Gukasyan & Nayak, 2021, Noorani & Martell, 2021) and unfortunately the time and resource restrictions of this thesis affected the diversity of this survey sample. Any future New Zealand psychedelic research should strive to gather participants from a range of ages, locations, and ethnic backgrounds.

Chapter Five: Interview Participants

Below is an overview of the 12 participant interviews, which will help to ground the following three analysis chapters. All names here and throughout the thesis are pseudonyms.

Interview with Pete

The first participant interviewed was *'Pete'*, who reached out after seeing my social media post on 'Dic Veals'. The interview took place in a private meeting room at Victoria University. Pete was in his early twenties, identified as NZ/European, and from a north-island city. He had experience microdosing LSD to help with social anxiety, although he did not do it frequently. He was introduced to recreational LSD by his friends and later discovered its potential for mental health treatment through his own research. Interestingly, Pete was strongly into the EDM (Electronic Dance Music) scene and claimed that taking LSD in these environments helped him to open-up and view himself from an outside perspective. He noted one side effect was 'eco-anxiety', an anxiety around global environmental issues such as climate change. Pete believed that this was because LSD sessions would make him 'more aware' of the world and claimed it was a positive side effect.

Interview with Ralph

'Ralph' was interviewed in a local pub, as the only convenient time to meet was after traditional work hours. We chose to sit in an upstairs dining area where there were no other patrons. Ralph was in his mid-twenties, identified as pākehā, and was originally from a north-island city. Ralph was a unique participant in that he had experience macro-dosing all three psychedelics being studied - LSD, psilocybin and MDMA - for his mental health. LSD was used primarily for getting out of a 'funk', whereas psilocybin and MDMA were used for self-therapy sessions. These substances were to help with depression and alcohol use. Ralph was a part of a welcoming and well-informed community of people that had introduced him to psychedelics in a safe way. Like other participants, he had tried a range of conventional methods for treating depression, none of which had worked. This interview was one of the longest (1.5 hours), as the conversation discussed several examples of Ralph's use of psychedelics.

Interview with Tony

'Tony' was a man in his late 40s who identified as pākehā and was from a south-island city. He was recruited via the survey, and the interview was conducted over zoom. Tony had experience microdosing psilocybin to help with depression that stemmed from Post-Traumatic Stress Disorder (PTSD). Microdosing psilocybin also improved his productivity and focus. He had been prescribed anti-depressants in the past, but they had had a negative, numbing effect. Notably, Tony expressed interest in doing macrodoses of psilocybin, however, only if it was during a legitimate therapy session.

Interview with Fred

'Fred' was recruited through the survey and was a pākehā man in his early 30s, based in a north-island city. We arranged to meet at a cafe after work, however, due to COVID-19 staff shortages, the cafe closed early, and the interview was instead conducted in a nearby park. Fred had experience using MDMA for well-being purposes, such as intimacy and creativity. Most participant interviews focused on mental health, so it was valuable to have someone who used psychedelics for their well-being, instead of specific mental health issues.

Interview with Oliver

'Oliver' was a half-pākehā, half-Indian man in his early 30s, based in a north-island city. He was recruited through the survey, and the interview took place at a local coffee shop. Oliver had experience microdosing and macrodosing psilocybin for his anxiety and depression, each with a different purpose. He explained that macrodosing was used for having an insightful and reflective experience, which became a pattern across interviews. Oliver microdosed for getting out of a mental 'rut' and being productive and sharp. Of interest is that Oliver had microdosed psilocybin the morning of the interview, which I had not noticed until mentioned.

Interview with Chris

‘Chris’ was the only interviewee whom another participant had recruited. He was in his early 30s, from a north-island city, and identified as part-pākehā and part-Māori. We met at a local cafe. Chris had experience macrodosing and microdosing psilocybin for self-described healing. He had suffered from severe paranoia, psychosis, depression, and general abuse of substances. He stated that the macrodoses of psilocybin helped him to understand his substance addiction, and to reflect on what in his past had brought him to that point. Microdoses were useful for keeping up the sharpness between the macrodoses. For Chris, psilocybin had a strong spiritual connection; it helped him connect with his inner consciousness and made him confront issues that he may not have been able to sober.

Interview with Julie

‘Julie’ was recruited through the survey, and we met in a local cafe. She was a pākehā/American woman in her mid-20s, based in a north-island city. Julie had been introduced to LSD through her friends and had done a significant amount of her own research on it. She used macrodoses to help with her anxiety and depression, both worsened by the COVID-19 pandemic. She had attempted therapy in the past but found that it did not work and was too expensive to continue with. She is currently on anti-depressants and finds them helpful and has not noticed any crossover effects of using LSD while on this conventional medication.

Interview with Erin

‘Erin’ was one of the first people to respond to my social media post and reached out to me over Facebook. She was in her mid-20s, identified as pākehā, and was originally from a north-island city. We met in a local cafe. Erin had had a one-off experience using LSD at a ‘burn’ festival and had otherwise grown up cautious of illicit substances. Erin was different from the other interviewees in that she had only used the psychedelic substance once, but it had had such a lasting, positive effect on her self-image and anxiety that she wanted to share it with me. Comparatively, she had tried therapy but found that its benefits were temporary.

Interview with Anne

‘Anne’ was a mid-20s pākehā woman from a north-island city who emailed me after seeing one of the flyers advertising the study. During our email exchange, Anne expressed concern over police intervention, as her experience had involved help from a psychiatrist. This interview was the most challenging for me as it discussed a severe case of sexual assault in Anne’s youth, which was difficult to hear. At one point during the interview, both Anne and I became quite emotional. Anne had used MDMA recreationally and found that it would bring back memories of the trauma. She discussed with her psychiatrist her wish to use MDMA to revisit her trauma, and together they made a plan on how Anne could carry out her therapy-like session. Using the planned therapy exercises, Anne took a macrodose of MDMA in her own home and was able to work through some of the severe PTSD she had been suffering from. This experience significantly accelerated her progress in therapy. Despite Anne discussing one of the most traumatic events I have encountered during this research, I noticed that she was incredibly calm, insightful, and open. Anne also briefly discussed how she sometimes used LSD and psilocybin in the winter to help with seasonal depression.

Interview with Susan

‘Susan’ was a pākehā woman in her early 30s who reached out over email to participate in the study. Susan had a history of heavy alcoholism that stemmed from undiscovered PTSD. She had been to therapy and forced to attend an Alcoholics Anonymous (AA) meeting. After looking into the literature on LSD-assisted therapy, she began using it as a substitute for alcohol and found that it could help her work through her PTSD, which subsequently motivated her to seek a trauma specialist.

Interview with Michelle

‘Michelle’ was an early 30’s pākehā woman with some whakapapa Māori. The interview took place in a booked, private room at Victoria University. Michelle suffered from anxiety and found that LSD helped her find the root of this anxiety by using a method similar to Cognitive Behavioural Therapy (CBT). She used LSD alongside this method to analyse the issues causing her anxiety. While conventional therapy had been helpful, Michelle had found it too expensive to continue with, and anti-depressants had some adverse side effects.

Interview with Laura

‘Laura’ was recruited through some contacts. She was a pākehā /Italian woman in her mid-20s and was based in a north-island city. We met in a local café. Laura had a history of macro- and microdosing of psilocybin for a range of issues she had suffered from since she was young. She was forthcoming with her medical history, citing double depression, PTSD, anxiety, dissociation, suicidal tendencies, and chronic migraines. In the past, she had been prescribed various medications, all of which severely worsened her symptoms. Consistent with other participant interviews, Laura found that the macrodoses instigated a confrontation of issues from her past and allowed her to delve into the root of her mental health. Microdoses were used to keep up a ‘sharpness’ between macrodose sessions. She discussed in-depth a strong spiritual connection with psilocybin. While Laura could not currently use psilocybin for unrelated reasons, she states that she would ideally be macrodosing once per month.

Chapter Six: The New Zealand Environment

While international studies continue to demonstrate the success of psychedelics for mental health treatment (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020, Griffiths et al., 2016, Hall, 2021, Ostuzzi et al., 2018), New Zealand has been hesitant to join this emerging field of research. Nonetheless, survey results presented in Chapter Four indicate that psychedelics are used in New Zealand as a form of self-medication for mental health and well-being needs. Research suggests that substance users are a highly stigmatised group (Yang et al., 2017), which can be detrimental to mental health outcomes (Birtel et al., 2017, Link et al., 1997). It will be interesting to consider whether the environment of prohibition in the New Zealand context has affected both social and internalised stigma around psychedelic substance use. Furthermore, while legal psychedelic research overseas has opened up public discourse internationally (Multidisciplinary Association for Psychedelic Studies, n.d., The Beckley Foundation, n.d.), the New Zealand psychedelic community still appears to be underground.

In this context, this chapter aims to examine the physical, social and systematic environment participants are in to determine whether psychedelics have a place in the future of New Zealand's mental health system. These themes will be discussed in three parts: firstly, this chapter will examine the current context of psychedelic use in New Zealand, including participant attitudes towards psychedelic use and its legal classification, and the effects of Covid-19 on mental health. Secondly, it will investigate the social environment; how psychedelic use affects friendships, familial relationships, and the wider community. Thirdly, it will discuss participants' beliefs around the future of psychedelic treatment in New Zealand, such as eligibility criteria, parameters, and perceived barriers. This chapter will subsequently set the scene for discussion about the effects of psychedelics (Chapter Seven) and why participants chose to self-medicate (Chapter Eight).

The Current New Zealand Context

Prior Attitudes and Usage of Psychedelics

Before using psychedelics for mental health purposes, all participants had existing positive attitudes towards them, except Susan and Erin. Susan reported having little knowledge of psychedelics, whereas Erin claimed that her secondary school education made

her cautious of psychedelic substance use. When asked about her prior attitudes toward psychedelics, Erin said:

'Cautious and curious, growing up, we learned about it at school, about different drugs and we never learned about any benefits. It was only, these are all the dangerous drugs and being quizzed and answering questions about all of the dangerous side effects. So I think that probably impacted how I felt about drugs.' (Erin)

The majority of participants had prior experience using psychedelics, with the exception of Laura and Erin. For some participants, this prior experience made them more confident to use the substance for a mental health 'trip':

'I had a bit of experience previously with random drugs and so I kind of knew what to expect a bit and I just felt prepared enough to do [MDMA].'
(Anne)

'If I'd never tried (LSD) I'd definitely be more wary, but, because I was comfortable with it and I was comfortable with myself on it, I guess it was just a little bit easier to be like I'm obviously not going to freak out. I'm comfortable with this drug and let's give it a go.' (Michelle)

Several participants also clarified that they did not see a distinction between a 'recreational' trip and a 'mental-health' trip. They clarified that the reflective, exploratory nature of any trip will always be medicinal:

'LSD is good for getting out of your shell and things like that and it's great for getting me out of a funk...I see that as medicinal because I can have a really shitty couple of weeks, and you know what? I catch up with a couple of friends, eat some LSD and get completely out of my funk.' (Ralph)

'I did start off using it recreationally, purely for the purpose of: oh well I want to see pretty colours. What's all this about, this looks like a new

*adventure? And then it shows you kind-of what it's about pretty quickly.
And it's not just about that [recreation], It's something a lot bigger.' (Pete)*

The notion that the line between recreational and therapeutic psychedelic use is blurred is an interesting element of psychedelic research. LSD and MDMA were initially synthesised for medical use (Dyck, 2005, Passie, 2018), while psilocybin has been used for healing purposes by indigenous cultures for centuries (Rucker et al., 2022). Indeed, perhaps the categorisation of psychedelics as 'recreational' or 'medicinal' is strictly a western lens, and instead, the psychedelic experience is much more complex. If the psychedelic experiences are inherently spiritual - as discussed in Chapter Seven - then it is possible there is a healing aspect to all psychedelic use, regardless of whether there is a recreational or therapeutic purpose.

Drug Classifications

The Class A categorisation of psilocybin and LSD appeared to cause anxiety and frustration among some participants. In New Zealand, LSD and psilocybin are classified as Class A substances, meaning they are allegedly 'very high risk'. MDMA is in 'Class B' - 'high risk' (NauMai New Zealand, n.d.). Pete and Laura both expressed that this criminal label impacted their experience with LSD and psilocybin respectively. Laura stated:

*'even though I was doing it for my health, I felt like the biggest criminal
and it was such a disgusting feeling. If I get pulled over with that little
baggy that I had it in my car, like that's fucking it for me you know,
it's...yeah, it was a horrible, horrible feeling.' (Laura)*

According to labelling theory, self-identity can become influenced by a 'criminal' label, causing a person to internalise stigma (Lemert, 1974). With psychedelics continuing to be classed as illicit substances, users may feel as if they are being stigmatised as a 'substance-user', which can negatively impact their mental health (Birtel et al., 2017). Additionally, as Laura states, psychedelic use is accompanied by a fear of punishment. The penalty for supplying or manufacturing a Class A drug can be life imprisonment and 14 years imprisonment for a Class B drug (New Zealand Police, n.d.). These penalties are similar to those for methamphetamine, heroin, and cocaine. As a person who had previous issues with

substance addiction, Chris was particularly adamant that psilocybin was not comparable to methamphetamine, heroin, and cocaine:

'I've been addicted to Class A drugs, I've lived that life... mushrooms are in the same [Class A] category - it ain't that life and that's coming from someone who's been in that situation [of taking Class A substances].... I have an issue now that my medicine grows for free in the ground. And you tell me that if I have it [psilocybin], I'm a blight against society and I'm a bad person, and in the same breath you promote alcohol. I can't wrap my head around it.' (Chris)

Other participants who used psilocybin also expressed frustration that a 'medicine' that grows naturally would be in such a high-risk classification. Pete states:

'Mushrooms, it's growing and shit in the ground and it's not illegal right up until the point that you hold it and ingest it' (Pete)

'They are mushrooms that grow on the ground and no law is going to stop me from going out, picking them. That they are Class A substance really rubs me the wrong way' (Oliver)

Mental Health, Covid-19 and Psychedelics

The Covid-19 pandemic has had an unprecedented impact on the already-struggling New Zealand mental health system (Officer et al., 2022). International research has demonstrated that Covid-19 has negatively impacted people's mental health, particularly during lockdown periods (Kahawage et al., 2022, O'Connor, 2021, Pierce et al., 2020). Three interview participants drew connections between New Zealand's initial 2020 Covid-19 lockdown period and their decision to use psychedelic substances. They claim that the lockdown period exacerbated feelings of anxiety, depression, and frustration:

'So it's two people in lockdown, which is quite hard. And towards the end, we were both feeling pretty shit by this point, and we both got talking

about how shit we felt and how depressed and anxious we felt. And we were like let's take some acid and go on a walk... it was lovely.' (Pete)

'When we first went into lockdown, I was really depressed because I knew I was gonna have to come home and I was enjoying my life in London and I really didn't want to come home. And then when I did come home, I was 'I don't want to be back here' ...I would have days on end where I wouldn't get out of bed because I was like, what's the point? I'm not happy, then with the anxiety as well - I never really had anxiety, I've always kinda had depression, and the anxiety started around when COVID started.' (Julie)

The lockdown toll on New Zealanders' mental health is demonstrated by an increased overdose and self-harm hospital admissions and an increase in ambulance callouts for mental health conditions (Officer et al., 2022). Officer et al. (2022) report that New Zealanders experienced financial stress, housing problems, high anxiety about contracting Covid-19, and loneliness. Māori, Pasifika, and refugees were particularly affected regarding housing and economic issues. In May 2020, the New Zealand Ministry of Health (n.d.) implemented 'Kia Kaha, Kia Māia, Kia Ora Aotearoa: COVID-19 Psychosocial and Mental well-being Recovery Plan', a dedicated mental health recovery framework to combat the pandemic-exacerbated decline in mental health. The framework involved strengthening alliances across mental health services and increasing public access and engagement with these services, however, in 2022, Officer et al. found that these services were not always accessible or responsive.

Lockdown periods have meant that some young people have postponed overseas travel plans indefinitely. In this study, the uncertainty of the pandemic forced Julie to give up her life in the UK and return to New Zealand, bringing on a bout of depression, which she compares to a feeling of existential distress:

'It was weird [the depression and anxiety triggered by returning home], cause I've always been a bit of a social person I love going out. And then it was just this thing of being, I don't even want to go to the shop to buy milk because I just feel, you know?' (Julie)

'It felt more like an existential crisis and even now I still have it, because I'm like, I don't know what I want to do with my life. When I was over in London, at least I'm travelling and I'm having fun and I'm having new experiences, meeting new people. And then when I come back here, I'm it's just home. And it's the same old shit it's always been, you know? Anxiety about being stagnant? just not achieving anything, not doing anything, feeling behind everyone else.' (Julie)

With New Zealander's mental health on the decline, it could be time to look to alternative - and perhaps more effective - forms of mental health treatment. The three participants in this study that reported pandemic-induced poor mental health chose to use psychedelics as a method of self-medication, which will be discussed further in Chapter Eight. One participant, Pete, explained that towards the end of the long isolation period, he and his flatmate were feeling increasingly depressed and anxious, and began to lean into some anti-government sentiment. Pete noted that subsequently taking LSD helped him to rationalise the government restriction:

'I found that I could totally rationalise, we're going in lockdown for the greater good and all that.... I think to some degree it gave me a lot more empathy about the pandemic situation.... sometimes you just gotta take a step back and see the bigger picture.' (Pete)

Indeed, as will be discussed in Chapter Seven, psychedelics have been shown to facilitate a user's change in perspective (De Gregorio et al., 2021a). Studies have shown that classic psychedelics can increase the personality trait of 'openness', which Nour et al. (2017) suggests may have the power to cause lasting changes in the user's beliefs and attitudes. If, as demonstrated by Pete's experience with LSD, psychedelics can help with bigger-picture thinking, this could have flow-on effects for broader society. Socially divisive events like Covid-19 may indicate that there is an increasing need for this type of influence.

Social Support

Friends

Interview participants made it clear that friendships were a significant source of support. All participants reported that their friends supported their use of psychedelic substances, and for the majority, these friends seemed to actively encourage the participant's use. Many friends had used psychedelics recreationally, with some also using psychedelics for mental health purposes. Interestingly, participants Ralph, Pete, Fred and Erin have been accompanied by their friends during psychedelic sessions, who helped them tease out mental health issues. During these sessions, the participant and their friends would both have a dose of the psychedelic substance. They would then take advantage of the increased openness and empathy between each other to explore their mental health and to use the other as a sounding board:

'Just having talked through your emotions and having talked through your difficulties of life and your problems with your friends while you're tripping, that's like three years of therapy sometimes' (Pete)

'It [psychedelics] totally opens you up. There are things that I would not tell a soul and have told close friends and family only probably because I was under the influence. And again, I would drink half a box of beers and would still have tight lips. But, you know, I can't think of the amount of times that I have cried in front of friends and usually on some sort of psychedelic substance, because it does seem to just bring out this energy, and it's never a negative energy, you know? there'll be four or five of you just bawling your eyes out in a big circle, laugh-crying. And it's like, fuck, this release is so necessary.' (Ralph)

'We (Fred and his friend) talked about some stuff of our past, some things that happened. We had a friend that we both lost and it was just good to open up about that, which we've talked about before, but wasn't as

enriched and it was more from who we are. It helped our friendship, it really reignited it.’ (Fred)

‘We had a lot of talks during that [LSD session], which I think were really helpful, but it wasn’t specifically addressing anxiety. It was more just talking about life and talking about our friendship. I feel like maybe it was more addressing the symptoms of anxiety, rather than the anxiety itself....I don’t remember if we talked much about mental health, but it was helpful anyway.’ (Erin)

Being supported by friends during psychedelic experiences appears to both be a method of bonding and of informal therapy. Current MDMA clinical trials have emphasised the importance of the participant having an established, supportive relationship with their therapist, who acts as a guide during the psychedelic session (Krediet et al., 2020, Mithoefer et al., 2016). One benefit is that the therapist can facilitate introspection and provide a level of comfort to the participant. In the absence of mental health care professionals, participants in this study and their friends were still able to create a successful therapeutic environment.

Psychedelic Community

Despite the prohibition of classic psychedelics in the 1970s and of MDMA in 1985, Pilecki et al. (2021) claim that these substances continued to be used for therapeutic and recreational purposes in established, underground communities. Indeed, participants often spoke of a ‘psychedelic community’ in New Zealand. The ‘psychedelic community’ refers to the wider social connections that the participants made while exploring psychedelics. It extends beyond the friend group, to dealers, online forums, and the ‘burner’ community. The burner community refers to people who attend, or are interested in attending, ‘Kiwiburn’ (or similar ‘burn’ festivals), a New Zealand version of the US ‘Burning Man’ (Kiwiburn, n.d.). While these festivals are not intended to focus on psychedelic substance use, there appears to be a significant crossover between people who partake in psychedelics recreationally and those who attend the festival.

Interviews showed that the psychedelic community provides participants with safety tips, friendly advice, and social support. Within the community, participants were able to find

advice on how to best prepare for a psychedelic session, including how to avoid MDMA comedowns, what to eat beforehand and general safety measures around setting and dosage. In reference to this community, Ralph explains:

'They taught me a couple of things that I was like, wow, okay. Little things like writing down your dose times on a phone. I was amazed by that, this is genius - writing down what time and how much and not just using that as a tool to keep you safe - if something bad happens, someone else knows what you have taken - but also as a tool to stop yourself from taking too much of anything, being able to go when did I last dose?' (Ralph)

The supportive nature of the psychedelic community appeared to also extend to some of the participant's dealers. In the eyes of the Criminal Justice System, the term 'drug dealer' refers to anyone who sells or distributes drugs, including those working in large-scale drug operations and those who only sell to family and friends. In this study, most interview participants (who did not forage or grow psilocybin mushrooms) used dealers who were also friends or members of their wider social group. That friends and family are a common source of accessing substances is consistent with both the results of the survey (accessed psychedelics via friends: 33.1%, n=98) and international literature (Drug Policy Alliance, 2019). Erin and Anne were two of the participants most cautious before their psychedelic session. Erin had not used psychedelics prior and, while Anne had tried them recreationally, she was preparing to revisit some severe trauma during her session:

'It was my first time ever using it [LSD]' (Erin)

'I've always just kind of had flashbacks [of the trauma] and it's just a massive part of my day-to-day [life], and especially if I'm taking MDMA or LSD. Especially if we're taking LSD, I know that it might all rush back. So I'm prepared if it does do that, you kind of welcome that.' (Anne)

Erin and Anne reported that their friend-dealer took extra precautions to ensure they had a safe session. Erin's dealer encouraged her to get her LSD tab tested and offered to reimburse

the cost if the tab was impure. Similarly, Anne's dealer recommended testing with KnowYourStuff⁴ and offered to be on-call during the session:

'It was [dealt] through someone that I worked with. That was actually really good because I really trusted that person. They were like, you should get it tested anyway, but they said that if we got it tested and it was contaminated or whatever that they can give us our money back..... they gave us lots of really good advice and stuff like that around how to take it.'
(Erin)

'He's [the dealer] like - you know, I don't want anyone taking this and having a bad time. So, you can always call me if you're having a bad time and we'll make sure that you get home safe - and so he is really lovely.... he doesn't sell it to lots of people cause he only sells it to people he trusts to take it responsibly.' (Anne)

Anne also reported that her dealer refused to sell MDMA pills during the COVID-19 pandemic because they were unable to guarantee purity:

'With the pandemic, there is so much eutylone and stuff around. He was, I'm just not selling anything now because I can't always guarantee that it's safe.' (Anne)

This is a stance that may conflict with the public perception of a 'dangerous' drug dealer (Coomber 2010, 2006). The recent shift in attitudes towards the War on Drugs and cannabis legalisation in some jurisdictions has not extended to drug dealers who are still regarded as dangerous criminals (Drug Policy Alliance, 2019). They are seen as predators who drive addiction, overdose, and violent crime (Drug Policy Alliance, 2019). This image of the drug dealer is also deeply racialised, with research arguing that they are often believed to be people of colour, pushing addiction on vulnerable - usually white - people (Drug Policy Alliance, 2019). In reality, according to a 2012 US survey, Caucasians are slightly more

⁴ KnowYourStuff is a New Zealand community organisation of volunteers that collaborates with the New Zealand Drug Foundation (NZDF). It provides substance harm reduction services, often in the form of drug checking and provision of drug-related information at large events, such as festivals (KnowYourStuff, n.d.)

likely to have sold drugs when compared to other ethnicities (US Department of Health and 2012). Anne and Erin's experiences with accessing psychedelics is in stark contrast to society's predatory image of drug dealers, however it is in line with the research. A 2016 study by Stanforth et al. found that the well-being of the buyer is an important consideration for most drug dealers. Dealers who are friends, family, or coworkers often want the buyer to be safe and satisfied with the product. Similarly, large-scale, competitive drug dealers share this goal as they want to maintain a good reputation - which is good for business (Stanforth et al., 2016).

The New Zealand psychedelic community was well established demonstrating how ingrained the use of psychedelics already is in New Zealand, ahead of any form of legalisation or decriminalisation. Furthermore, members of this community are seemingly able to get the support and advice needed to feel comfortable trying an illegal, alternative form of mental health treatment. Future research on psychedelics and mental health will already have a significant population to sample from. Additionally, if psychedelic-assisted mental health treatment does become legal in New Zealand, it would be wise to consult with this existing psychedelic community.

Family

Family support networks are considered a primary source of social support and an important aspect of positive well-being (Pernice-Duca, 2010). In this study, participants had mixed responses on whether their family supported their psychedelic-substance use or not:

'I'm really fortunate to have a mother that is really quite open with this stuff, she does not experiment with any of it herself, she smokes pot occasionally. My dad's a bit like see no evil, hear no evil, speak no evil. He just doesn't really want to know but doesn't really care.' (Ralph)

'We [Julie and her brother] talk about it. We do, we're pretty open with our mum about it. She's pretty fine about it. To be honest, she thought it was amazing I was coming here today [to interview]. She was there when I read the thing [Social Media post], I was, I'm applying for this. And she's, oh, that's great. It sounds really interesting....I wouldn't talk to my dad

about it - my dad's very old school, he's in his mid-sixties and just wouldn't understand it. So, I don't really talk to him about it, but yeah, me and my brother talked about it quite a lot. ' (Julie)

This was different from their friends - who were all supportive - and the disparity could have two explanations. Firstly, friends, unlike family, are chosen; therefore, psychedelic users may gravitate towards others with similar, psychedelic-positive values. Secondly, there are more generational differences within the family. Often, participants who had mixed levels of support within their family noted generational differences; siblings and cousins were seen as supportive. In contrast, parents and grandparents were more likely to be opposed to psychedelic substance use:

'My mum's anti-drugs, she knows we all smoke weed and stuff like that, but I think she'd rather not know [about psychedelic use], 'cause she worries a lot as well, and she's from a generation that wasn't sort of so open....' (Michelle)

[The only ones who know about my psilocybin use are] the ones my age or my cousins and stuff, but I've never talked to anyone older than me too much about it. I've talked to my uncle and he was just like be careful about it. I feel like my family aren't really drug users, so they just see the stigma and they wouldn't see much else.' (Oliver)

Differences in family attitudes towards psychedelics meant that participants would be selective about who they discussed their use of psychedelics with. Parents of participants were also frequently split, one supportive and the other not.

Participants with supportive parents were more open about their use of psychedelics and its effect on their mental health. For some participants, such as Ralph, this deepened the relationship they had with their parents, as they were able to discuss their mental health issues more openly:

'We have great conversations that are really healing and important when I am on psychedelics and she [mum] will be sober. She might be drinking.

She might've smoked a little bit of a spliff, but she's not on the same substance as me. It's those times where quite often we will find a little breakthrough or I will have a breakdown and a positive breakdown, a breakdown that I wasn't capable of having in a sober mindset and we'll actually the next day go: Wow. Okay. Well that was a thing and how do we fix that? and how do we change that? That's something that I would've never been able to do with her back in the day.' (Ralph)

In contrast, a few participants chose not to discuss their use of psychedelics with their parents, as they were worried that news of their struggle with mental health would be a burden:

'The MDMA - I've never spoken about that with my mum. She knows that I've taken it and stuff, but I think she thinks I've taken it recreationally with my mates, but I just don't speak about everything [the trauma] that happened with my mum because she's in more pain than I am now about it. She just feels like a bad mother and horrible because of what happened as you would, but it isn't her fault at all and so I don't talk about that.' (Anne)

'If I told her the extent of the drug use she'd just be disappointed, but if I told her about how badly I was sort-of coping she'd just worry a lot. So it's probably not the healthiest thing for me to do.' (Michelle)

Several participants also cited that their parents had an 'out-of-sight, out of mind' mentality - they were not directly unsupportive but would rather not hear about the participant's substance use.

'He [Dad] doesn't like to hear as much about it...he's sort of like out-of-sight, out-of-mind, like, I don't really want to hear too much about it, but I don't really care what you do with your time.' (Ralph)

'I can't really talk to my parents about this [psychedelic use] without them kind of freaking out...they're both quite against it. They're not concerned,

because I think they do trust me and they know it's my path....They don't really want to talk about it. ' (Pete)

Participants who believed their family members would disapprove often chose not to disclose their psychedelic substance use and attributed this lack of support to conservative, outdated (and in some cases, religious) views. Parents, or older family members, who had grown up with an 'anti-drug' approach were perceived as only seeing the stigma attached to the substance. For some, this negatively impacted their relationships. Ralph states:

'What am I going to choose? this tool that I think makes my life or helps to make my life leaps and bounds more profitable, enjoyable, and really helps me grow and develop as a person? Or a [non-parent] family member who wants to do the exact opposite and sort of push me down and fit me into a certain uh, cookie cutter, shape and size'. (Ralph)

As the revival of interest in psychedelic research is relatively recent, older generations may have difficulty associating psychedelic use with positive effects. Therefore, family stigma may partially be the result of outdated fears around psychedelic toxicity and high potential for abuse, both of which have been disproven by numerous studies (De Gregorio et al., 2021a, Jansen, 1999, Johnson et al., 2018, Yaden & Griffiths, 2021).

Five participants reported that their parents' anti-drug attitude had changed after witnessing the effects that the psychedelic substance had had on their mental health. In these instances, some parents changed their mindset after realising that the substance was not leading to the negative consequences that they had grown up believing. Julie states:

'I think she used to think you do it once and it'll fuck your brain. And that's it, you're screwed for life.. I think now she realises that's actually not true.' (Julie)

'I told my mum about it [LSD use]. She wasn't too pleased, but then I think she came around when she realised I wasn't lying in a gutter somewhere

dying or ...she grew up very protestant catholic and never really saw drugs as a good thing. ' (Susan)

Several participants believed that it was the obvious improvement of their mental health that had lead to their parents change in opinion:

'definitely afterwards [after the LSD session] I was trying to tell her [mum] - cause she's always been aware and concerned about my mental health - so when I was trying to tell her how much of a positive impact doing acid had on me, she, I dunno....She's quite disapproving, but at the same time, I guess happy that I felt better. ' (Erin)

This indicates that the positive effect of psychedelics on mental health may be so significant that it can influence even those staunchly against it. If so, then conducting further research on psychedelics will be an important step in reducing psychedelic-related stigma. Studies on the use of psychedelics for mental health must be conducted in New Zealand to mitigate stigma from both the user's interpersonal relationships and the wider community.

Wider Stigma

While studies have found substance users to be a highly stigmatised group (Yang et al., 2017), most interview participants reported experiencing no (or very little) wider social stigma around their use of psychedelics. In this thesis, social stigma refers to the perceived prejudicial attitudes held by the public towards people who use psychedelics. Participants who had experienced social stigma seemed to believe that it was due to a lack of education around - or lack of experience with - these psychedelic substances. In some cases, this stigma would give way to an interest in the field, as Laura states:

'there's always, always, scepticism [from others]. But then a lot of those people have gone and done their own research and then become really invested and interested. Almost anyone who's been sceptical has looked into it themselves and been like, oh, there's a whole lot of shit that I don't know about. ' (Laura)

This scepticism indicates that social stigma may manifest itself in a disbelief about the effectiveness of the therapy, and an overall dismissal of psychedelic-induced mystical experiences.

An evaluation of how New Zealanders attach social stigma to drug use is key to assessing whether they can be integrated into mainstream therapy effectively. As noted by Anne, there could be an intersectionality – where stigma is enacted on multiple levels - attached to the combination of seeking mental health treatment and of using substances:

Some people probably don't want to go to a therapist, they just don't even want to go to a therapist because of the stigma and oh my God, those people definitely don't want to go to a therapist to get MDMA therapy. There's like double stigma - just be a nightmare for them probably.'
(Anne)

The most effective way to combat such stigma would be to provide the public with evidence-based education (Yang et al., 2017). Such education could dispel some of the fears of psychedelics, such as abuse-potential and toxicity, that contribute to stigma. Additionally, legalising or decriminalising psychedelics would remove the criminal label, thereby reducing stigma. From this study, it would appear that there is little social stigma present in the New Zealand population, however, it is important to acknowledge that this sample was primarily made up of people who lived in Wellington. Wellington is likely more liberal towards substance use than other areas of New Zealand, as evidenced by having the highest number of 'yes' legalisation votes than any other city for the 2020 cannabis referendum (Electoral Commission, 2020). Nonetheless, New Zealand's drug laws and the failure of the 2020 cannabis referendum indicate that drug stigma could still be significant. Indeed, one survey participant noted that their use of psychedelics had led to a negative social effect:

'Isolation [is a side effect] as many people don't understand/ appreciate my experience.'

Perceived social stigma has also been associated with lower self-esteem and higher rates of depression and anxiety (Birtel et al., 2017). This has a particularly detrimental effect on people with mental illness and is consequently suggested to lead to a lower quality of life

(Birtel et al., 2017, Link et al., 1997). Future research should assess the level of stigma across all of New Zealand to get a more thorough understanding of public perceptions of psychedelics. As part of the social stigma around psychedelics is linked to their Class A status, any legalisation or decriminalisation of psychedelics is likely to significantly reduce stigma.

The Future of Psychedelic Mental Health Treatment

Legalisation and Decriminalisation

Among participants, there was a unanimous desire for the legalisation of psychedelic-assisted therapy. Reminiscent of the 2020 cannabis referendum, participants often cited a ‘health-not-handcuffs’ approach to legalisation:

‘I think problematic drug use needs to be treated as a health problem rather than a criminal problem.’ (Tony)

‘[The LSD session] definitely changed how I feel about - I think I was already sort of pro legalisation of drugs or making them safer - treating it as a health issue rather than a criminal issue, addiction and stuff like that.’ (Erin)

‘I think decriminalising drugs is better for everyone. I think a health-based approach is better than a fucking criminal approach. That's a whole other thing, probably. I think it should be decriminalised totally, because I don't think it does anyone any good putting people in prison or inflicting more trauma on them for using [psychedelics] as a health issue.... I think, you know, MDMA is dangerous if you take too much, but you just don't know how much you're taking a lot of the time and so I think it [legalisation] would just be safer.’ (Anne)

As Anne states, legalising psychedelics would allow for safety regulations. As evident by the breadth of the psychedelic community, many people in New Zealand already use psychedelic substances. The idea that legalisation will lead to a safer use of substances is one of the core

reasons for the legalisation of cannabis (Meacher et al., 2019). Legalisation can result in harm-reduction education for users and allow for a regulated market. A regulated market for psychedelics means that products would not be adulterated with other, more harmful substances. Products would also be labelled so that users would know the dosage they were taking (Meacher et al., 2019). Regulations such as these can be guided by some of the international drug policies around psilocybin. Psilocybin is currently legal in several countries, such as Brazil, the Netherlands, Samoa, and the US state of Oregon (Hallifax, 2022). Additionally, it is decriminalised in certain European countries, and in several US cities across Colorado, California, Massachusetts, and Michigan (Ollove, 2022).

Participants believed that, prior to any legalisation, psychedelic-assisted therapy would need to be academically supported:

'It would have to be so academically and psychologically backed, everyone would have to be talking about it in a really responsible way.'
(Pete)

'I think the research needs to be done. I think we need to approach it wisely.' (Fred)

International research has already made significant progress demonstrating the success of psychedelic treatment, however clinical studies in New Zealand would work to bring this research to the forefront of the public's attention. Most participants believed that psychedelics should be available as an adjunct to therapy. This means that the user would have a therapist present during the session to act as a guide:

'I would really like it [psychedelics] to be [legalised], definitely more guided with therapists being there and doctors making sure dosages and everything was fine - 'cause also I feel like if it was considered a medicine, a lot more people would be more accepting.' (Susan)

That [psilocybin] is a tool, but that is something that I really need to do in conjunction with therapy, which I can't get because it's illegal. So pretty much I'm having to use, my own knowledge and take away from it

and be like, okay well, what was that? And what is it that I'm going to work on rather than having someone who will sit there with me and is trained in it and will be like, maybe this is what's going on, we need to do this and that.' (Laura)

Using psychedelics as an adjunct to psychotherapy is the current method being examined in international clinical trials (Bird et al., 2021, Davis et al., 2020, Carhart-Harris, 2016, Dolder et al., 2016, Griffiths et al., 2016). Post-Traumatic Stress Disorder (PTSD) trials using MDMA have stressed the importance of having at least one, but often two, therapists to guide the session (Kriedet et al., 2020). Therapists ought to have a pre-established relationship with the participant, and studies have shown that having a therapist during the session allows for increased participant introspection and the ability to work through structured therapeutic exercises (Kriedet et al., 2020)

Two participants believed that New Zealand would first need to focus on other societal issues that contribute to mental health. Underlying socio-economic issues, such as lack of housing and employment, were considered higher priorities. Ralph states:

'I think it'd be nice for us to iron out a couple of other social issues before....not that I think it would add anything negative or fuel to the fire, but I think it's just before we start having those discussions lets fucking talk about housing and public transportholy fuck like, what's the point of having psychedelics legal, if you don't have a house, you know? and that's sort of my personal mindset at this time, I think it will come, but I think it's a little way off and I don't think that's such a bad thing.' (Ralph)

Indeed, Maslow's Hierarchy of Needs dictates that people's need for adequate housing and financial stability must be satisfied before their need for emotional well-being (Maslow, 1943). The question is whether this will improve to a satisfactory level where mental health then can take priority. Furthermore, poor mental health may contribute to people's difficulty securing housing and employment. New Zealand's need for improved mental health services was also cited by one participant as being a higher priority than the legalisation of psychedelics. Anne states:

'I think there are so many more things that we need to do before we make that [psychedelic therapy] available. So like ultimately I would love it to be available, but I think that mental health services need to be far more accessible before we even begin to we cannot bring MDMA therapy into the country when we haven't got people to support people, even without therapy, we just haven't got the resources or the systems to even cope with, people now.....I think it's more necessary to decriminalise drugs, to reduce inequality... if we did this, but didn't have adequate mental health resources in high schools, I'd be annoyed that we didn't focus on that first.' (Anne)

Psychedelic-assisted therapy will not be effective without mental health services being made more accessible and affordable (Government Inquiry into Mental Health and Addiction, 2018). This is an important aspect to consider - the legalisation of psychedelics may require an initial increase in mental health service expenditure. Even if psychedelic therapy sessions are not done under formal supervision, users will need access to educational resources or on-call therapists. While this would initially require a higher budget and resources spent on the mental health sector, it could be successful enough to reduce some of the pressure for mental health support in the long term.

Most participants expressed that the failure of New Zealand's 2020 cannabis referendum had led to a loss of faith in the possibility of legalising psychedelics. The cannabis referendum had narrowly failed to pass, with 48.4% voting in favour and 50.7% voting against it (Office of the Prime Minister's Chief Science Advisor, n.d.). Many participants were shocked that the referendum had not passed and felt that it was due to the public not fully understanding the benefits of cannabis and the consequences of continued prohibition:

'I don't know because, after the cannabis referendum, I don't have all that much faith [in psychedelics becoming legalised]. Just because I think it's the same thing of people just not understanding it....After that failed don't think psychedelics had a chance just because it's, I think people understand less about [psychedelics] than they do about weed.' (Julie)

'Before the referendum on cannabis, I think I was more optimistic that it [psychedelic legalisation] would happen and then that happened and I mean, it's just the little biased bubble that I lived in, but I was like, oh, wow.' (Anne)

The future of psychedelic-assisted therapy, they believed, was now even further out of reach. One participant, Pete, explained that the decision to legalise psychedelics should not be made with a public referendum, as cannabis had been in New Zealand, but rather should be based on expert opinion only:

'I think a lot of people don't know what they're talking about and people who are scientists - obviously, not every scientist - but most scientists are pretty evidence-based and pretty logic-based. You're being trained in logic when you're becoming a scientist and so those are the kind of people who should have quite a bit of decision-making in terms of drug policies.'
(Pete)

Research by Pratt (2006) claims that New Zealand has a history of punitive penal attitudes, suggesting expert advice can often be dismissed in favour of emotionally-driven public reactions. This is consistent with the timeline of New Zealand's prohibition of psychedelics, which followed the US drug moral panics in the late 1960s (Entheos, n.d., Goldberg et al., 2020, Hall, 2021). Despite LSD and MDMA initially being used for medicinal purposes, widespread moral panics put increasing political pressure on governments to prohibit psychedelic substances, which were perceived to be associated with 'hippies' and the similarly-demonised cannabis (Chi & Gold, 2020). By 1970, the US 'Schedule 1'⁵ classification prohibited recreational and clinical use of psilocybin and LSD. MDMA was also designated under this classification in 1980, following fears of its 'party drug' reputation (Sessa, 2019). According to Pratt (2006), New Zealand's history of penal punitiveness stems from the 1984 Government restructure, which led to wholesale changes in the social, political and cultural climate. Subsequently, public anxiety led to an increase in support of harsher penal punishment as a method of enhancing social cohesion and security. Indeed, drug policy is somewhat dictated by the pressure on political figures to adhere to the

⁵ Schedule 1 substances are defined as drugs with no currently accepted medical use and a high potential for abuse (United States Drug Enforcement Administration, n.d.)

public's desires and avoid being seen as 'soft' on crime (Pratt, 2008). These punitive penal attitudes, combined with the moral panics surrounding psychedelic use, have overshadowed the successful results of clinical psychedelic research.

All participants strongly advocated for more research and education on psychedelic substance use to be done in New Zealand:

'We know that we take these things [psychedelics], but we need to educate everyone that's already taking them so that they can further educate the people who aren't taking them and then once everybody's educated, I think it'll be a quick succession [to legalisation].' (Ralph)

'I think if there was more research and then people could learn about it, then people can make more informed decisions.' (Julie)

Alongside this, any future legalisation of psychedelics will need to consider certain eligibility criteria and parameters.

Eligibility and Parameters

Establishing suitable eligibility criteria will be necessary ahead of any legalisation of psychedelic treatment for mental health. Additionally, clear criteria may help alleviate some public fears around psychedelic use. The type of eligibility criteria needed should be partially informed by people who already use psychedelics for their mental health. Of all the questions asked in the interviews, whether there should be eligibility criteria seemed to be the most difficult for participants to answer. This section will compare participants' beliefs around eligibility and parameters with global discourse.

10 out of 12 participants reported having done extensive research on psychedelic substances prior to use. Based on this research and their own experience, participants struggled between deciding whether there should be certain limits for age or whether access should be available for all:

'If they are a 15-year-old and they had some mental health issues and say microdosing LSD would help them, then I'd be all for it. I don't want to be

no, they can't have it 'cause they're underage, you know? Just whatever is gonna help people... I guess it's a bit of a tough one because yeah. I feel like I don't want to tell people what they can do, but then I'm also I don't think 15-year-olds should be running around taking LSD.' (Julie)

'Ideally I think everything should be legal. That's [eligibility criteria] a tricky thing to work out, you know, just make sure you're over 16. Nah over 18 or whatever. It's a tricky one to work out.' (Fred)

Of the participants that believed psychedelics should be accessible for all, their reasoning tended to be that healing should not be required to fit into a particular set of criteria:

'I don't believe that healing should have to fit in a fucking box. I believe that anyone can benefit. Everyone has trauma. Everyone can be better. Everyone has something that they could benefit from learning from psychedelics. I do not think that healing should be restricted, no way. And I hate that it's probably going to be, there's going to be criteria for it.'
(Laura)

Generally, participants seemed to believe that there should be an age limit of 18 years, but no mental health diagnostic criteria:

'I don't think you should be able to take it if you're under 18, or I would be in support of if research came out saying you shouldn't take MDMA before you're 24 or something like this part of your brain hasn't developed - I'd be sweet as, criteria over 24. I'd be all for that. Whatever evidence-based research says.' (Anne)

Participant's suggested an 18-year age restriction for psychedelics would align with the New Zealand alcohol and tobacco age of purchase (NauMai, n.d.). This research-backed restriction is because drinking at an earlier age is thought to negatively affect the development of vital organs, such as the brain, liver, bones, and of hormones (National Health Service [NHS], n.d.). Early use of psychedelics has not been found to have these same developmental

consequences, however further research would need to be done. The argument here is that any legal supply should align with other substances.

One participant reasoned for having no diagnostic criteria by saying that mental health is difficult to define:

'It gets tricky here, you know? Because some people are like, oh, we shouldn't give it to people who are prone to mental illness... that's quite hard to even fathom when we don't really understand a lot of these things.'
(Pete)

This is an interesting point to consider - Catton and Tilford (2006) state that there is no universally agreed definition of mental health. Mental health is a complex and subjective issue that differs cross-culturally. 'Mental health' may also be considered different from 'mental-illness', in that it doesn't comprise solely of mental disorders but rather refers to the general health of the mind, which may also include well-being (Catton & Tilford, 2006). Defining mental health will be necessary for deciding any approach to psychedelic mental health treatment, as it may help to determine eligibility criteria. Indeed, several participants believed that using psychedelic therapy could be beneficial to anyone, regardless of whether they officially 'needed' it or not:

'I think if you have the desire to seek therapy then you obviously need it already. I don't know many people who don't have the need for therapy in itself today. I feel like anyone should be eligible for getting treatment.'
(Susan)

'I don't think that there needs to be a mental health threshold, because I think that anyone would benefit from a therapeutic session, even if they've never had depression once in their life, everyone could learn something about themselves and, be themselves in some way.' (Tony)

Of the few that did believe there should be diagnostic criteria, the main concern was that psychedelics should not be given to individuals with schizophrenia:

'I mean there's the obvious things where it's like schizophrenia and stuff, you shouldn't be taking psychedelics for.' (Michelle)

'I think maybe like people who are quite like, severely schizophrenic, maybe shouldn't have access to this sort of stuff [psychedelics]. Because that's been shown to not be good for those people's brains.' (Pete)

There is currently no evidence to suggest that psychedelics would exacerbate the symptoms of schizophrenia or any other mental illness (Johnsen & Krebs, 2015). However, as psychedelic therapy is still a recent field of study, it would be prudent to conduct more research on the possibility of existing mental illnesses being exacerbated by psychedelics before advocating for widespread use.

Most participants believed there would need to be parameters around the psychedelic treatment of mental health. The parameters depended on what kind of psychedelic legalisation would be introduced. If psychedelics were available for self-medication, then some participants suggested that there could be daily purchasing limits or that users would need to have some form of education before use, such as resources to read through and questions to answer:

'I think people have some degree of personal responsibility like they do with alcohol. And with psychedelics, they're way less dangerous than alcohol, so I think this could just be sold over the counter potentially in a safe way because you'd know the dosage as well. And if you could only buy like a hundred micrograms at one time and you couldn't buy something again that day, for instance....' (Pete)

'I think, if you can, have some really great resources and maybe, when you buy [psychedelics] you have to go and read through the whole pamphlet and stuff, answer some questions about drug safety. I think people need to be informed when they buy it.' (Anne)

Some participants also suggested that the user ought to be trained on how to best handle the psychedelic session, particularly for those revisiting trauma, and that a support network could be available on-call:

'I definitely think that there needs to be training, I'm not sure if there is another word for it, but train people on how to comfortably reach the state where they can set good intentions for a trip. Cause I came in like a firecracker, ready to smash out my trauma, but I feel like at that point, if I hadn't had this severely traumatic abortion right before that, I wouldn't have been ready. And so I feel like I don't want other people to go through such traumatic things and suddenly be like I have to change.' (Susan)

'I also think that you need so much support to be able to do it, so I don't think you should just be able to go and buy some MDMA and take it with a leaflet explaining how it could be beneficial. It's such a tailored approach for every person, I don't know how you'd roll it out, but therapists could administer and help.' (Anne)

Training and on-call social support would be necessary if psychedelics were legal for self-medication purposes. These parameters may not be necessary if psychedelics were only legal when administered alongside formal psychotherapy, as the guiding therapist would provide sufficient support. However, the therapists themselves would need to be qualified and well-informed, with Laura suggesting that the therapist even have experience using the psychedelic substance:

'[about therapists] You would have to be qualified to participate and you would have to research and probably to have actually done it yourself while you would have had to sit through sessions yourself and to dose yourself to know what was going on. There have to be parameters for understanding and for safety.' (Laura)

As a relatively new form of mental health treatment, training therapists in psychedelic-assisted therapy would likely be a long-term goal, as it will require a significant amount of

dedicated time and research. In the meantime, people will still be using psychedelics for their mental health, as is evident in this study, and so the legalisation or decriminalisation of psychedelics would be important for two reasons. Firstly, legalisation or decriminalisation would mean that psychedelic users are not being penalised for trying to improve their mental health. Secondly, the legalisation of psychedelics would allow for appropriate safety regulations to be in place so that people can use psychedelics wisely and with the necessary support.

Perceived Barriers to Psychedelic Mental Health Treatment

Although international psychedelic research has so far been successful, New Zealand appears reluctant to join this emerging field of study. Interviews with participants identified three possible barriers to the introduction of psychedelic-assisted therapy in New Zealand: societal stigma, lack of social discourse around psychedelics and lack of understanding of psychedelics.

While few participants reported having experienced stigma around their use of psychedelics, several still cited it as a contributing factor to New Zealand's lack of progress. Some participants believed that New Zealand's geographical isolation and small size meant that it is slower to accept alternative or progressive treatments:

'Partly because we're so isolated. We are so far from the rest of the world and I just think people don't quite realise there's a lot more to life than just what happens in this country. I think that's probably a thing, part of it. Um, because I don't know, even in the UK people seem pretty open about it.' (Julie)

Stigma around psychedelic substances may be because the public are unable to see the broader picture, such as the potential health benefits, instead of only the criminal connotation. One participant also believed that New Zealand was more 'anxious' than other countries, which inspires an irrational fear of the consequences of psychedelic substance use:

'I think New Zealand is more anxious than other countries I've noticed. And the scene here seems to be very word-of-mouth.... I think basically the

social situation in New Zealand is much more towards drinking alcohol and doing stimulants rather than exploring the mind through psychedelics.
(Pete)

In regards to social discourse about psychedelic therapy, most participants believed that New Zealand was far behind the rest of the world and found the lack of conversation frustrating:

'We're so behind the rest of the world, just in every way and you know, for a community that's so surprisingly connected, when you get down to it we're barely connected at all. It's so frustrating.' (Laura)

Some participants believed that, as a small country, there was less word-of-mouth to jumpstart pro-psychedelic conversations:

'other countries, you've got enough people, enough population that if this group figures it out and this group figures it out and they educate this group here and this group here and this group here, and then it becomes easier for it to spread when you're attacking it from all angles' (Ralph)

compared to their international counterparts. Outside of New Zealand, there is the Multidisciplinary Association for Psychedelic Studies (US), the Beckley Foundation (UK), Psychedelic Association (Canada), Mind Foundation (Europe) and Mind Medicine (Australia). These organisations aim to promote psychedelic-assisted therapy by funding research and advocating for drug policy reform. In New Zealand, there is Enthenos, a non-profit charity aiming to fund psychedelic therapy, however it is significantly smaller than the international psychedelic organisations. New Zealand also has the New Zealand Drug Foundation, which promotes drug harm reduction and educates the public on drug issues but does not focus solely on psychedelics. Additionally, participants felt that conversations around psychedelics were much more present in international media:

'The public discourse is just so backwards here, we don't even mention it. I mean, in the States, people are mentioning it all the time in the news and

all that. And when a 'Stuff'⁶ news article gets published here, it is so blatantly wrong and there's no evidence, they never properly cite evidence and all this Oh God, it's terrible. It's like, they almost think it's a joke and it's like they're laughing at it.' (Pete)

It is difficult to determine whether this statement is true. In recent years, New Zealand media has published several articles discussing the role of psychedelics in mental health, however perhaps not at the same frequency as the international media.

Participants also believed that a lack of understanding of psychedelics meant that the public feared these substances. Ralph and Chris both spoke of how bad experiences with psychedelics are usually the result of people using them incorrectly:

'I think maybe a couple of problems is that a lot of the users are probably using something that's not what they necessarily think. And that's the catch-22 of it not being legal. You've got people that say we should legalise this, but they're coming possibly from the same groups of people that are getting hospitalised for being awake for three days after snorting cathinones and those people might not necessarily be the same people who are getting out and being vocal about the safe ways to use these things. They're just having a good time on something and being, let's legalise. So NZ has a whole bunch of people using it [MDMA], and only a chunk of people using it properly.' (Ralph)

This was particularly for cases where the psychedelic substance was mixed with alcohol or stimulants and where users had improper set and setting. Numerous studies have demonstrated that set and setting can significantly impact the outcome of a psychedelic session and therefore is important to take into consideration prior to use (Gukasyan & Nayak, 2021, Noorani, 2021, Carhart-Harris et al., 2018b). This is discussed in depth in Chapter Eight. Furthermore, MDMA can often be cut with other substances, such as cathinones or eutylone, which may cause a 'bad' session (New Zealand Drug Foundation, n.d.). The lack of understanding of psychedelics means an inaccurate, negative public perception of these

⁶ Stuff is a New Zealand news media website (Stuff, n.d.)

substances, which only serves to spread misinformation. This is another reason why accurate and thorough drug education and harm reduction information is necessary for New Zealand.

Summary

This chapter has demonstrated that the New Zealand environment may be amenable to a future of psychedelics for mental health treatment. Most participants had positive attitudes and prior recreational experience using psychedelics, which gave them the confidence to experiment with psychedelics as an alternative form of mental health treatment. Friends were seen as a source of support, however family members had mixed attitudes, indicating that psychedelic stigma is present in New Zealand. Nonetheless, a strong psychedelic community is already established, which would be useful for any future legalisation policy, as participants provided well-informed opinions on legalisation, eligibility for and parameters of psychedelic therapy. Notably, several measures need to be taken prior to the introduction of formal psychedelic-assisted therapy, specifically better psychedelic education and improved access to mental health services. In the context of this environment, the next chapter will examine the effects of psychedelics on participants' mental health.

Chapter Seven: The Success of the Treatment

Psychedelic-assisted therapy may have the power to offer New Zealand an alternative form of mental health treatment. International research has argued that LSD, psilocybin, and MDMA can induce positive and meaningful experiences that reduce mental health symptoms over a sustained period (Bird et al., 2021, Davis et al., 2020, Griffiths et al., 2008, Muttoni et al., 2019). These experiences are often described as affecting introspection (Gasser et al., 2015), perspective (De Gregorio et al., 2021a), fear extinction (Carhart-Harris et al., 2015, Kraehenmann et al., 2015), mood elevation (Griffiths et al., 2006), and productivity (Rucker et al., 2022). Determining whether these effects are occurring in a New Zealand context may incentivise further research and provide a framework for any possible future psychedelic treatment systems. This chapter will be divided into three parts: first, it will examine how participants used psychedelics for specific mental health issues, including an evaluation of any adverse effects. Second, it will discuss the therapeutic elements of the psychedelic sessions and the effect that this had on participant's mental health. Third, it will analyse participant's association between spirituality and psychedelics. This chapter will also evaluate whether these findings are consistent with international literature. Of note, all participant's psychedelic sessions were conducted unofficially in New Zealand, without the role of formal and legal supervision.

The Effects of Psychedelics

Psychedelics for Specific Mental Health Issues

In this study, all interviewed participants reported a significant reduction in mental health symptoms following their use of psychedelic substances. Participant's uses of LSD, psilocybin and MDMA mostly corresponded with how these substances were used as reported in the international research however, there was some variance, illustrated in the table below:

Table 2: Participants Purpose for Psychedelics

	LSD	Psilocybin	MDMA
Depression	Julie, Ralph, Anne	Tony, Laura, Chris, Oliver, Ralph, Anne	
Anxiety	Julie, Michelle, Erin, Pete	Laura, Oliver, Ralph	
PTSD	Susan	Tony, Laura	Anne
Alcohol Use Disorder (AUD)	Susan		Ralph
Substance Use Disorder (SUD)		Chris	
Social Intimacy			Fred, Ralph
Fibromyalgia		Laura	
Chronic Migraines		Laura	
Motivation			Ralph

From this table, it is clear that each psychedelic substance was used for various mental health needs, and, significantly, seven participants used a singular psychedelic substance for multiple mental health needs. In support of international research, psilocybin was used by participants for depression, anxiety, Substance Use Disorder (SUD) and Alcohol Use Disorder (AUD). Laura also used psilocybin for chronic migraines, which is an area where recent studies have shown success (Andersson et al., 2017, Schindler et al., 2021). Two participants, Laura and Tony, used psilocybin to treat their Post-Traumatic Stress Disorder (PTSD), which international research has focused on treating with MDMA (Bird et al., 2021, Mithoefer et al., 2011, 2018). In line with LSD literature, participants used LSD for anxiety (Gasser et al., 2014, Gasser et al., 2015,) depression (Muttoni et al., 2019), and AUD (Krebs & Johansen, 2012), although Susan also used it to treat PTSD. Research on MDMA has focused on the treatment of PTSD (Mithoefer et al., 2011, 2018), with some studies also

examining its use for AUD (Sessa et al., 2021, Sessa et al., 2022); both these ways of using MDMA are reflected in this study by Anne and Ralph. MDMA was used by Fred for strengthening social bonds. While studies have not examined this specific relationship, one of the benefits of using MDMA for PTSD treatment is that it can improve the ‘therapeutic alliance’, which is the relationship between a patient and their therapist (Feduccia & Mithoefer, 2018b; Johansen & Krebs, 2009, Sessa et al. 2019a). It does so by increasing interpersonal trust and empathy, which can be seen in the MDMA sessions Fred had with his friends and family.

Adverse Effects

Seven participants reported experiencing no adverse effects from their use of psychedelic substances for mental health. Interestingly, previous studies on recreational use (rather than clinical use) of MDMA have found that there is a higher potential for abuse in comparison to LSD and psilocybin (De Gregorio et al., 2021a), however MDMA user Fred claimed never to have had a craving for the substance:

‘I was never hooked on it. Like I’ve never had a craving to do it. Never have, even when I was doing it a lot of the time.’ (Fred)

MDMA ‘comedowns’ are the period of a decline in a user's mood and cognition during the days following a dosage (Sessa et al., 2022). This effect has been documented in recreational observations, although recent research by Sessa et al. (2022) has found no evidence of the comedown effect in clinical trials. These findings were supported in this study, with all three MDMA users reporting having not experienced a ‘comedown’ post-session:

‘I didn’t feel too shaky or anything. I didn’t have a bad come down or anything at all.’ (Anne)

Sessa et al. (2022) suggested that clinical trials with MDMA can mitigate any perceived comedown effect by putting greater emphasis on preparation, and set and setting, compared to recreational sessions. Indeed, participants in this study believed that the MDMA must be pure to avoid comedowns. Two participants, Fred and Ralph, used vitamin supplements to

mitigate potential comedowns post-MDMA session. This preventative method was suggested to Ralph by the psychedelic community.

Anne and Pete reported experiencing side effects from their psychedelic use; however, these effects were not perceived as ‘negative’. Anne equated the side effects of her MDMA session with the effects of her conventional therapy sessions:

‘I slept for like, I don't know, 14, 15 hours and it's so not like me.... I've done MDMA other times and I don't need to sleep that long. It was actually just like when you do really hard therapy’. (Anne)

Pete believed that his use of LSD resulted in a more ‘depressing’ perspective on the world post-trip:

‘to some degree, society and the situation of the world can become more depressing, post-psychedelic trip. Because you can reach a point in psychedelics where everything seems to be going perfectly and you know, everything is one. And then when you kind of come out of this, you can begin to realise that everything is not one, oh God, it's all going to shit’ (Pete)

Three participants reported experiencing adverse effects from their use of psychedelics. The first participant, Erin, who had a one-time LSD trip, found that she became forgetful and unable to properly look after herself during the session. This negative effect did not last past the session:

‘the forgetfulness was a negative side effect because it means that - it was quite cold actually during the time that we were there [at Kiwiburn festival], especially at night - and it meant that I got really cold and I didn't realise I because I wasn't fully with it’ (Erin)

The second participant, Susan, found that when she first began using LSD to treat AUD and PTSD, she developed anxiety around being dirty, showering three to four times per day. Susan had initially decided to use LSD to treat her AUD and had not known that there was an

underlying case of PTSD. Therefore, it is difficult to assess whether the anxiety around cleanliness was a result of her LSD use or her processing of the PTSD:

‘When I first started, I found that I had developed a weird anxiety about being dirty. So I upped my showering to 3 or 4 times more a day. And i talked to my therapist about that recently too and he was like “oh you probably just wanted to wash off the negative feelings” ’ (Susan)

The third participant, Oliver, had experience microdosing psilocybin to treat depression. Oliver reports that consecutive days of microdosing can lead to fatigue. He also finds that microdosing increases awareness of his surroundings, which can sometimes lead to anxiety, particularly in the workplace:

‘Some days it’s just like I’m dulled I’m not really paying attention to what’s going on. And then if I take them [psilocybin microdoses], I’m kind of a little bit more aware and I’m physically anxious. My muscles are all tense and I’m better at spotting that [anxiety]’ (Oliver)

For some, the ability to spot anxiety may be seen as positive, however, for Oliver, it was seen as a negative side effect. He believed that without the psilocybin microdose he could better ignore the physical symptoms of anxiety.

Overall, this study found limited adverse effects of psychedelic treatment on mental health, which is consistent with international research (Davis et al., 2020, Gasser et al., 2015, Gasser et al., 2014, Griffiths et al., 2016, Ross et al., 2016, Rucker et al., 2022, Studerus et al., 2011). While five participants reported experiencing side effects, two did not perceive the effect as negative, and for two others, the side effects were not sustained over a significant period. These effects did not appear to be isolated to a specific psychedelic substance. Comparatively, side effects of conventional mental health medication seemed to be common, long-lasting, and severe:

‘[side effects of conventional medication were] anything from nausea, I mean, headaches are hard to tell because I already had headaches... extreme, extreme fatigue, body aches, loss of motor function, loss of speech, loss of eyesight, sensory issues with my hearing and stuff like that.

I have no doubt that the medications that I was on made me sicker than I was. ' (Laura)

*'I was prescribed antidepressants at the age of 15 and tried maybe I don't know, 6 different types or something like that and found it was like having a frontal lobotomy, it didn't work, I mean it just made me feel flat rather than ya know, even now, it [medication] won't make me want to jump off a building but *laughs* just didn't make me feel good.' (Tony)*

These types of effects of conventional medicine have often been reported in the research, indicating a need for an alternative method of treating mental health (Carhart-Harris et al., 2021, Davis et al., 2020, Ostuzzi et al., 2018). This will be discussed further in Chapter Eight.

The Enduring Effects of Psychedelics

In the research, one of the benefits of psychedelic-assisted therapy appears to be that a single dose can have enduring effects (Davis et al., 2020, Muttoni et al., 2019). This is an advantage over conventional medicine, such as antidepressants, which often need daily administration to be effective. The lasting effect of psilocybin and LSD in this study was extremely varied among participants. This variance may be due to the self-medicating nature of the treatments and perhaps lasting effects would be more consistent when combined with the type of therapy sessions performed in clinical trials.

Clinical trials with psilocybin have demonstrated that a single dose can have enduring effects on participants' mental health, lasting for at least six months (Davis et al., 2020, Hall, 2021). Similarly, LSD studies have suggested that single doses can have sustained anxiolytic and antidepressant effects for up to 12 months post-session (Gasser et al., 2015). These trials have been conducted on participants with a range of mood disorders. In this study, all six psilocybin users and five out of six LSD users reported experiencing a lasting effect on their mental health, although the lengths of time were varied. The most enduring effects were estimated to last months:

'I think [psilocybin effects] probably lasts for about four to six months as well. You just need the tiniest amount as well [while this was a small dose, it was not a microdose], you don't need to trip really' (Anne)

'I would say [the effects of LSD lasted for] at least two months. For those two months afterwards it felt the strongest and it sort of faded, but, I would say even three or four months down the track I still felt like little things like the sky'⁷, just really appreciate it a lot (Erin)

Other participants ranged from approximately one month:

[Psilocybin] 'I'd say I'd get a good month' (Chris)

[LSD] 'I do find that LSD gives a really nice afterglow. I feel like I have a spring in my step for three weeks, it is truly incredible' (Ralph)

to less than a week:

[Psilocybin] 'it can last for weeks, months. Mine is a couple of days to a week at most before it starts to taper off. But that's just because of the level of illness and trauma that I am dealing with' (Laura)

'I think it's getting better now because it used to be maybe a day or two and then I'd be I need to go on a trip again and now I'm just, after Christmas'⁸ and I'm still feeling pretty good. I'm still feeling pretty positive.' (Julie)

Interestingly, throughout Julie's journey of using psychedelics for mental health, she has been able to space out longer time periods between sessions. There are two possible explanations for this. Firstly, as Julie's mental health has improved with the help of LSD, she is becoming less and less reliant on treatment. Alternatively, the effects of LSD could become more long-lasting with continuous and consistent use. Either of these explanations could suggest that LSD-assisted therapy (and perhaps other psychedelics) may have a natural drop-off rate and could, therefore, eventually stop an individual's need for treatment. This is discussed in more

⁷ Note: *'I still felt little things like the sky'* - Erin is referring to her increased appreciation of nature, specifically the beauty of the sky, that she had experienced during her LSD session

⁸ Interview conducted in late January - continued effect felt 1-month post-dose

detail in Chapter Eight. Further research comparing participants with differing lengths of lasting effects is needed.

MDMA participants in this study did not mention any enduring effects. For Ralph and Fred, this may be due to their purpose of using MDMA for openness and intimacy among friends, rather than to heal a specific mental health issue. Indeed, the enduring effects felt by psilocybin and LSD participants were in reference to the reduction of depressive or anxiety-related symptoms, or AUD and SUD symptoms, and so perhaps the effects of MDMA for Ralph and Fred were isolated to the time of their psychedelic session. However, MDMA studies focusing on PTSD have found a sustained reduction in PTSD symptoms at the 12-month mark (Mithoefer et al., 2019). Anne, who used MDMA to help treat PTSD in a one-off session, did not report any long-lasting effects although she did state that the session accelerated her progress in conventional therapy:

‘They [the conventional, non-MDMA therapy sessions] were pretty much the same [after the MDMA session], except I reckon it just cut out a good six months of work. The therapist was amazed.’ (Anne)

This was because there were specific key exercises for Anne’s PTSD that she had been unable to do in conventional therapy but could do under the influence of MDMA. The MDMA session allowed Anne to move past a mental block and continue to progress in therapy:

‘I had done about 2 years of therapy, made massive progress, but I plateaued a bit and I was a bit stuck for a while. And then I was always just interested in this MDMA stuff and so I took that [MDMA] and it changed my life and I was able to move on with a lot more therapy and it was quite a big breakthrough for me’ (Anne)

That psychedelics can facilitate breakthroughs in conventional therapy supports the notion of combining both methods of treatment. Indeed, many participants believed that psychedelics work best as an adjunct to psychotherapy. This is discussed further in Chapter Eight.

Two participants were able to recall the mindset they had had during their psychedelic session, and this helped to calm them when new issues arose at later dates:

‘ But after that [the trip], it's weird to say, I remembered the mind state I was in. And that was quite a calming thing to be like, well, actually, no, I know that, you know, I've thought about this and I've done all of this. So it's just a nice sort of point to stop the cyclical thoughts’ (Michelle)

‘It was like, my brain had been in that past state of mind before. So I felt like even sober, I could like sort of access it, but then it sort of faded as time went on and I can't really access it now’ (Erin)

The ability to recall their LSD-induced mind state had an anti-anxiety effect on both Erin and Michelle. Studies have shown that people attending conventional therapy often have poor memory of the contents of their session, although it is so far undetermined why this happens (Dong et al., 2017). This subsequently negatively affects treatment adherence and clinical outcome (Dong et al., 2017). Erin and Michelle's ability to recall their LSD-induced perspectives suggest that there may be a link between LSD and improved therapy-recall. While purely speculative, this is an idea worthy of further research, as it could positively affect treatment adherence and clinical outcome.

Therapeutic Elements of Psychedelic Treatment

Introspection and Confrontation of Issues

The idea that psychedelics can lead to a deeper understanding of one's own mental health issues is supported by LSD literature, which has suggested that LSD can act as a catalyst for greater introspection and insightfulness during psychotherapy (Gasser et al., 2015). In this study, a psychedelic-enhanced level of introspection allowed participants to analyse the underlying root of their mental health issues in their own settings:

I think I'm looking at it more from a logical perspective and being, here's the situation, here are the emotions. What caused the situation? What's happened because of that? And then the feelings obviously relate to that so how can I change it? Is there anything I can do to stop feeling that way? Can I replace it with another feeling? So I definitely feel I can just sit here and analyse it, all these different perspectives and not let the emotions cloud the judgement.’ (Julie)

'I can actually see my mental health now. I can actually see parts of my mind, almost like compartments, but they're all interconnected. So anxiety is connected to depression, which is connected to derealization, which is connected to overwhelming feelings, physical symptoms.' (Pete)

In particular, participants who used LSD and psilocybin found that during their sessions they were able to reflect more deeply on their mental health issues. Participants believed that these classic psychedelics led them to deeper and more reflective thinking:

'The macros [macrodoses] are definitely for that introspective healing. That's when you go inside yourself and inside the trauma and inside what you need to heal.' (Laura)

'It's just a level of focus and something about the mind state at that point, or that level of trip is just very useful for clarity of mind and a slightly deeper thinking.' (Michelle)

'Psilocybin is definitely a bit more like I'm going to be very cautious and I want to learn. I want to figure things out, I want to see what the fuck my deepest subconscious is thinking or thinks about these topics' (Ralph)

'It's like I would go in with the intention to explore parts of the mind and I would feel a feeling and then I would really, try to find the core of that feeling, like what you do in meditation. You really try to find the core of what that thing is and so you really dive deep into that' (Pete)

Emerging research has suggested that classic psychedelics may be able to reduce Avoidance Coping (AVC) (Wolff et al., 2020, Ziefman et al., 2020). AVC is a common coping method for people suffering from PTSD and AUD and can be a significant contributor to co-morbidity between the two disorders, as well as symptom maintenance (Hruska et al., 2011, Pineles et al., 2011). In this study, two participants reported that their use of psychedelics for addiction disorders revealed an underlying AVC of deeper mental health issues. Chris, who had struggled with addiction to a range of substances, such as cocaine,

methamphetamine and heroin, initially used psilocybin to replace these other drugs. Similarly, Susan used LSD as a replacement for alcohol. During the psychedelic sessions, Chris and Susan both realised that these other substances had been used as a method of AVC:

'The big doses brought it right back to why I felt like I had to take drugs and the things that took place in my life that made me feel like I needed to do drugs to escape situations.' (Chris)

'I think the constant avoidance did lead to alcoholism, because ignoring my feelings and not wanting to feel them meant that I was shutting down quite a lot. And when I couldn't avoid the feelings I just drank. And taking LSD was a very opposite thing from that. Alcoholism was hiding it and with LSD, I was I'm going to confront this right now.' (Susan)

So far, studies have suggested that psychedelic-assisted therapies can reduce AVC and instead promote acceptance of mental health issues and trauma (Wolff et al., 2020, Ziefman et al., 2020). Hruska et al. (2011) suggest that the early identification of and intervention in AVC will increase the chances of positive clinical outcomes and therefore should be targeted in future psychedelic-assisted therapy for PTSD, AUD and SUD patients.

Change of Perspective and Fear Response

LSD studies have theorised that LSD may be able to reduce anxious and depressive symptoms by restructuring a person's perspective on themselves and the world (Gasser et al., 2015). De Gregorio et al. (2021a) suggest that LSD's ability to alter the integration of sensory perspectives may reduce the rigid thinking styles observed in some mood disorders. In this study, six participants - all with experience using LSD or psilocybin - believed that their use of psychedelics had led to a profound change in their perspectives, significantly alleviating symptoms of anxiety or depression. For Julie and Pete, this change of perspective came from actively taking on an 'observer' role. This meant that the participants could remove themselves from the issue and analyse it from an outside perspective. Pete states:

'The drug sometimes shows you all these parts of your life where you've experienced that - almost like it's like opening something up and you're

looking at it and you're almost observing your parts of your mind ...It's like you have an observer within you that can see these things from an outside perspective.' (Pete)

Similarly, Julie was able to use this observer role to analyse her thought processes and try to influence future behaviour:

'I honestly feel like I'm just taking a step back and I can see everything clearly. And I also feel when I'm looking at my emotions, when I am depressed and oh, this is shit really sucked and then on acid it's actually okay to feel that way. And trying to figure out why I'm feeling that way. And if there's something I can do to stop feeling that way without the acid then okay.' (Julie)

The ability for participants to observe their thoughts in a removed manner allowed them to analyse their feelings more critically, in a safe and supportive setting, despite it not being a formal, legal environment. Similar to CBT therapy, this meant that they could better understand their mental health and subsequently cognitively restructure how they responded to triggering situations. For Pete, this perspective restructure motivated permanent changes:

'The thing is that it changes your mindset so drastically in the moment it makes you go, fuck, I want this drastic change permanently. I don't want this to just be a 6, 8, 10 hour experience. I want my life to be different when this is over. And I think that that's where you start to rewire and switch and go.' (Pete)

The ability of psychedelics to facilitate changes in perspective may also be useful to people suffering from guilt or shame-based feelings. For people suffering from mental health issues, misplaced guilt can sometimes occur, particularly for victims of sexual-related PTSD (Vidal & Petrak, 2007). This shame will often help to maintain PTSD symptoms (Lee et al., 2001, Vidal & Petrak, 2007). Lee et al. 's (2001) clinical model of shame-based PTSD suggests that shame can occur due to the interpretation and salience of a traumatic event. This model states that, in some cases, victims will understand and process the event from a shame-related schema (e.g. *'I knew I was useless'*). This is reflected in this study, where Anne

reports finding it difficult not to resent the younger version of herself, who had experienced a severe sexual assault:

'I had a lot of difficulty wondering if it was my fault. Which I know it wasn't, but there are all these different times where I felt I could have gotten away then, or if I did this differently and almost disliking my past self and just going you fucked up, you could have done better. You should have known this. You should've done that' (Anne)

After the MDMA session, Anne was able to restructure how she perceived the sexual assault. She states:

'I know it's not my fault and I know that I did everything I could and I was kind and loving to those parts of myself who, previous to the [MDMA] experience, I thought they were really shit, didn't do a good job, my 14-year-old self was stupid. And then the day after [the MDMA trip] I was like, I did an amazing job and even though people had told me that and stuff, I had to know that for myself.' (Anne)

MDMA research on people with PTSD has found that MDMA can decrease feelings of fear, allowing users to re-process their trauma (Feduccia & Mithoefer, 2018b; Johansen & Krebs, 2009, Sessa et al. 2019a). Anne's change of perspective was partially due to her ability to do a therapeutic exercise, in which she sat around a table and 'talked' to her past selves. Prior to the MDMA session, Anne had been unable to do this exercise:

'It just made me more open to therapy tools, it made me more open to doing what I thought before to be silly exercises, but I think maybe also because I was open to the table thing, doing that and it helped me so much.' (Anne)

'The best way I can put it is in the hour before taking in MDMA, I wasn't able to do that, the day after I took MDMA I was able to do it. And I had been trying to do that for like six months with one of the best trauma people in the world.' (Anne)

Anne's experience suggests that psychedelics may be helpful for participants that find it difficult to do certain therapy exercises, particularly ones that require a level of imagination. On average, psychotherapies have a patient dropout rate of 20-25%, which is associated with poorer clinical outcomes for patients (Hundt et al., 2020). A study by Hundt et al. (2020) found that two of the most common reasons for dropout rates in PTSD therapy were a lack of buy-in to rationale or therapy tasks and a belief that the treatment was not working. If, as is suggested by Anne's experience, psychedelics are able to increase patients' 'buy-in' of therapeutic exercises, then this could significantly reduce the chances of dropout during psychotherapy treatments.

Three participants reported that psychedelics allowed them to 'let go' of control. One participant in particular, Erin, felt that her need to be in control of situations was tied into anxiety around losing people she loved. After her one-time LSD session, she found that this control-related anxiety was significantly reduced. Erin, Fred and Pete have attributed this loosening of control to an increased life appreciation occurring during their psychedelic sessions:

'Even when I'm at a cool thing, I'm thinking, "oh, but what if I was at this other place?" So I'm not truly living in the moment. That trip helped me live more in the moment and appreciate exactly where I was. And having that mindset of being 'I am where I need to be' (Erin)

'And I think what psychedelics brought into this was the fact that it doesn't really have to matter what you're doing as long as it's fulfilling to you and doesn't harm anyone else or anything.' (Pete)

The desire to be in control of situations has been linked to anxiety and depression disorders (Bandura, 1997). Recent research on intolerance of uncertainty finds that it can be a risk factor in anxiety-related disorders (Gu et al., 2020). If psychedelics can reduce this intolerance to uncertainty, then they may be useful in the treatment of anxiety-related disorders, particularly Obsessive Compulsive Disorder (OCD).

A significant body of research suggests psychedelics may be useful for fear extinction and memory consolidation (Carhart-Harris et al., 2015, Kraehenmann et al., 2015, Muller et al., 2017, Rucker et al., 2019). This has proven to be beneficial for mood disorders, in particular PTSD. In this study, Anne and Susan, who both suffered from PTSD, were able to

use psychedelics to revisit the memories of their trauma on their own, in a safe and comfortable environment and without a fear response:

'It [LSD session] was really nice, calm - I'm not sure if this makes sense - but removed from myself...And being removed from myself was really nice and quite, a good way to be critical of myself in a really positive way.'
(Susan)

'It [MDMA] just made everything way more comfortable for me. So I was able to, look at those experiences and I wasn't scared either. You just think about things.' (Anne).

International PTSD studies have primarily focused on MDMA. However, research suggests LSD and psilocybin can also allow for the recollection of memories and fear extinction (Kometer et al., 2012, Mueller et al., 2017, Rucker et al., 2019). MDMA's facilitation of fear extinction may reduce the avoidance of PTSD patients accessing and re-processing traumatic memories (Feduccia & Mithoefer, 2018b).

Mood Elevation

Across international research, psychedelics have been found to contribute to greater well-being by elevating participant's mood (Rucker et al., 2022). This was supported by five participants, four of whom microdosed LSD and one who microdosed psilocybin. These participants spoke of this effect as increasing their positivity and interest in life:

'It's [LSD] purely for mood elevation. It's interesting..... things become a little more interesting.' (Pete)

'I'll just take a quarter or half a tab [of LSD] and I'll go for a big walk and I'll do that in the winter and pretty much in July every year I'll do that. And I'll just feel 'cool, I'm happy, I'm inspired, it's inspiring.' (Anne)

'It [psilocybin] makes me feel more empathetic in general, I feel like less of a dick going round, less judgy. I'm just in less of a bad mood than I might otherwise be' (Oliver)

Oliver and Tony, who both felt this effect by microdosing psilocybin, assert that it was not enough to pull them out of a depressive episode but rather can make them feel slightly happier. Tony specifically refers to it as a preventative method, meaning that microdosing elevated his mood enough to mostly avoid depressive episodes. However, he notes that, in the event of a depressive episode, microdosing will not be strong enough to help:

'It [psilocybin] definitely evens me out and gives me positivity. It makes me feel better about myself...It can be quite subtle and it won't drag me out of a depressive episode. Although a high dose can, it's more like a preventative measure for me.' (Tony)

Indeed, psychedelic-induced mood elevation is supported by the substantial research literature. LSD and psilocybin have been shown to increase general well-being, happiness, and positivity, which has led to improved social effects (Griffiths et al., 2006, Griffiths et al., 2008, Rucker et al., 2022, Schmid et al., 2014). These effects have also been sustained at 14-month follow-ups (Griffiths et al., 2008). The ability of psychedelics to have enduring effects on users' mood could be particularly beneficial for certain mood disorders, such as Major Depressive Disorder (MDD) and Treatment Resistant Depression (TRD), which can require weeks of treatment and daily administration of medication (Davis et al., 2020, Hall, 2021).

Additionally, Chris, Oliver, Tony and Pete found that microdosing psilocybin and LSD improved their attention span in day-to-day activities. These results are supported by international studies that find that microdosing LSD and psilocybin can lead to cognitive enhancement (Lea et al., 2020). Chris finds that the microdoses keep his mind balanced between macrodoses of psilocybin:

'Just refreshed, recharged [in following days]. Everything that was becoming sluggish isn't anymore. sharp? but because it's so far in between the big ones now, I know that the micro-dosing just keeping that sharp all the time.' (Chris)

Prosociality

Increased prosociality is a potential effect of psychedelic-assisted therapy that could be useful for mental health and well-being. Two participants, Fred and Pete, spoke of the effects psychedelics had on strengthening social bonds. Fred used MDMA sessions to grow intimacy with his friends and reported that this deeper connection was valuable for his well-being:

'I had really good times. And especially when you're with people now, friends and you're on it and you get that intimacy and connection... and I thought that was really valuable' (Fred)

This indicates the blurred line between the recreational and therapeutic use of psychedelics, first noted in Chapter Six. While Fred is not using MDMA to treat a specific mental health issue, the effects of the sessions are nonetheless benefiting his emotional well-being. Combined with the fact that Fred's sessions are joined by his friends, it could appear on the surface that the purpose of his MDMA use is recreational. However, if building emotional intimacy among friends contributes to Fred's well-being, then arguably this fulfils a therapeutic purpose. Pete also used LSD to reinforce his friendships. LSD sessions allowed Pete and his friends to open up to each other emotionally:

'that's really powerful, that's really shaped me and really helped me come up from slumps and whenever you're going through hardship or whatever, it helps you just relate to somebody on a deeper level. Cause you're seriously vulnerable on these drugs' (Pete)

Both of these participants found that psychedelics allowed them to be vulnerable in front of their friends and to create more meaningful connections. This is supported in LSD and MDMA literature, with studies demonstrating that both psychedelics can increase emotional empathy and prosociality (Chi & Gold, 2020, Cloitre, 2009, Dolder et al., 2016).

Spirituality and Psychedelics

A growing body of research has demonstrated the positive effect of psychedelic-induced spirituality on patients' mental health (Garcia-Romeu et al., 2014, Lafrance et al., 2021, Roseman et al., 2019). In these studies, participants have often stated that their psychedelic sessions were 'meaningful' and 'profound' (Griffiths et al., 2008). Similarly in this study, several participants who had used classic psychedelics referred to a spiritual element to their sessions:

'It's extremely spiritual. It's the consciousness, that ether, the realms that we can't see, the messages that we get. It's incomprehensible, even to me, who's been in it. It really makes you wonder what this is' (Chris)

'I truly believe that psychedelics are a link to the spiritual world and it is a link to the ether and to all those things that you can't understand when you're sober. So I think it was a combination of you and the psilocybin and for lack of a better word, the ancestors.' (Laura)

Two participants, Anne and Laura, connected spirituality to the act of foraging for psilocybin mushrooms. They claim that their ability to find these mushrooms in nature is a sign that they are meant to be using psilocybin for their mental health:

'I have been fortunate, which considering so many people struggle [to access], I feel like that's just a sign that it's what I was meant to be doing, because I always had enough to sustain what I needed to do. And there were times where I did luck out.' (Laura)

'I don't mean to be all spiritual or wishy washy but if I can't find any then I'm like, alright, it's not meant to be.' (Anne)

Anne's comment *'I don't mean to be all spiritual or wishy washy'* may reflect the way that society views psychedelic-related spirituality. This is reinforced in a statement made by Laura:

'It's a very hard conversation to have with people who don't there are heaps of people who don't believe in spirits and they don't believe that there's more out there.' (Laura)

Despite concerns of public disbelief about the spirituality of psychedelics, numerous international studies have found participants' perceived mystical or spiritual experience to be associated with improved clinical outcomes (Garcia-Romeu et al., 2014, Lafrance et al., 2021, Roseman et al., 2019). Lafrance et al. (2021) suggest that classical psychedelics may invoke spiritual experiences, which can predict better emotion regulation and subsequently result in lower anxiety, depression, overall mood, and improve disordered eating. The participants in this study all reported a reduction in mental health symptoms, regardless of whether they associated the sessions with spirituality. However, participants' association of psychedelics with spirituality may also highlight a need for guided therapy sessions. Research on psychedelic-induced spiritual experiences has found that participants may experience significant fear and anxiety during the session (Griffiths et al., 2011). Formal psychedelic-assisted therapy sessions would allow for better setting preparation and ensure that participants are well-screened and kept under supervision. This measure is supported by Laura, who states:

'That's [guided session] what I think a lot of people need because taking psychedelics is dangerous. You're connecting yourself to the spiritual world and you can invite any entity and you need someone who is knowledgeable and I'm not knowledgeable in that, which is another reason why I've been hesitant to continue my healing because of that.' (Laura)

Given that perceived spirituality appears to positively affect clinical outcomes (Bogenschutz et al., 2015, Garcia-Romeu et al., 2014, Griffiths et al., 2016), future therapeutic guides could structure sessions around allowing patients to explore that connection. Some studies have found that one of the features of a psychedelic-induced

mystical experience is a sense of sacredness of the session (Garcia-Romeu et al., 2015). The sacredness of the psychedelic sessions to Chris, Fred and Ralph highlights a departure from the public perception of recreational drug use:

'It has gotten to the point where I try and dose with friends and there's visuals, but the whole time they're telling me this is medicine . And so I almost feel guilty that I've called upon the consciousness and I'm not using it. So there's no fun with them anymore. It's purely when I need to, when I'm on my own, in a meditative state.' (Chris)

'[Psilocybin] just got me really interested in the interconnectedness of all things, basically. And I guess given me a slightly more, religious point of view of life. Psilocybin, to me, it's almost like a sacred kind of territory and that feels really weird to talk about because I have been so scientific for most of my life.' (Pete)

As in Chapter Six, the line between recreational and therapeutic use of psychedelics may be blurred. For Chris, and Ralph, their experiences with recreational psychedelic use soon became therapeutic. As soon as this therapeutic element was introduced, these participants could no longer see psychedelics as 'recreational', because every session - regardless of the intention - became healing in some way. Additionally, one of the key challenges for reducing the stigma around psychedelics will be showing the public that they are more than simply a 'fun', recreational substance, particularly MDMA, which is seen as a 'party' drug (Bird et al., 2021).

The Knocking

Congruent to the spiritualistic association of psychedelics was a phenomenon called the 'Knocking'. This is a term referred to by Chris and Laura and is the idea that psychedelics will 'present' you with the issues underlying mental health that need to be addressed. Laura and Chris state:

*‘They [psilocybin] show you this incredible beauty and they get you comfortable and then they give you what’s called **‘the knocking’**, which is like knock knock there’s something here you need to address. And so they get you all comfortable and feeling magical and like, wow, this is amazing and then they’re like psych bitch, you’ve got something to work on’*
(Laura)

‘Once I realised what they were doing and the benefits that were coming from it, I accepted. You bought this to me for a reason. I sit with it.’
(Chris)

While Laura and Chris referred to the ‘Knocking’ only in a psilocybin context, several participants alluded to a similar phenomenon with their experiences of MDMA and LSD:

‘Sometimes they’re just so stimulating, it’s just like they’re throwing information at you. It’s like, what am I supposed to do with this?’ (Pete)

‘It was politely shown to me’ (Anne)

Interestingly, the psychedelic substances were often referred to as if they were sentient, i.e. ‘they will show you this’, ‘they will show you what you need’, ‘they will tell you when to start/stop.’ Participants may not necessarily believe that these substances are sentient, but rather that there is a spiritual connection between them and your subconscious:

‘When I say ‘they tell you’, it’s more your subconscious or maybe them telling you and your subconscious hearing it.’ (Chris)

Dismissing psychedelic treatment as ‘wishy washy’⁹ would limit mental health treatment to a strictly Western perspective. As this paper is examining the potential for psychedelic use in a New Zealand context, it is necessary to take historical Māori healing practices into account. The notion that people are able to communicate with psilocybin, a plant-based psychedelic, shares some similarities with the traditional Māori healing practice,

⁹ As stated by Anne, page 103

Rongoā Māori (RM). RM is a system of Māori healing techniques, historically based on cultural customs and beliefs, and is defined by Mark et al. (2017) as the therapeutic use of medicines from rākau (herbs, trees and plants). Psilocybin-containing mushrooms – of which there are nine native to New Zealand (NZ Drug Foundation, 2012) – fall into this category of rākau. In RM, plants are viewed as individual entities; they are alive and able to communicate with Māori healers (Mark et al., 2017). It is significantly more spiritual than Western medicine, with plants being seen as a link between humans and the sacred Māori ancestors Papatuanuku (Mother Earth) and Ranginui (Sky Father). Due to this, spirituality is incorporated into the RM process through karakia¹⁰ and tikanga¹¹. In a 2017 study on RM by Mark et al. Māori healers described the process of RM as hiking into the native bush and connecting with the rākau. This connection enables the rākau to communicate their stories and genealogy with the healer. Māori healers will often give thanks via a karakia when taking rākau, as it is believed that the plant life force is becoming one with the person (Mark et al., 2017). Looking at psychedelic use for mental health through this lens suggests that users may indeed be able to communicate on some spiritual level with psilocybin.

Indeed, there appears to already be some links between RM and psilocybin research. In their 2017 study, Mark et al. (2017) described instances where RM was able to change the perspective of people on their deathbed, from fear to acceptance. Comparatively, numerous studies have found that psilocybin-assisted therapy can reduce death-anxiety in patients with life-threatening illnesses (Griffiths et al., 2016, Grob et al., 2011, Ross et al., 2016). After a dose of psilocybin, patients suffering from terminal illness often report significant decreases in depression and anxiety symptoms, and an increase in life satisfaction and spiritual well-being. Mark et al. (2017) also state that one of the key elements of RM is the importance of a strong relationship between the healer and the patient. Similarly, psychedelic clinical trials have stressed the importance of building a strong alliance between the therapist and the user, prior to the psychedelic session (Carhart-Harris et al., 2018b). The parallels between psychedelic-assisted therapy and RM provide a unique perspective on the future of mental health research, and RM should be considered a valuable perspective in this emerging field.

Recent psychedelic research has emphasised the importance of setting intentions prior to mental health-orientated psychedelic sessions (St. Arnaud & Sharpe, 2022). In this study, participants that referenced the Knocking believed that the will of the psychedelic substance could sometimes surpass any intentions that were set:

¹⁰ Incantation/ritual chant, as defined by the Māori dictionary (Māori Dictionary, n.d.)

¹¹ Māori customs/practices, as defined by the Māori dictionary (Māori Dictionary, n.d.)

'They give you what you need, not what you want. You can go in with intentions and that's good, but at the end of the day, the consciousness, your higher self, whatever it is that's teaching you is what you're going to get shown and taught.' (Chris)

'I have never taken a dose and then been, I want to purely investigate this issue because you can't really do that. Cause it's a trip, you know? It's going to take you wherever it wants to take you' (Pete)

'You should always set an intention, but because I have such a multitude of things going on, my intention is to - I want to heal, but I'll let you show me what it is that I need to be working on. So that's the intention that I set and so I'll go into it with that mind frame, and then they'll bring something up and it's never pleasant, it's always challenging.' (Laura)

Furthermore, Chris and Laura assert that psilocybin will be able to tell you, through the Knocking, when you need another session:

'How do you know when you need to do a bigger [macro] dose? They tell you' (Chris)

The Knocking also tells you when you are no longer in need of treatment:

'If I had the psychedelic-assisted therapy it would just take a matter of years [to stop needing treatment]. I believe that I would get to the point where I would no longer need psilocybin... I would hang up the phone, which means that once I've finished with the psilocybin, it tells you that you're done and you don't touch it again' (Laura)

If future research supports this phenomenon, then this could have positive effects for a natural drop-off of the need to use psychedelics for mental health. Indeed, in this study, several participants experienced a drop-off rate with psychedelics, which will be discussed in the following chapter. However, as Laura states, psychedelic use would likely need to be

alongside guided therapy. This is because, for some participants, the Knocking can lead to a confrontation of issues, which can sometimes be unpleasant to deal with:

‘Some of them were horrendously uncomfortable and I guess that's what some people would refer to as a bad trip.’ (Chris)

Interestingly, compared to psilocybin, LSD seemed to be confrontational when addressing issues. For Susan, she believed that this was more beneficial:

‘If I really wanted to avoid it I was able to but I felt with mushrooms, psilocybin, I could actually just be I don't want to deal with this and walk away and LSD would be nagging me, be like come on, do it.’ (Susan)

Whereas Laura preferred psilocybin’s ability to allow you to ‘walk away’ from issues:

*‘I have always been able to walk away from whatever I was being confronted with. Psilocybin is something that I think has more of a benefit than with LSD. Like once you're on a trip you're stuck, but with the psilocybin, you can actually push it away, depending on how much you've taken. You can be, I actually don't want to do this. I'm going to change my setting, I'm going to change my scenery, I'm going to ignore... which is not, you're not meant to do that, but you can you know? you can actually be I don't want to fucking deal with this. I want to do something else’
(Laura)*

The lack of LSD research means that it is difficult to determine why it may be perceived as more ‘confrontational’ than psilocybin, and this will be discussed further in the following chapter. However, understanding the difference between the effects of LSD and psilocybin will be critical ahead of any future legalisation of psychedelic mental health treatment.

Summary

This chapter has demonstrated that the interview participants’ self-medicated psychedelic treatment was highly successful. Congruent with international research, LSD,

psilocybin and MDMA were shown to have strong, long-lasting therapeutic effects for participants with a range of mental health and well-being purposes, with minimal adverse effects (Bird et al., 2021, Davis et al., 2020, Griffiths et al., 2008, Muttoni et al., 2019). Some of the key ways in which psychedelics were able to improve mental health was via introspection and confrontation of issues (Gasser et al., 2015), changes in perspective (De Gregorio et al., 2021a), and improved aspects of well-being, such as mood (Rucker et al., 2022), strengthening social bonds, and prosociality (Chi & Gold, 2020). However, one of the most intriguing findings in this chapter was the spiritual connection between participants and psychedelics, particularly the idea of the ‘Knocking’, in which psychedelics were able to present to the user the mental health issues that need to be addressed. Future research should therefore keep in mind that indigenous cultures have historically used plant-based psychedelics for healing and spiritual purposes, and so it is important not to consider psychedelic therapy from a purely Western perspective. Of note, all participants used psychedelics as a form of self-medication, with no official supervision from a mental health professional. This suggests that, if psychedelics were accompanied by legal psychotherapy, the effects could potentially be even more profound. In this context, the next chapter will demonstrate how participants were able to create positive clinical results by crafting their own method of psychedelic therapy.

Chapter Eight: The Self-Therapist

The Right to Health states that having access to a high standard of healthcare is a fundamental right of every human being (World Health Organisation, 2017.). Under Te Tiriti O Waitangi¹² principle of Hauora (health and wellbeing), the New Zealand government has an obligation to provide accessible, quality healthcare to all members of the public (Reid & Robson, 2007). However, dissatisfied with the current legal methods of mental health treatment, participants in this study have turned to psychedelic substances in an effort to improve their mental health. In this sense, they have become ‘self-therapists’. In the context of this thesis, the term ‘self-therapist’ refers to an individual who uses psychedelics to improve their mental health on their own, rather than alongside conventional therapy. Self-therapists are separated from recreational users, who primarily use psychedelics for enjoyment or socialising (St Arnaud & Sharpe, 2021). In contrast, the self-therapist’s purpose is to use psychedelics for healing. As the goal is to have positive clinical outcomes, much more emphasis is placed on crafting an appropriate treatment method.

Previously, Chapter Six discussed the New Zealand environment that enabled self-therapists to flourish, while Chapter Seven demonstrated how successful their treatment methods were. This chapter will outline the development of the self as a therapist and how self-therapists conducted their mental health treatment. Firstly, it will discuss New Zealand’s current mental health system by examining participants’ experiences with conventional therapy and medication. Secondly, it will outline how the participants were able to craft their own method of psychedelic treatment, in regards to preference of psychedelic, preference of dosage and their source of access to psychedelics. Thirdly, this chapter will examine how participants safely prepared for their psychedelic therapy sessions. Lastly, it will explore participants’ adherence to set and setting.

The Struggling New Zealand Mental Health System

In 2018, the New Zealand government issued the report ‘He Ara Oranga’, which assessed the state of the mental health system and aimed to provide a framework for mental health recovery going forward. The assessment concluded that the current mental health system was failing, reporting that 20% of New Zealanders were struggling with mental health issues at any given point (He Ara Oranga, 2018). The mental health system was found to be

¹² Treaty of Waitangi

under extreme pressure, with a high demand for services, limited support for the public, and difficulty recruiting and retaining staff, who were experiencing significant burnout. The most highly reported issues by the public appeared to be problems with accessing services, wait times for services, and overall quality of services. An excerpt from the report states that people were *'having to fight and beg for services'* (He Ara Oranga, 2018, p10). After outlining the issues with the system, He Ara Oranga provided the government with a framework for improvement. However, so far, there has been little change in the state of the mental health system. According to the Mental Health and Wellbeing Commission (MHWC), a 2022 evaluation of the progress of He Ara Oranga's suggested framework found that the mental health system was still struggling. The report, titled *'Te Huringa'* (MHWC, 2022), claimed that, despite a 1.9 billion funding allocation to the mental wellbeing budget, there are still significant issues with accessing mental health services, particularly for Māori. Consistent with these findings, many participants in this study had difficulty with conventional mental health treatment and, in response, decided to self-medicate with psychedelics.

For the majority of participants in this study, psychedelic-assisted therapy was not their first attempt at mental health treatment. 11 of the 12 participants reported having experience with conventional talk therapy¹³ and 8 out of the 12 participants reported having tried prescription medication, such as antidepressants or anti-anxiety medication. For some participants, experiences with conventional methods of mental health treatment were extensive; Ralph states:

'I had tried so many different things to treat, not treat but help deal with, my mental illness in the past. Everything from pharmaceutical drugs, like your standard antidepressants to ...my mum's really into naturopathy. So, I tried all these weird herbal sleep remedies and things...and I tried running, exercising hard. And this [psychedelics] was just another avenue that I thought, fuck it, I'm trying everything, what's the harm in giving this a little bit of a go' (Ralph)

¹³ In the context of this thesis, conventional therapy refers to person-to-person sessions with a professional mental health worker, such as a psychiatrist, psychologist, therapist, counsellor, or General Practitioner (GP)

Conventional Therapy

In this study, 11 out of the 12 participants reported having attended a conventional therapy session at one point prior to using psychedelics for their mental health. Seven of these participants reported negative experiences. Some had become disillusioned with conventional treatment after multiple unsuccessful attempts:

'I was going through therapists, I wasn't finding it helpful though. I felt like I was constantly talking about my traumas rather than anything getting better ever.' (Susan)

'I couldn't count the amount of therapists I've seen on two hands and that's everything from school therapists who maybe aren't super into it or really pushing the cause? And then, psychiatrists that my parents probably forked out far too much money [for]. And there were some that definitely worked. And some that I felt were more of a cop-out for me... it sounds so bad, but there were therapists that I felt I could just say the right thing.' (Ralph)

Two participants found that the professionals they met with were dismissive of what they said. For Anne, the General Practitioners (GP) that she spoke with were disbelieving of her trauma:

'It was so difficult though, because, I spoke to GP's and heaps of the time they would - just lots of them either didn't believe me or that any of this [sexual assault-related trauma] happened.' (Anne)

For Laura, her psychiatrist over-prescribed her with medication and refused to listen when she told them of the side effects:

'The interesting thing is if you look back through all my medical reports, all my reports say prior trauma, early trauma, PTSD, which you can't treat with medication. And often I walk into, especially in the later years, I'd walk into - I call him the medicine man - my psychiatrist's office and I

sit there and I tell him, I'd be you know, these are the side effects that I'm having from this medication. and he'd be like, well, you've got a very medication-resistant form of mental illness, so here's what we're going to do is we're going to put you on some more medication and that's just not making sense. Telling me that my illness cannot be treated with medication yet you're going to put me on another combination of medication anyway. '
(Laura)

Susan, who previously had struggled with Alcohol Use Disorder (AUD), had been pushed into attending Alcoholics Anonymous (AA) and disliked the 'abstinence-only' approach:

'I went to one AA thing, I was pushed into it, I didn't have a choice, I had to go to one and it was all about abstaining and you have a bad thing inside you, and I was, yup, not interested. '(Susan)

Interestingly, Susan's current therapist criticised the abstinence method:

'I also had a discussion with my [current] therapist and he says that he believes that the abstinence method is really harmful to people's mental psyches because they always tell the person that they are the one doing the bad thing rather than trying to help something inside of you. ' (Susan)

Indeed, studies have found that approximately 70% of people treating AUD with conventional treatment relapse within the first year (Gasser et al., 2014, Gasser et al., 2015, Garcia-Romeu et al., 2019, Krebs & Johansen, 2012). Success with this treatment was positively correlated with a readiness to change. Therefore, the intention to stop drinking alcohol is critical to successful treatment. Comparatively, LSD and psilocybin studies on AUD have had highly positive success rates (Bogenschutz et al., 2015, Garcia-Romeu et al., 2019,, Krebs & Johansen, 2012). This is demonstrated by an international online survey by Garcia-Romeu et al. (2019), which found that 83% of respondents no longer met AUD criteria after using a classic psychedelic. From the study, Garcia-Romeu et al. (2019) concluded that psychedelics induced insightfulness, mystical experience and personal meaning, all of which positively correlated with a reduction in alcohol consumption.

Access to therapy is a significant issue in New Zealand. For Anne, accessing mental health services through the Accident Compensation Corporation¹⁴ (ACC) was a frustrating process:

'Oh, my God, it's so difficult getting ACC, and they don't tell you anything that you're entitled to or anything that they can do for you. So it was just really hard and took ages.' (Anne)

And for Michelle, therapy was simply unaffordable:

'I had a few sessions with a therapist, which was nice to get a few coping mechanisms and breathing exercises as well is a good one for me. [I stopped going because] it was a financial issue.' (Michelle)

As stated in the MHWC's (2022) report 'Te Huringa', access and affordability of mental health services in New Zealand is poor. Private therapy providers can charge between \$120-\$200 per session, depending on the therapist's location and level of experience (Change it, n.d., Home and Family Counselling, n.d., Talking Therapy, n.d.). New Zealanders may access low-cost, ACC-subsided counselling (Mental Health Foundation of New Zealand, n.d.), however a 2021 article by RNZ found reports of people being placed on 12-month waitlists for public mental health care (Cardwell, 2021). Indeed, Rucklidge et al. (2018) attributes the prevalence of mental illness in New Zealand to a lack of available services, with the people in need of therapy far outnumbering the clinical psychologists (estimated ratio 312:1). Subsequently, it is estimated that 30-50% of people with mental health issues do not receive any help at all (Rucklidge et al., 2018). The inability to access mental health services was a significant driver in study participants' decisions to take their mental health into their own hands by becoming self-therapists.

Despite previously having had negative experiences with conventional therapy, Susan, Anne, and Laura have now found therapists that have been able to help:

¹⁴ ACC - New Zealand Crown entity that administers a no-fault accidental injury compensation scheme, which provides financial compensation and support for people who are accidentally injured. This includes mental health services (ACC.org, n.d.)

'I have had a really good relationship with the person since [finding her through ACC]. It just miraculously... I got the perfect person for me and then my life just was better, very suddenly.' (Anne)

'I was doing counselling and therapy on and off for years, but for the last 2 or 3 years I have been with just one therapist and she is just fantastic.'
(Laura)

In fact, for Susan, her use of LSD to improve her mental health indirectly resulted in positive conventional therapy. As discussed in Chapter Seven, Susan found that LSD - initially used to treat AUD - had revealed underlying trauma. Her discovery of this trauma led to the decision to seek a trauma-related specialist:

'It took me quite a lot of LSD trips to really get through to the core of what my trauma was and how I could go about sorting it out in my own mind. And not long after that, I decided to go see a specialised therapist that was specific with my traumas. And he understood what psychedelic use was and was accepting of it, rather than diminishing it. And would always make sure he was checking in on what was happening around that.'
(Susan)

Susan, Anne and Laura's positive experiences with conventional therapy show how conventional therapy and self-therapy are not mutually exclusive. Most participants noted that they would prefer psychedelics as an adjunct to psychotherapy, however prohibition of psychedelics makes this impossible in New Zealand. In the absence of this service, Susan, Anne, and Laura chose to do their own psychedelic self-therapy alongside their conventional therapy.

Conventional Medication

In a 2022 Newshub interview, Victoria University of Wellington clinical psychologist Dougal Sutherland states that combining conventional medication and therapy is the best method of treating mental health (Hewett, 2022). Conventional medication in this context refers to pharmaceutical substances such as antidepressants or anti-anxiety medication.

Unfortunately, the difficulty in accessing talk therapy means that many New Zealanders have to rely on medications alone. According to New Zealand's Ministry of Health (MoH) (2021), antidepressant prescription rates have risen by 20% since 2010. Comparatively, the MoH claims that psychological distress has also increased in recent years, particularly among youth, with 21% of youth (aged 10-19 years) now living with a mental disorder (MoH, 2021). Rucklidge et al. (2018) have argued that the rising rates of antidepressant and antipsychotic prescriptions in New Zealand are having no significant impact on mental health statistics (Rucklidge et al., 2018).

While the efficacy of conventional medication in clinical trials is often very high, in reality, they do not work for all users (Penn & Tracy, 2012). Eight out of the 12 participants in this study had tried conventional medication to treat their mental health. Similar to conventional therapy, the majority (five) of these participants reported a negative experience, which was partially a driver in the decision to become self-therapists. Side effects included a 'numbing' effect:

'I've been prescribed by the doctors a few heavy medications. They made me extremely numb and disconnected - a zombie. To be fair, there wasn't much going on up here, so it was kind of like a win, but it was a big loss in the same breath. I remember one time my partner screamed in my face as loud as she could: "FUCK YOU", like screamed it, tears billowing, and she was trying to get something out of me. I remember sitting there sort of just looking past her being like, shit's not good, but this was the medication they had me on to fix me.' (Chris)

'I was prescribed antidepressants at the age of 15 and tried maybe i don't know, 6 different types or something like that and found it was like having a frontal lobotomy.' (Tony)

Suicidal ideation:

'All these doctors are trying to prescribe you things, like venlafaxine was the worst. [I did] so many different anti-psychotics, antidepressants, SNRIs, SSRIs and they were all just terrible. And they didn't work for me ...heart palpitations and random fits of crying and some of them that

made it worse....I mean, doctors were using the tools that they had at their disposal to try and help me.... I felt suicidal thoughts on the antidepressants. So they don't sit well with me. ' (Anne)

Psychosis:

'[My experience with conventional medicine was] terrible. Majority of them made me a lot worse. At times I was on two to three at once and just a cocktail of it. And I ended up getting extremely psychotic, which is, we think it was a mixture of the medications that I was on. ' (Laura)

And numerous physical issues:

'[side effects were] anything from nausea, I mean, headaches is hard to tell because I already had headaches... extreme, extreme fatigue, body aches, loss of motor function, loss of speech, loss of eyesight, sensory issues with my hearing. I have no doubt that the medications that I was on made me sicker than I was. ' (Laura)

The adverse effects of conventional medication felt by participants have been repeatedly found in studies on end-of-life-anxiety, Major Depressive Disorder (MDD) and Treatment Resistant Depression (TRD) (Carhart-Harris et al., 2021, Davis et al., 2020, Ostuzzi et al., 2018). These effects can often include increased suicide ideation, weight gain, anxiety, lowered libido, and a reduction in emotional responsiveness (Carhart-Harris et al., 2021, Davis et al., 2020, Ostuzzi et al., 2018). Furthermore, research in the US has found that the increasing overprescription of certain anti-anxiety medications, such as Benzodiazepine, has subsequently led to overdoses (Bachhuber et al., 2016). One participant, Laura, explained that she became addicted to quetiapine (an anti-psychotic medication) and zopiclone (a nonbenzodiazepine used to treat difficulty sleeping):

'I was incredibly addicted to quetiapine and zopiclone. I was more chemically addicted to them than I was mentally addicted to them. So I wouldn't sit there and be I have [to have them].... I was only using them for sleep, because they were sedatives. ' (Laura)

Comparatively, numerous studies have demonstrated that LSD and psilocybin have a low propensity for addiction (Bonomo et al., 2019, Johnson et al., 2018, Nutt et al., 2007). This is evident by Nutt et al.'s (2007) scale of harm, which ranked 20 different substances based on their level of physical harm, social harm, and the likelihood of dependence. LSD, psilocybin and MDMA were all given a low-level rank of harm and dependence, while alcohol was deemed high risk. This was recently supported by an Australian study (Bonomo et al., 2019) which conducted a similar scale of harm, finding that, out of 22 substances, LSD and psilocybin ranked number 20 and MDMA ranked number 18. Like Nutt et al. (2007), alcohol was ranked number 1, meaning it had the highest risk of harm and dependence. In contrast to conventional medication's adverse effects, psychedelics' low level of harm made self-therapy an appealing mental health treatment method for many participants.

Four participants did report positive experiences with conventional medication, although they often still came with side effects:

'I guess the biggest side effect [of the conventional medication] is that I feel so much better. ...And now I feel I have the strength to be aware of all of these different reasons why I had a mental breakdown and work towards healing it, because the medication has given me that ability to do that.... But I feel like I definitely noticed like a lack of sex drive, which really sucks. But at the same time, when I'm in that really awful place, I also had a massive lack of sex drive.' (Erin)

'[Conventional medication] was fine. I found, 'cause especially trying to get to sleep at night is the biggest time of trying to stop the brain racing, so [conventional medication] helped me sleep a lot, which was great. I gained a bit of weight which made me upset, just a lack of control over my own body, but I didn't feel bad because of the antidepressants.' (Michelle)

Or would require daily administration:

'If I forget to take them for a day or two, then I notice my mood dropping a little bit or feeling a bit funny and then I'll realise that's probably what it is, but, they've been honestly amazing.' (Julie)

Daily administration of conventional medication is common for MDD and TRD treatments (Davis et al., 2020, Hall, 2021). As discussed in Chapter Seven, psilocybin and LSD studies have demonstrated that a single dose can have sustained benefits for at least six months (Davis et al., 2020, Gasser et al., 2015, Hall, 2021). Additionally, several participants reported using psychedelics while still on a course of their conventional medication. All of these participants reported experiencing no crossover effects of the psychedelics on their conventional medication. This suggests that if necessary, psychedelic-assisted therapy may be administered alongside conventional medication, although more clinical research is needed to assess this possibility. Furthermore, similar to conventional therapy, the role of the self-therapist does not need to replace traditional mental health treatment methods.

The results of this study support international research in finding that conventional mental health treatment may induce a range of adverse effects while also having limited therapeutic success rates (Carhart-Harris et al., 2021, Davis et al., 2020, Gaynes et al., 2009, Kolovos et al., 2017). Comparatively, studies on psychedelic-assisted therapy have had high success rates, as well as limited adverse effects (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020, Griffiths et al., 2016, Hall, 2021, Ostuzzi et al., 2018), as demonstrated in Chapter Seven. However, it is important to keep in mind that the success rates of these studies may lessen over time. Psychedelic research is still an emerging field. As the participant pool is widened due to growing interest, studies may demonstrate more adverse side effects and negative clinical outcomes (Noorani & Martell, 2021). These risks can likely be mitigated by appropriate safety regulations and attention to set and setting, which may be easier to do in a legal, clinical setting, rather than as a self-therapist.

Crafting the Method of Psychedelic Therapy

Participants are Well-Researched

Palmer and Maynard (2022) state that lack of research is one of the primary reasons why first-time psychedelic users can experience bad trips. Studies have found that understanding the psychedelic experience positively impacts the session, as users are informed on how to deal with distress (Palmer & Maynard, 2022). In this study, 10 out of 12 participants reported having done extensive research on psychedelic therapy prior to their first session, in preparation for their role as self-therapists. Some participants were introduced to the research by their friends, while others found the research independently. The research was

primarily in the form of articles and studies, however some participants listened to podcasts or joined forums:

'I used to listen to podcasts and stuff, just random ones about Paul Stamets [American psychologist who advocates for medicinal fungi] or whoever else. I can't remember the name of the group - MAPS? So I heard about stuff they're doing and kind of figured it was true.' (Oliver)

'I was learning about trauma therapy and things with my psychiatrist and then I just learnt about MDMA therapy and psychedelics came up when you are researching all about how people get better from these things. So I drew the line between my [previous recreational MDMA] experiences and how that brought up PTSD stuff ...and I thought maybe this could be helpful for me, so I pursued it myself and just did some research.' (Anne)

Participants used psychedelic research as a method of harm reduction. Substance harm reduction is a range of strategies that promote safer use, managed use and an understanding of the risks and benefits of use (Pilecki et al., 2021). Harm reduction strategies acknowledge that people will use illicit substances, regardless of the legal or physical risks, and therefore focus on reducing potential negative consequences of substance use, rather than try to eliminate use (Pilecki et al., 2021).

The comprehensive level of research conducted by the participants in this study was indicative of their intent to maximise the potential of psychedelic therapy and reduce any possible risk. Research was often driven by a desire to use psychedelics as safely as possible.

How Participant's Access Psychedelics

As Class A (psilocybin and LSD) and Class B (MDMA) substances, participants resorted to illicit means of accessing psychedelics. In the survey, respondents primarily accessed psychedelics through their friends (33.1%, n=98), however foraging or growing psilocybin was also common¹⁵. Interview participant's method of accessing psychedelics was

¹⁵ Indicated by the text-box answers when participants selected 'other' forms of access (14.% n=43), as foraging/growing was not included as a survey option

dependent on the substance. The majority of MDMA- and LSD-users procured their substances from dealers, friends, or the dark web.

'A few years ago it [LSD access] was through friends. I lived with a few people who knew some people, and then previously leading up to last year I got it off of Discord¹⁶, but I've been banned from there now because I was buying drugs. Uh, so I haven't bought any since that time last year. Yeah, no, I'd probably just go through friends now.' (Michelle)

'[LSD access is] Mainly through the dark web, online forums, places like that.' (Susan)

Participant's method of accessing psilocybin was different to that of LSD and MDMA. Only one participant (Ralph) accessed psilocybin through friends. The other five psilocybin users foraged for psilocybin-containing mushrooms:

'My friend, who gave me mushrooms, lives nearby and he said it's mushroom season. At a certain point in April the mushrooms are popping out, here's where to find them. And then I just started going out every day and finding them.' (Oliver)

'It grows freely in the winter, all over New Zealand for free in the ground. all over the country. There's about 20 species' (Chris)

Or grew psilocybin-containing mushrooms themselves:

'I love growing mushroom cultures and I like growing Pekepeke-kiore and oyster mushrooms, so I'm already growing heaps in my backyard and then I found these [psilocybin-containing] mushrooms and I just love growing things...so I wasn't like, oh, I'm going to start growing heaps of magic mushrooms so I can get high all the time, I was like, I wonder if this would grow.' (Anne)

¹⁶ Discord is an instant messaging social platform, where 'servers' (forums) can be created for various groups/purposes. Some Discord servers are created with the purpose to buy/sell illicit substances

'I've started growing them a while ago and I use them frequently and they work well.' (Tony)

However, participants who used psilocybin found that access was limited, as psilocybin-containing mushrooms primarily grow in New Zealand's autumn and winter months (KnowYourStuff, 2021). For some participants, seasonal availability affected their desire to choose psilocybin over MDMA or LSD as a substance for psychedelic therapy. These illicit access methods were the only option for self-therapists, as prohibition has meant that there is no legal market for purchasing psychedelics in New Zealand. The legalisation of psychedelics and an established commercial or clinical market would hopefully mean that psychedelics could be safely regulated. Decriminalisation or legalisation would also mean that those using psychedelics to treat PTSD and other mental health issues would not have to run the risk of being criminalised.

Deciding the 'Right' Psychedelic

The choice of which psychedelic substance to use for mental health was partially decided based on the effect of the substance, mainly by participants who had experimented (albeit in some cases recreationally) with more than one of the psychedelic substances being examined in this study (LSD, MDMA, psilocybin). Identifying which psychedelic would be the most beneficial demonstrates the participant's attempt to maximise positive effects and minimise adverse risks of the experience. This is indicative of their role as a self-therapist. In particular, participants who preferred LSD appeared to have an aversion to psilocybin and visa versa. Susan and Laura (as noted earlier) both explain that LSD is more of a 'confrontational' substance in comparison to psilocybin:

'Once you're on a (LSD) trip you're stuck, but with the psilocybin, you can actually push it away, depending on how much you've taken.' (Laura)

'[Psilocybin] was a lot calmer, like I could avoid the trauma. I would be able to just be like I don't want to deal with this, whereas LSD was way more confronting ... and LSD would be like nagging me, be like come on, do it.' (Susan)

LSD was perceived to be more confrontational because sessions were comparatively difficult to ‘leave’. Those who experienced this felt they were forced to deal with the mental health issues presented to them, whereas psilocybin sessions allowed the user to avoid issues if they so desired. Some participants, such as Laura, preferred psilocybin’s ability to let you leave the session, because she would then be able to change the set and setting in order to have a better outcome. Other participants, such as Susan, preferred the confrontational nature of LSD as it ensured that she would not avoid her trauma. It is difficult to determine why LSD is perceived to be more confrontational. While LSD sessions are longer in duration than psilocybin sessions, studies show that they are closely pharmacologically related and generally have similar effects (Johnson & Griffiths, 2017, Holze et al., 2022). One possible explanation could be that both Susan and Laura took LSD at high dosages, as studies have shown that high doses of LSD and psilocybin are correlated with feelings of being ‘trapped’ in the session (Aday et al., 2021). However, a 2011 opinion piece in ‘The Guardian’ describes a similar experience of the confrontational nature of LSD (Blackmore, 2011). Sue Blackmore, who had experience with LSD, psilocybin, MDMA, DMT and mescaline, states that while on LSD she would be presented with images of ‘*torture, rape and other kinds of human cruelty*’. She writes:

‘I began by fighting them [imaginary scenes of human suffering] and trying to push them away, but LSD will not let you push anything away. You have to face it. And this is, I think, what makes it the ultimate psychedelic. There is no hiding with LSD. You have to face whatever comes up or be overwhelmed by it.’ (Blackmore, 2011)

Perhaps Sue Blackmore’s experience was also due to a high dose of LSD, however this is an area that warrants further investigation. Future research could compare participants’ experiences using LSD and psilocybin at a moderate clinical dose and determine whether LSD is more confrontational. These studies could also examine whether there is a spiritual element to participants’ feelings of being unable to avoid the issues presented by LSD.

For some participants, psilocybin and LSD simply had different effects on the user, and this was the basis for their preference. Chris, who preferred psilocybin, felt that using LSD had adverse effects:

'You know from someone who's suffered paranoia you'd think that a hallucinogenic or, or, or psychedelic would contribute to that. Mushrooms - they didn't. Ironically acid did. So personally, I don't touch acid anymore.' (Chris)

Whereas Michelle felt that prior use of LSD made her more comfortable:

'Maybe because I'm more comfortable with LSD, and I've taken it a lot more than mushrooms, I know the headspace and I know what to expect, you know? Sort of how my brain is going to go.' (Michelle)

Participants' preference for MDMA appeared to be a result of the type of therapy they wanted. Anne, who has Post-Traumatic Stress Disorder (PTSD), felt that MDMA would be the 'safest' option based on international PTSD studies, as well as prior experience with psychedelics:

'I think there is something about MDMA which for PTSD specifically, it's like a safe mattress under your nervous system, it's just like cushioning for that. Um, but I haven't felt as safe with LSD and shrooms [psilocybin].' (Anne)

Preference for Macro dosing vs. Micro dosing

As self-therapists, an essential aspect of participants' psychedelic treatment was their identification of which level of dosage was most appropriate for their mental health needs. Participants varied in their decision to do macro dosing or micro dosing of psychedelics for their mental health. Macro dosing refers to a level of dosage where the user will feel the obvious effects of the psychedelic substance, and this is the primary method for most psychedelic studies. Micro dosing is ingesting a small dose of psychedelics, which will have a sub-perceptual effect (Kartner et al., 2021). Observational and anecdotal reports have found that micro dosing is primarily used as a form of self-medication for improving mental health rather than for a recreational purpose (Lea et al., 2020, Rootman et al., 2021). In this study, macro dosing was the most common method (seven participants) in comparison to

microdosing (three participants), however two participants would swap between the two different ways of using psychedelics.

Similar to how they decided on their preferred psychedelic substance, the needs of the participant determined their dosage method. Participants who preferred to macrodose chose to do so because the stronger effect was better at working through their mental health issues:

'I've tried microdosing and I didn't notice a massive change. I feel like that's more of a personal thing for me, that I need a big dramatic punch-in-the-face wake-up call, rather than just feeling a little bit of a pick me up.' (Ralph)

Comparatively, some participants preferred microdosing because it was most effective at increasing focus and mood:

'It's just like a little bit of clarity and a little bit of focus, which is weird to think about psychedelics, but it just works... I'm very, over-cautious about things and so I started small. I did one time take a half [tab of LSD], and that was just a little bit harder to focus for me. It wasn't too intense, it just didn't feel right to me. I was like, no, I think, it's a lot more effective at a smaller dose.' (Michelle)

'Well, I can't come to work after taking a large portion [of psilocybin]. There's certain things I don't want to do when I take a larger dose. So it fits in with a work schedule a lot better, and with only small amounts on a weekend, microdosing seems to just fit in with it better.' (Oliver)

'[Microdosing] definitely evens me out and gives me positivity. It makes me feel better about myself, although, it can be quite subtle and it won't drag me out of a depressive episode....a high dose can, it's more like a preventative measure for me.' (Tony)

Research has found that 'self-therapy' is the primary aim of most microdosers in lieu of conventional mental health treatment (Lea et al., 2020). These studies show that microdosing classic psychedelics can improve mood and cognitive enhancement while also

reducing symptoms of anxiety and depression (Kuypers, 2020, Lea et al., 2020, Polito & Stevenson, 2019, Rootman et al., 2021). It appears that, for some users, the effects of microdosing - particularly mood elevation - could work as a preventative measure for depression. Consistent with the research literature, users who microdosed did so primarily with LSD or psilocybin (Lea et al., 2020). This suggests that microdosing could be used as an alternative to conventional medication, particularly for individuals who do not respond well to the latter. While it may not be a high enough dose to facilitate analysis of underlying mental health issues, it could work to lift users' mood and avoid a depressive slump. Additionally, observational and anecdotal reports have also found that microdosing may increase energy and creativity at work, boost productivity, and improve interpersonal relationships (Fadiman & Korb, 2009, Johnstad, 2018, Polito & Stevenson, 2019, Rosenbaum et al., 2020). Further research on microdosing is needed to determine the validity of these effects, however the sub-perceptual effect of microdosing found in this study demonstrates that psychedelics could be used outside of a therapeutic environment.

Self-therapists were also not restricted to either micro or macrodosing as is often the case in the international literature around psychedelic-assisted therapy. Laura and Chris were innovative in creating a new approach by preferring a mixture of macro- and microdosing of psilocybin. They believed that macrodoses were best for introspective healing, although, the microdoses were needed between macrodoses to keep up a level of sharpness and focus:

'Because it's so far in between the big ones now, I know that the micro-dosing is just keeping that sharpness all the time.' (Chris)

'The microdosing was to help keep that balance between the macro doses, because I need to do both to heal. Some people just microdose, some people just macro dose.. I need both.' (Laura)

'It [microdosing] also keeps the level of psilocybin up in my body, like a medication, you want to keep your levels up. And a lot of people get the benefits off micro-dosing, I've heard lots of people who have epiphanies just from the micro-dosing but unfortunately I need more, so keeping that psilocybin level up just keeps my hormones and keeps me and my mind more balanced.' (Laura)

While there are currently no studies that measure microdosing and macrodosing as a combined treatment approach, Laura and Chris' experience indicates that it may be helpful for treating some people with depression and anxiety-related disorders. As discussed earlier, microdosing may be used to avoid depressive slumps. This method of mixing both ways of dosing could also prepare the user for a more introspective, healing macrodose session by ensuring they are in the right mindset. Further research is needed to determine how these two dosage methods can be combined and for what type of user it would be suited. For instance, the severity of the mental health issues and the clinical goals of the user may factor in deciding to use this method.

Psychedelics and Conventional Therapy

While participants currently have to take on the role of self-therapists, for many, it is not the ideal mental health treatment method. New Zealand's lack of access to adequate mental health services and its aversion to joining the psychedelic therapy research field has meant that self-therapy is the only option for some people. However, many study participants believe that combining psychedelic and conventional therapy would result in the best clinical outcomes. Several participants expressed a belief that New Zealand's lack of formal psychedelic-assisted therapy was hindering their mental health progress:

'[Psychedelics] are a tool, but that is something that I really need to do in conjunction with therapy, which I can't get because it's illegal. So pretty much I'm having to use my own knowledge and take away from it.' (Laura)

'I actually think that I would get more benefit from high-level therapeutic dosing [as opposed to micro-dosing], but I want to have a sit-in session with someone like, I don't think there's great benefit to be had from - I don't think there's great benefit to be had in just sitting with yourself or with friends doing a high dose. I think that the benefits from therapy happen when you're sitting down with someone who's kind of a guide and you can eat, then you can talk about the issues that you want to talk about. And I haven't found that person that I can do that with. I've been looking for someone that would do that with me, but it didn't seem to be that much going.' (Tony)

Some participants stressed that psychedelics were not a ‘cure’ for mental health issues. These participants believed that the improvement that they had seen in their mental health was partially due to psychedelics and partially due to conventional therapy:

‘I feel like [psychedelics are] sort of similar to anti-anxiety [medication] or antidepressants in that you can't just rely solely on the drug. It's like the drug that enables other things to happen. ... It's an aid to help you achieve other things rather than a cure in itself. And I feel that's why the environment that you're in when you take it is so crucial, sending up a really safe, fun, beautiful environment with people that you love. So if you were to do it in a therapy environment with a counsellor or something that you really trusted and had a really good like history with, like long, decent, deep connection - I think that would be really important parameter of it.’ (Erin)

‘[The MDMA session] wasn't just like one night changed my life. It was that one night and then six months of [conventional therapy] work after that which really had a massive impact and I was always tying back to the things that I thought about [during the MDMA session].’ (Anne)

‘I don't think [psychedelics are] enough. I think it's still helpful to see therapists. I've never seen a therapist before. I've seen a counsellor before. And I talked about all this stuff and it was beneficial. They are really, really beneficial, I think used properly though tools like LSD you can absolutely use as therapy, but it is not the answer to the whole thing.’ (Pete)

The participants' belief that psychedelics are not a ‘magic bullet’ solution to mental health issues illustrates a desire to combine them with conventional therapy. Combining both methods would mean that the effects of the psychedelics can be properly processed with the help of a professional. Legal, clinical therapy would also be able to ensure safer psychedelic use by having pure, accurate dosages and proper set and setting. This notion is heavily supported in the research literature, with the majority of studies advocating that psychedelics

be used as an adjunct to psychotherapy (Bird et al., 2021, Davis et al., 2020, De Gregorio et al., 2021a).

Reduction in Use of Psychedelics - 'Drop-off rate'

Julie, Chris, and Susan each reported a drop-off rate in their use of psychedelics. In this study, the drop-off rate refers to the participant's ability to increasingly space out the distance in time between sessions. The reasons behind psychedelic drop-off rates varied between users. For Chris (psilocybin) and Julie (LSD), the psychedelic drop-off rate was connected to long-lasting effects:

When I first started doing it for mental health purposes, it was probably once every two weeks when I was feeling quite depressed and I notice now that I don't do it as often and I think that is because I'm in a better place. I feel like I'm doing really well. I always love it and do it when I feel like I need to, but I just kind of haven't had that same pull that I had when I first started taking [LSD].... I would have a really good trip and work through some stuff, but when it ended, I would feel kind of depressed again and I'd want to just instantly do it again....now that I'm feeling better, I just t have that thing - I'll do the trip and I'll be, that was great. And then I don't even think about it for a while.' (Julie)

'Because it's so far in between the big ones now ,I know that the micro-dosing is just keeping that sharpness all the time.....it's because I'm in such a healthy place, spiritually, emotionally, mentally. I don't need to visit. Yeah, I don't need to go there.' (Chris)

Whereas, for Susan, the decrease in using LSD for mental health was due to being unable to combine psychedelics with conventional therapy:

I pretty much felt like I reached as much inward thoughts and my own [trauma] processing and I was just reaching blockades where I was ... I don't know what to do...And I needed someone else to help me through

that. I felt like I had reached the point where I couldn't help myself as much as I could, by myself.' (Susan)

In contrast, Laura, who had not experienced a drop-off rate of psilocybin (although she stopped dosing due to unrelated reasons), maintains that a drop-off rate would only naturally occur for her if she had access to formal psychedelic-assisted therapy:

'Being able to unlock the things I have with the psilocybin has given me the tools to work through some of the stuff in normal therapy, but not all of it. It would take my entire lifetime to try and heal from this by itself. But if I had the psychedelic-assisted therapy it would just take a matter of years. I believe that I would get to the point where I would no longer need psilocybin.' (Laura)

In this statement, Laura feels that self-medicated psychedelic therapy will not be enough to work through her mental health issues fully, however neither will conventional therapy alone. Laura believes that she needs a combination of the two, with which she would get to a point where she no longer needs to use psychedelics for her mental health. Therefore, because of New Zealand's continued prohibition of psychedelics, Laura predicts that she will be self-medicating with psychedelics for the rest of her life and there will be no natural drop-off rate.

Preparation for Psychedelic Sessions

As a self-therapist, it was important for many participants in this study to undertake certain safety measures, ensuring that they were adequately prepared for each psychedelic session. These efforts were often informed by international research, advice from their friends, or prior psychedelic experiences.

Determining a Safe Dose

Determining a safe dosage will be necessary for any future psychedelic-assisted therapies. Palmer and Maynard's 2022 study of recreational psychedelic harm reduction measures found that participants described appropriate dosing as one of the key predictors of a safe psychedelic session. Compared to MDMA and psilocybin, LSD in tab-form is

particularly difficult to measure. It could be that incorrect LSD dosing is why, as stated earlier in the chapter, participants felt it was harder to ‘leave’ an LSD session. In this study, several participants reported caution around their dosage of psychedelics, particularly in regards to the initial session. Michelle determined her LSD dosage via self-experimentation:

‘I was very cautious the first time, like I took a very small amount. And then, yeah, the results spoke for themselves.’ (Michelle)

While Anne determined her MDMA dosage based on her weight:

‘If you look up those MDMA people they had dosages for your weight and stuff, and then I worked it out exactly. So I was very lucky cause I was able to take a very precise dose and it was exactly what the MDMA people said I should basically, like it was the amount for one person based on your weight for a therapeutic dose.’ (Anne)

Participants’ attention to appropriate dosage is illustrative of their adherence to safety measures as a self-therapist. The legalisation of psychedelics would allow a user’s psychedelic dosage to be determined by a mental health professional, who can consider aspects such as weight, recreational history, and mental health needs. Additionally, online resources that give accurate methods of determining dosage would be more accessible for those wanting to self-medicate.

Testing Psychedelic Substances

This study found that several participants were aware of possibly adulterated psychedelics and reported having tested their psychedelic substance prior to use. In New Zealand, people wanting to use illicit substances can test them with KnowYourStuff (n.d.). As recreational substances can often be adulterated, drug checking is an evidence based method of reducing potential harm because it shows people who use drugs what they are really taking. Drug checking is also legal in New Zealand and in this study, several participants used KnowYourStuff to test their substances:

'I took acid. I had a quarter of a tab? No half of a tab, but it was quite strong. We got it tested with KnowYourStuff. That was really good. I would never do a drug without testing it.' (Erin)

'I had access to [MDMA] from a friend at the time and the KnowYourStuff people are really good at testing it beforehand so I knew what I was taking.' (Anne)

The prohibition of psychedelics meant that it is up to users to choose whether they want to test their psychedelics. As self-therapists, participants in this study were well-informed about the dangers of psychedelic adulteration, and had a desire for the best possible clinical outcome, therefore they often chose to test their substance. However, in a 2022 study by Palmer and Maynard most participants would not test their psychedelic substance, as they believed they had acquired it from a 'trusted source'. With this in mind, the legalisation of psychedelics would be the safest method of ensuring users are not accidentally taking adulterated substances, by enacting widespread testing prior to ensuring a legal, regulated supply of psychedelic substances.

Preparing for 'Bad' Trips

Evidence of participants' caution around psychedelic substance use is seen in their preparation for the event of a 'bad trip'. Bad trips are an adverse reaction to the psychedelics during the session, such as intense anxiety, confusion or fear (van Amsterdam et al., 2011). Research suggests that bad trips can sometimes result from an improper set or setting (Aday et al., 2021), which will be discussed later in this chapter. As a safety precaution, several participants in this study prepared for a bad trip before the psychedelic session. During Anne's one-off MDMA session, she reports being ready to seek medical attention in the event of a bad trip:

'I'm really a bit hyper drug safety aware even, so I was fully prepared just to take myself straight to the hospital if I needed to - I was very prepared.'
(Anne)

Furthermore, Anne had both her therapist and partner available on-call if she felt unsafe:

'I had my boyfriend who I could call and stuff. And, he was the only other person [aside from the therapist] I told.' (Anne)

'[My therapist] basically set the whole evening aside and I had their personal number and they're like, just call me if you need anything at all. Anything at all, give me a call. I didn't need to, but I called the next morning. Well, actually they called the next morning going 'how are you'?' (Anne)

Similarly, Laura will make a third party aware of her location, if she decides to have a psychedelic therapy session outside of her home:

'I definitely prefer to do it somewhere secluded, in nature if I can. But then I have to let people know that's what I'm doing so that if I'm gone for too long, someone could come, nothing ever bad's happen but you just have to be aware of what you're doing.' (Laura)

Laura and Anne's decision to make other people aware of their session indicates an adherence to safety and awareness that the self-medication of psychedelics can have unexpected consequences. Comparatively, Pete's safety precaution for bad trips is to carry benzodiazepines:

'I just always keep benzos on hand... Some people call them trip killers, but they're not really trip killers. They're more like, well they will kill your trip, but more they'll significantly reduce the effects of the drug pretty much instantly.... I've never taken one though. I've never had to. Um, but it's good to have them on hand.' (Pete)

Benzodiazepine is a prescription medication that can be used to treat severe anxiety (Lalive et al., 2011). While there are currently no studies on the effects of benzodiazepines as 'trip killers', it could be inferred that they help to reduce the anxiety that can sometimes occur during a bad trip. Studies on the effects of benzodiazepines have found that they have a high abuse potential and propensity for addiction (Lalive et al., 2011). The use of drugs - like benzodiazepine – in the psychedelic context is demonstrative of the limits of self-therapy and

doing one's own research. If use of benzodiazepines as trip-killers is prevalent among the psychedelic community, then this highlights a need to have legal psychedelic-assisted therapy, where bad trips can be mitigated via safer methods, such as set and setting.

Set and Setting

A significant body of literature denotes that set and setting are crucial for a psychedelic session's outcome. In the last 20 years, the idea of set and setting has extended to substance harm reduction measures, such as quiet rooms and free water in clubs where MDMA is commonly used (Goulding et al., 2009). The notion that the same psychedelic substance can result in different reactions across users suggests the possible role of set and setting in psychedelic-assisted therapy (Hartogsohn, 2016). Indeed, even in observational studies of recreational psychedelic use, users will often respect set and setting to avoid a bad trip (Gashi et al., 2021). While research in this area is still somewhat limited, participants in this study spoke of the importance of set and setting:

'There are definitely things I can do [to ensure a good outcome]. Being in the right place and the right setting is really important. If I was to take a bigger dose at a party and I wasn't feeling great about myself, it would definitely be the wrong setting. But if I was just with, one or two really trusted people in my own home, or, in the forest or something, it would be a really beneficial setting and I'm most likely to get a positive outcome from that.' (Tony)

Set and setting are already considered to be powerful tools in psychedelic research, although it will be important to explore set and setting in New Zealand, particularly in a Māori and Pasifika context. As discussed in Chapter Seven, modern clinical research primarily examines psychedelics from a western perspective, and so future New Zealand studies ought to consider the cultural differences for set and setting. Consistent with the literature (Aday et al. 2021, Hartogsohn, 2016, Noorani et al., 2018, Palmer & Maynard, 2022), interview participants often referred to 'set' in terms of setting intentions and avoiding negative mindsets with setting referring to being out in nature, being at home, and the importance of music. Their adherence to self-chosen set and setting measures demonstrates how they crafted a treatment method that was tailored to their mental health needs.

Set: the Importance of Intention

Several studies found that setting clear intentions can positively predict the quality of a psychedelic experience (Aday et al., 2021, Haijen et al., 2018, St. Arnaud & Sharpe, 2021). An intention is where users will decide their goals of the session before taking the psychedelic dose. Intention can be anything the participant chooses, for example, recreational, spiritual, social, introspective, creative or meditative (St Arnaud & Sharpe, 2021). Even if the participant is not actively focusing on their intention during the session, it remains in their subconscious and can help guide the experience. Several studies have also shown that setting intentions can reduce the chances of adverse effects because the ability to guide the session can increase predictability (Aday et al., 2021, Haijen et al., 2018, St. Arnaud & Sharpe, 2021). In this study, six participants reported that setting intention before the session was important. Setting an intention meant that participants had a degree of control over their trip. For some participants, this could be as specific as improving a relationship:

‘So have some clear intentions, if that's what I'm doing. If it's not such a social thing, if I'm wanting to get something out of it, I go in with a clear intention... it can be quite general or it could be really specific. It could just be that I want to improve a relationship with someone or an aspect of my personality or an acceptance of something.’ (Tony)

And for others, it could be as general as wanting to heal:

‘So, you should always set an intention, but because I have such a multitude of things going on,, my intention is I want to heal, but I'll let you [psilocybin] show me what it is that I need to be working on. So that's the intention that I set.’ (Laura)

As stated, sometimes the intention occurred on a subconscious level rather than as the focus of the session:

‘I set a general thing of ... It could be like something in my relationship or something social and I'll have that thought as I go into the trip. And during

the trip, I'll go on a walk for instance, in the bush, and I won't just think about that one thing, it's almost like meditating. You'll be looking at your surroundings and all that and taking it all in, but in the back of your mind, you will be having insights into that initial intention.' (Pete)

Further research is needed to examine the value of setting intention prior to a psychedelic session. In this study, participants' role as the self-therapist involved setting their own intention, however if psychedelic-assisted therapy were to become legal in New Zealand, this is something that could be determined with the help of a qualified therapist.

Set: Caution Around Negative Mindsets

Participants appeared to be cautious of taking psychedelic substances while in a negative mindset. Indeed, a recent meta-analysis of 14 set and setting studies found that unstable or negative mindsets increase the likelihood of users having a bad trip during the psychedelic session (Aday et al., 2021). A negative mindset can include apprehension, confusion and distress before the session, and so studies have recommended approaching the experience with a positive and open mind to decrease the likelihood of a challenging session (Aday et al., 2021). Clearing the mind via meditation or mindfulness practice has been suggested to achieve this positive mindset (Palmer & Maynard, 2022). Participants' awareness of the risks of using psychedelics during a negative mindset is demonstrative of their knowledge and adherence to safety measures, as well as their role as a self-therapist:

'Especially with LSD, I'm still cautious. So if I'm ever in the middle of being freaked out about something, I'd never take it, just to be cautious. 'Cause obviously taking psychedelics in a bad mind state, taking too much can have the opposite effect.' (Michelle)

'You can sort of hit a bigger dose socially [referring to using recreationally in a social environment] and you have a bad time with it. If you're not in the right headspace, the set and setting thing, if you're not quite right it can make you feel worse.' (Tony)

However, the need to take psychedelics for poor mental health and the avoidance of a negative mindset could be contradictory. As Erin states:

'I feel like everyone could benefit from [psychedelics] if it was a good trip, but at the same time it's hard because I feel that people who need help the most are probably the same people who would have a really bad trip if they took it! I can't speak on behalf of other people, but if I had taken acid and I was at my worst, I would have had a terrible trip, because your mind is just already in a bad place.' (Erin)

The difficulty in identifying when psychedelics will be beneficial for a person's mental health and when they will be harmful represents the need for legal psychedelic-assisted therapy. Medical professionals who could identify when a user's mindset would contribute to a negative psychedelic session could be the difference between positive and negative clinical outcomes. Several studies have found that the best clinical outcomes of psychedelic-assisted therapy occur when there are 'preparation' sessions prior to the psychedelic session (Krediet et al., 2020, Mithoefer et al., 2016). These preparation sessions will act similarly to conventional therapy, with the user discussing their mental health issues with the therapist, as well as building a relationship between the two (Krediet et al., 2020, Mithoefer et al., 2016). These preparation sessions could serve firstly as an assessment of whether the user is in a negative mindset, and if so, then secondly as a method of bringing users into an appropriate mindset for psychedelic use. A possible solution to negative mindsets could be a combined macro- and microdose approach. Earlier in the chapter, it was shown that Laura and Chris used psilocybin macrodoses to work on their mental health issues, and in between those sessions they used microdoses to keep up a level of balance and focus. In Chapter Seven, five participants also stated that microdosing classic psychedelics elevated their mood. Therefore, perhaps a combined macro and micro approach to psychedelic treatment could help people who are in a negative mindset, where microdosing could elevate the user's mood enough so that they can cope with a macrodose, which is where the real healing may happen.

Setting: Nature

Most participants preferred to experience their psychedelic sessions in nature. This was particularly the case for classic psychedelics. Studies have found that nature-based

settings can be soothing, which subsequently improves a user's subjective psychedelic experience (Gandy et al., 2020). In this study, there appeared to be two primary reasons why nature appealed to participants as a setting for psychedelic substance use. Firstly, being outside made participants feel more connected to the earth - this seemed to resonate specifically with psilocybin-users:

'For me, a big thing is actually getting out of the room. Being in nature, I think, is such an important thing for psychedelics because it's this idea of getting back to something sort of raw and natural.' (Ralph)

'I've also done [psilocybin] out in nature. I've done it in the forest, which is always a really interesting perspective and personally I prefer to do it in nature because it is a natural medicine and allows you to be more connected with the earth. But the problem is that, once you choose your setting, you can't really move from it. If you were to start outside and go inside you would cause yourself massive problems, because you're going from this big, open natural space to this really confined little horrible box.' (Laura)

Indeed, research has shown that psychedelics can foster nature-relatedness, which is a person's self-identification with nature and is associated with a range of psychological benefits (Gandy et al., 2020, Noorani et al., 2019, Studerus et al., 2011). These studies have suggested that nature-relatedness and contact with nature during a session may help to reduce any adverse effects during a psychedelic experience (Gandy et al., 2020).

Secondly, a nature setting also appeared to appeal to participants because it ensured that they were alone:

I suppose part of it is, being in my own home or the forest is about not being surprised by people who are straight - it can be a real downer. When you've taken a decent [psilocybin] dose, you might act in a way that might seem strange to other people and the last thing you want to do is become self-conscious.. I think that that's where it goes really badly is when I become self-conscious.' (Tony)

'I find being out in nature really helpful, just among the trees and whatever. It's just so full of life, and life that won't judge you.' (Pete)

The desire to not be around 'straight' (sober) people while on psychedelics indicates how self-medicating psychedelics can be valuable as opposed to as an adjunct to therapy, as some users may prefer to do sessions without the presence of a clinical therapist. Although, perhaps the presence of a therapist may not have the same self-conscious-inducing effect evoked by members of the public. This is indicative of the need to have a strong, therapeutic alliance established prior to the psychedelic session for the user not to feel judged, a notion that is supported by mental health literature (Dolder et al., 2016, Feduccia & Mithoefer, 2018b, Gukasyan & Nayak, 2021, Sessa et al. 2019a).

Setting: Music

There is substantial research indicating a relationship between music and psychedelics in both therapeutic and recreational settings (Barrett et al. 2018, Kaelen et al. 2015, Preller et al., 2017). O'Callaghan et al. (2020) state that music is integral for creating a deeper, emotional experience and guiding self-exploration. Patients of psychedelic-assisted therapy have often referred to music as having a significant impact on their experience (Belser et al. 2017, Swift et al. 2017, Watts et al. 2017). In this study, six participants reported involving music in their psychedelic sessions:

'Usually I would just play some music, I'd just hang out, like mess around, until I started feeling it. And then I would just, you know, do whatever I felt like doing, most of the time I was listening to music because it was just helpful.' (Julie)

'Sometimes I have very chill music, like lo-fi or classical, just background noise, but not intrusive.' (Michelle)

During psychedelic sessions, music is thought to be able to both propel and anchor the user, meaning that it can facilitate self-exploration but also ground and soothe them if the session becomes distressing (O'Callaghan et al., 2020). The psychedelic-induced emotional response to music can also lead to perceived personal meaningfulness (Preller et al., 2017). While

listening to music on psychedelics, people are more likely to experience an emotional release, with one study by Watts et al. (2017) finding that music provoked repressed emotions and promoted an acceptance of painful ones. In the context of psychedelic-assisted therapy, music could be instrumental in creating an emotional and meaningful experience for the user and, therefore, could be incorporated into some sessions.

Summary

The participants' experiences in this study demonstrate a shift away from psychedelics being used recreationally and towards being used as a therapeutic tool. This chapter has outlined the way in which participants designed a psychedelic-therapy treatment method to achieve intended clinical results. New Zealand's struggle to meet the increasing need for mental health treatment has led some people to self-medicate using psychedelics. Armed with somewhat limited international research and prior recreational experience, participants have been able to craft individualised psychedelic treatment methods and subsequently take control of their mental health needs. Participants found methods of access, determined the appropriate psychedelic substance and dosage level while also testing for adulteration, and paid heed to the importance of set and setting before a session (Aday et al., 2021, Hartogsohn, 2016, Krediet et al., 2020). Consistent with academic studies, measures undertaken by participants likely contributed to the positive clinical outcomes that were discussed in Chapter Seven. This chapter has also illustrated a need for psychedelics to be combined with legal psychotherapy, a notion which appears to be strongly desired by many of the participants. Legal psychedelic-assisted therapy would mean safer access, ensured purity of substances, controlled set and setting, and a reduced likelihood of bad trips for those who find psychedelics helpful for their mental health and wellbeing.

Chapter Nine: Discussion and Concluding Remarks

Psychedelic research has highlighted its potential as an alternative form of mental health treatment. Numerous studies have demonstrated the success of LSD, MDMA and psilocybin for treating a range of psychiatric disorders, as well as improving well-being, with limited adverse effects (Entheos, n.d., Muttoni et al., 2019, Goldberg et al., 2020, Gorman et al., 2020, Hall, 2021). Whereas this research has been conducted internationally, in New Zealand continued prohibition of psychedelics and stigma surrounding illicit substances has resulted in little interest in exploring psychedelics as a medicine (Inserro, 2019). While 1.9 billion dollars has been allocated to improving the mental health system, no exploration of the possibility of alternative psychedelic treatment has been conducted, despite significant research demonstrating the adverse effects of conventional medication (Carhart-Harris et al., 2021, Davis et al., 2020, Ostuzzi et al., 2018). This reluctance by the New Zealand health system to join the emerging field is motivating individuals to take mental health into their own hands. A subset of the New Zealand population is using psychedelics to treat their mental health, despite the possible severe legal consequences. Experiences of those individuals researched in this thesis demonstrate there is a future for psychedelic treatment in New Zealand.

To understand the environment in which participants felt comfortable enough to use psychedelics, which are Class A substances, it was essential to understand the social and cultural context in New Zealand, discussed in Chapter Six. These findings were used as a basis to determine how receptive the New Zealand environment would be if psychedelics are legalised in the future. Participants were frustrated at the Class A status of LSD and psilocybin (and Class B for MDMA), however, that did not deter them from using them from using psychedelics to help their mental health and well-being. Social support was clearly very important to participants and research showed that friends were generally highly supportive, although responses from families were mixed. Future research will need to determine the prevalence of social stigma towards psychedelics in New Zealand and the best method of combating it. A highly stigmatised environment will only harm users' mental health further. An interesting finding covered in this chapter is that there is an already-established psychedelic network in New Zealand, in part facilitated by online Facebook groups, that serves to support and provide safety advice to psychedelic users. This will be a valuable sample to draw on for future research and indicates the degree of activity of psychedelic therapy that already exists in New Zealand. Overall, the study demonstrated that participants

were an insightful, well-informed sample, who strongly advocated for the legalisation of psychedelics for mental health treatment in New Zealand.

This study found that results in New Zealand were congruent with international studies, with some interesting exceptions, covered in Chapter Seven. Participants reported increased introspection and confrontation of issues (Gasser et al., 2015), changes in perspective (De Gregorio et al., 2021a), improved mood (Rucker et al., 2022), and prosociality (Chi & Gold, 2020). The effects from the experience were shown to be long-lasting, with minimal adverse effects. Some exceptions were observed in the New Zealand environment due to the illicit nature and accessibility of LSD, psilocybin, and MDMA. Participants used psychedelics for a wider range of mental health needs than the literature on international research suggests. For example, international studies show MDMA to be the standard for Post-Traumatic Stress Disorder (PTSD) treatment (Mithoefer et al., 2011, 2018), however in this study two participants treated PTSD with psilocybin, and one participant treated it with LSD.

In this chapter, aspects of spirituality are also explored and a key finding was the idea of ‘the Knocking’. The Knocking is described by participants as the idea that psychedelics (particularly psilocybin) will present users with the mental health issues needing to be addressed. There does not appear to be evidence of the Knocking in other literature, although this may be because psychedelics have historically been examined from a western perspective. Indeed, the Māori healing practice Rongoā Māori (RM) views plants as individual entities, alive and able to communicate with healers (Mark et al., 2017). This indicates that understanding psychedelics may be complex and will require studying them through other cultural lenses.

The concept of a ‘self-therapist’ is examined in Chapter Eight. In self-therapy, individuals have chosen to use psychedelics to improve their mental health on their own, rather than alongside conventional therapy. In part, this decision to self-medicate is due to the deficiency of New Zealand’s mental health system. Participants generally found that conventional talk therapy was difficult to access and that conventional medicine was a gamble; while it worked for some, for others there were severe adverse effects, such as suicidal ideation, psychosis, or numbing of emotions. As self-therapists, participants used substantial research to craft a tailored therapy method, which included safety measures such as dosing and testing and adherence to set and setting. Out of these treatment methods came the concept of combining macrodosing and microdosing, used by two participants. Macrodosing was used for introspective healing sessions, while microdosing was used

between the macrodose sessions, to elevate mood and increase focus. It appears that, while macrodosing was used to pull participants out of a depressive episode, microdosing served to prevent the episode altogether. Combining approaches in this way could be valuable for people not in the right mindset to macrodose but who need to lift their mood via a microdose before beginning the healing process. Overall, the decision to become self-therapists was largely due to the lack of legal psychedelic treatment in New Zealand, indeed, many participants desired psychedelics to be used as an adjunct to legal psychotherapy.

The recreational use of psychedelics is inevitable, and therefore it is better to explore how they can be used in an advantageous way. The disproportionate fears around psychedelic harms have since been disproven, and New Zealand has long been due for a reevaluation of the Class A classification of psychedelics. This thesis is one of the first studies to explore psychedelics in a New Zealand context, as little psychedelic research has been conducted to date. It foregrounds the voices of psychedelic substance users, which may be useful in informing future drug policy. Four key implications can be taken from this thesis, as outlined below.

Prohibition of Psychedelics Does Not Work for Self-Therapists

The prohibition of psychedelics is ineffective. Prohibition of psychedelics was built on a history of intolerance, fueled in the late 1960s by moral panics and political agendas (Chi & Gold, 2020). The intention of prohibitive psychedelic laws is that they will deter individuals away from harmful drug use (Barnett, 2009). There are two issues with this. Firstly, prohibition has consistently been shown not to deter the public from substance use (MacCoun, 1993, UK Home Office, 2014). As evidence of this, this study has found that an established, underground psychedelic community is present in New Zealand. Secondly, according to Nutt et al.'s (2007) scale of harm, psychedelics are not harmful, and therefore the motive behind prohibition falls short. Participants of this study reported minimal adverse effects and little propensity for addiction. Indeed, prohibition does not prevent the public from seeking out psychedelics. Access to international studies on the therapeutic use of psychedelics provides individuals with the information they need to self-administer, while also providing reassurance for those using psychedelics for the first time. Furthermore, the lack of a legal regulated market for psychedelics did not prevent participants from accessing them. Participants found it relatively easy to forage for psilocybin-containing mushrooms or procure LSD and MDMA from the dark web, their friends, or via Discord - an online

messaging platform. Accessing psychedelics this way provided participants with easier, more affordable mental health therapy than that currently offered by legal treatment methods.

Instead of deterring participants from psychedelics, prohibition perpetuates societal and internal stigma, while also restricting potentially valuable research. This study found that prohibition only served to make participants fearful of legal repercussions. Research has demonstrated that being labelled as an illicit substance user can negatively impact mental health, which can be detrimental to an already vulnerable population (Birtel et al., 2017). Indeed, the desire to improve one's mental health should not be met with punishment. This study also demonstrates that prohibition is dangerous as it prevents people from discussing their psychedelic use with their family members and their therapists. In this way, prohibition of psychedelics restricts people's ability to be vulnerable about their mental health needs. Overall, New Zealand's legalisation of psychedelics would reduce this stigma by changing the narrative from criminal to therapeutic.

[Psychedelics Need to Be Rescheduled and Enabled in Drug Laws.](#)

As prohibition appears to be ineffectual, psychedelics need to be rescheduled and enabled in New Zealand drug laws. All participants in this study expressed a strong desire to see psychedelics legalised in New Zealand. Psychedelics have been classified as high-risk (Class A/B in New Zealand, Schedule 1 in the UK and US) on the condition that they have no medical purpose and that they cause harm. Studies have repeatedly demonstrated the therapeutic value of LSD, psilocybin and MDMA (Bird et al., 2021, Carhart-Harris, 2016, Chi & Gold, 2020, Griffiths et al., 2016, Hall, 2021, Ostuzzi et al., 2018), as well as the minimal harm potential (Bonomo et al., 2019, Nutt et al., 2007). This study supports international findings. On this basis, psychedelics no longer meet the conditions for Class A and B classifications in New Zealand. It is time for New Zealand to evaluate the relevant research and update its drug laws. Renewal in the interest in psychedelics is happening internationally, and New Zealand must not be left behind. Psilocybin is currently legal in Brazil, Bulgaria, Jamaica, the Netherlands, Samoa, and the US state of Oregon (Hallifax, 2022). It is decriminalised in Portugal, and the US state of Washington DC, as well as in certain US cities across Colorado, California, Massachusetts, and Michigan (Ollove, 2022). The wealth of international research and emerging New Zealand research demonstrate the success of LSD, psilocybin, and MDMA, which could pave the way for psychedelics to be

more fully researched in the New Zealand context – with the ultimate aim of legal psychedelic therapy.

The New Zealand government's struggle to provide the public with accessible mental health care demonstrates the necessity to look at psychedelics as an alternative treatment method. Several government reports (He Ara Oranga, 2018, MHWC, 2022) demonstrate that New Zealand is currently not fulfilling the public's Right to Health, which states that the public must have access to the highest attainable standard of healthcare. The high expense of mental health services, along with 12-month waitlists, drove participants in this study to take their mental health into their own hands. Covid-19 has had a detrimental effect on the public health system and the strain on New Zealanders' mental health will continue to impact for years to come. Enabling psychedelics through a change in drug laws could significantly reduce pressure on the mental health system.

Current criminalisation of the use of psychedelics, means studies such as this are small and covert. While this MA study shows that participants crafted their own therapy and incorporated research-supported harm reduction methods, the small sample size is not necessarily representative of the broader psychedelic-using population. The legalisation of psychedelics will ensure that harm reduction strategies can be more accessible and widespread across New Zealand. Regulation of psychedelic substances means that they can be sold unadulterated, in correct doses, and with safety information at the point of sale making their use safer.

[Psychedelics Should Be Available for Both Self-Medication and as an Adjunct to Psychotherapy.](#)

Psychedelics and conventional therapy are not mutually exclusive. The research literature strongly advocates for the use of psychedelics as an adjunct to psychotherapy (Bird et al., 2021, Davis et al., 2020, De Gregorio et al., 2021a, Griffiths et al., 2016). This means that users will be guided through the psychedelic experience by a trained therapist, with preparation sessions prior and debriefing sessions afterwards (Kriedet et al., 2020, Mithoerfer et al., 2016). Several study participants, using therapy and psychedelics concurrently, eventually had positive experiences with conventional therapy and medication and chose to continue using psychedelics alongside, as if to replicate the psychedelic-assisted psychotherapy method in international trials (Bird et al., 2021, De Gregorio et al., 2021a). Indeed, the majority of participants stated that self-medication was not their preferred

treatment method and that they would much rather have a clinical therapist guide their session. They were adamant that psychedelics were only a tool for improving their mental health, rather than a cure, and therefore would greatly benefit from the addition of professional help.

While formal psychedelic therapy in New Zealand is a long-term goal, it should not prevent psychedelics being available for self-medication purposes. The low number of clinical therapists currently available in New Zealand may mean that psychedelic-assisted therapy will encounter similar accessibility issues as conventional therapy (Rucklidge et al., 2018). If people are able to self-medicate safely alongside formal psychedelic therapy, it may reduce the burden on the mental health system. Indeed, if psychedelics produce the same successful, sustained effects that the literature has suggested, the demand for mental health services could stabilise at the least and potentially decline, thereby reducing issues with accessibility. Participants in this study demonstrated that self-medication, while perhaps not maximising psychedelic's potential, is still effective for treating mental health and well-being. Some participants even preferred to use psychedelics on their own. With prohibition proven to be ineffective, and the use of psychedelics already apparent in New Zealand, legalising self-medication will prevent harms due to criminalisation and stigma.

Psychedelic Research Must Consider Diverse Cultural Approaches.

Modern studies of psychedelics have primarily used a western lens. Western psychedelic research needs to acknowledge the roots of some plant-based psychedelics and be mindful that psychedelic therapy is different to conventional western medicine. For thousands of years, indigenous groups have used plant-based psychedelics for spiritual and healing purposes, therefore the prohibition of psychedelics is a strictly western construct (Rucker et al., 2022). Future research and education should consider examining other cultures' use of psychedelics, particularly in regard to spirituality. Numerous studies have linked the perceived spirituality of psychedelic experiences with positive clinical outcomes (Garcia-Romeu et al., 2014, Lafrance et al., 2021, Roseman et al., 2019). In this study, the 'Knocking' demonstrated a strong spiritual association with psychedelics, where participants were communicated with on a subconscious level. Criticising this as 'wishy-washy' would be limiting mental health treatment to a purely Western perspective. Indeed, future New Zealand psychedelic research should incorporate a Māori lens on the use of psychedelics. An

examination of the historical Māori healing practice of Rongoā Māori (RM) demonstrates how plants are able to communicate with traditional healers (Mark et al., 2017). This connection between an individual and a plant supports this concept of the ‘Knocking’ described by participants in regards to the plant-based psychedelic psilocybin. The spirituality of psychedelics may cause some to view it as a pseudo-science, however doing so would dismiss the successful use of psychedelics by other cultures.

Examining psychedelics through the lens of other cultures means that we must also be aware of cultural appropriation. Michael Pollan (2018) discusses the case of Maria Sabina, a Mazatec woman from the remote Mexican village Huautla de Jimenez, where psilocybin was used in a sacred healing ritual called ‘velada’. In 1955, ethnomycologist R. Gordon Wasson visited Sabina and tricked her into guiding him through a velada session. Wasson published a paper about his psilocybin experience, and subsequently, the Huautla de Jimenez village was besieged by western visitors (Pollan, 2018). This altered the dynamics of the village community, who ostracised Sabina for her involvement, including murdering her son and burning down her house (Schwartz-Marin et al., 2021). In this case, western appropriation of psilocybin infringed on the Mazatec sacred customs with ruinous effect. All future psychedelic research must be highly sensitive to cultural context and sacred use as well as indigenous intellectual property. We must also consider whether using some plant-based psychedelics will be taking away resources from indigenous populations (Campbell, 2021). One example of this is peyote, a small cactus which mescaline is derived from, and in the US is currently only legal for Native American consumption (Campbell, 2021). In a 2020 interview with the LA Times (Sahagun, 2020), Navajo spiritual leader Steven Benally expresses concern about the growing western interest in peyote, which is considered crucial for Native American religious identity. Activist groups, such as ‘Decriminalise Nature’, wish to legalise peyote for public consumption, however, some Native American communities are worried about the impact this will have on the already sparse peyote populations that grow wild on Native American reserves. Psychedelic substances that are sacred to indigenous cultures, such as peyote, should be off-limits. Indeed, there are other natural sources of mescaline which do not involve infringing on Native American resources, such as the San Pedro cactus (Sahagun, 2020).

Going Forward: Concluding Remarks

This thesis calls for the New Zealand government to legalise psychedelics for the use of mental health. The study demonstrates that, regardless of prohibition, psychedelic use is still prevalent. Both international studies (Bird et al., 2021, Davis et al., 2020, De Gregorio et al., 2021a, Griffiths et al., 2016) and the results found here demonstrate how effective psychedelics can be in treating mental health and well-being needs. Instead of criminalising individuals who are using psychedelics to improve their mental health, New Zealand needs to enable more research and take advantage of the benefits of psychedelic substances. A path to legalisation must be made so that psychedelics can be used as an adjunct to psychotherapy, thereby maximising their potential. At the very least, psychedelics ought to be decriminalised, as the public should not be punished for attempting to address their mental health needs and accessing their right to health.

Currently, there are substantial gaps in the psychedelic literature, particularly in regard to set and setting, and spirituality, and more research needs to be conducted in New Zealand to address these gaps. Both international studies and this thesis use relatively homogenous samples (Gukasyan & Nayak, 2021, Noorani & Martell, 2021), and future research should prioritise diversity. In particular, there is no existing literature on how psychedelic substances will affect Māori and Pasifika populations. Studying these populations for certain aspects of psychedelic therapy, such as set and setting, may reveal crucial and differentiated insights that are specifically relevant to the New Zealand context. Future policy needs to be guided by this study and additional studies conducted on non-pākehā audiences. While this thesis stresses the urgent need for more psychedelic research, the legalisation of psychedelics should not wait for this to be conducted. As psychedelic use is already in New Zealand, immediate legalisation will be beneficial for harm reduction measures and mitigating potential social stigma.

Advertising for this study was met with extensive support for this line of research, demonstrating that New Zealanders are keen to determine how psychedelics can play a role in mental health treatment. Aside from the study participants, numerous people reached out during this research process, expressing interest in meeting to discuss the future of psychedelics in New Zealand, and to be part of a movement towards legalisation. There were also many requests to receive copies of the thesis on completion. Participants and the members of the public who reached out had found psychedelics life-changing and most could

access these psychedelics easily. Their passion in wanting to legalise psychedelics was not for their own use but because they believed others suffering would benefit significantly.

'It [psychedelics] changes your mindset so drastically in the moment it makes you go, fuck, I want this drastic change permanently. I don't want this to just be a 6, 8, 10 hour experience. I want my life to be different when this is over.' (Ralph)

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Appendices

Appendix A: Ethical Approval



TO	Daisy Lutyens
FROM	Associate Professor Rhonda Shaw, Convenor, Human Ethics Committee
DATE	25 November 2021
PAGES	1
SUBJECT	Ethics Approval Number: 29937 Title: The benefits of psychedelic therapy for mental health in New Zealand

Thank you for your application for ethical approval, which has now been considered by the Human Ethics Committee.

Your application has been approved from the above date and this approval is valid for three years. If your data collection is not completed by this date you should apply to the Human Ethics Committee for an extension to this approval.

Best wishes with the research.

Kind regards,



A/Prof Rhonda Shaw

Convenor, Te Herenga Waka—Victoria University of Wellington Human Ethics Committee

**Psychedelics in NZ
Research Study**

Have you had experience using psychedelic substances in relation to mental health issues e.g. PTSD, Depression, Anxiety? Would you like to participate in a study about your experiences?

My name is Daisy Lutyens and I am a MA student at Victoria University of Wellington. This project will explore people's experiences using psychedelics to help with mental health issues and/or wellbeing. In taking part you will be contributing to the understanding of psychedelics as an alternative to conventional mental health treatment in NZ.


If you would like to take part in an informal interview (\$20 supermarket voucher as koha), please get in touch:

[REDACTED]

I am looking for people who:

- Are over the age of 18
- Have used a psychedelic substance (e.g. MDMA, LSD/Acid, Psilocybin/Magic Mushrooms) to help with a mental health issue/wellbeing

If you wish to take part in the survey (you can do the survey and volunteer to be interviewed), follow this QR code:



This project has been approved by Victoria University of Wellington Ethics: approval number #29937. Your information will be kept confidential.

Appendix C: Social Media Posts

Kia ora,

Have you had experience using psychedelic substances in relation to mental health issues e.g. PTSD, Depression, Anxiety? Would you like to participate in a study about your subjective experience?

My name is Daisy Lutyens and I am a MA student at Victoria University of Wellington. This project will explore how people in New Zealand may have used psychedelic substances to help with their mental health issues and/or wellbeing. Your participation will support this research by contributing to the understanding of psychedelics as an alternative to conventional mental health treatment in New Zealand.

I am looking for people who:

- Are over the age of 18
- Have used a psychedelic substance (e.g. MDMA, LSD/Acid, Psilocybin/Magic Mushrooms) to help with a mental health issue.

This project has been approved by Victoria University of Wellington Ethics: approval number #29937. Participant information will be kept confidential.

If you wish to participate in the survey, follow this link:

http://vuw.qualtrics.com/jfe/form/SV_bEhSj1juMhzsFy6

If you would like to participate in an interview, please get in touch:

Participants of the interview will be offered a \$20 supermarket voucher as koha.

Effects of Psychedelics on Mental Health

INTERVIEW INFORMATION SHEET FOR PARTICIPANTS [psychedelic users]

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

Who am I?

My name is Daisy Lutyens and I am a Masters student in Criminology at Victoria University of Wellington. This research project is work towards my thesis.

What is the aim of the project?

This project aims to identify whether there is a future for mental-health related psychedelic research in New Zealand. This project will explore how people in New Zealand may have used psychedelic substances to alleviate their mental health issues. Your participation will support this research by contributing to the understanding of psychedelics as an alternative to conventional mental health treatment in New Zealand. This research has been approved by the Victoria University of Wellington Human Ethics Committee #29937.

How can you help?

You have been invited to participate because you have experience using a psychedelic substance during a time where you suffered from a mental health issue. If you agree to take part I will interview you at either a Victoria University café or meeting room, depending on your preference.

As the interview may include discussion of illegal activities, such as drug use and supply, in the unlikely event that the Police become interested in my research I may have to disclose any information of this nature that you provide.

I will ask you questions about your personal experience using psychedelic substances. It is expected that the interview will take approximately 30-60 minutes, and a \$20 supermarket voucher will be offered as a koha for giving up your time for the research. I will audio record the interview with your permission and write it up later. You can choose to not answer any question or stop the interview at any time, without giving a reason. You can withdraw from the study by contacting me at any time before 10/07/2022. If you withdraw, the information you provided will be destroyed or returned to you. Withdrawing from the study will not have any impact on the supermarket voucher that you received as thank you for taking part.

What will happen to the information you give?

Unless as stated above the Police become interested in my research, this research is strictly confidential. Confidentiality will be preserved except where you disclose something that causes me to be concerned about a risk of harm to yourself and/or others. This means that the researcher named below will be aware of your identity but there will be no identifying information included in the write-up of results from this research project, as pseudonyms will be used in the research project. The information given in the interviews may be published in academic journals and may also be presented at academic conferences or public seminars and lectures, and in media opinion pieces.

Only my supervisor and I will read the notes or transcript of the interview. The interview transcripts, summaries and any recordings will be kept securely and destroyed on 11/09/2021.

What will the project produce?

The information from my research will be used in my Masters thesis.

If you accept this invitation, what are your rights as a research participant?

You do not have to accept this invitation if you don't want to. If you do decide to participate, you have the right to:

- choose not to answer any question;
- ask for the recorder to be turned off at any time during the interview
- withdraw from the study before 10/07/2022
- ask any questions about the study at any time;
- receive a copy of your interview transcript
- be able to read any reports of this research by emailing the researcher to request a copy.

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Student:

Name: Daisy Lutyens

University email address [REDACTED] z

Supervisor:

Name: Fiona Hutton

Role: Associate Professor

School: Social and Cultural Studies

Phone: [REDACTED]
[REDACTED]

information

If you have any concerns about the ethical conduct of the research you may contact the Victoria University of Wellington HEC Convenor: Associate Professor Judith Loveridge. Email hec@vuw.ac.nz or telephone +64-4-463 6028.

Effects of Psychedelics on Mental Health

CONSENT TO INTERVIEW (all participants)

This consent form will be held for two years.

Researcher: Daisy Lutyens, School of Social and Cultural Studies, Victoria University of Wellington.

- I have read the Information Sheet and the project has been explained to me. My questions have been answered to my satisfaction. I understand that I can ask further questions at any time.
- I agree to take part in an audio recorded interview.

I understand that:

- I may withdraw from this study at any point before 10/07/2022, and any information that I have provided will be returned to me or destroyed.
- The identifiable information I have provided will be destroyed on 11/09/2022
- Any information I provide will be kept confidential to the researcher and the supervisor. Confidentiality will be preserved except where you disclose something that causes me to be concerned about a risk of harm to yourself and/or others.
- I understand that the interview may include a discussion of illegal activities, such as drug use and supply and that in the unlikely event that the Police become interested in the research, the researcher may have to disclose any information of this nature that I provide.
- I understand that the findings will be used for a Masters thesis.
- I understand that the recordings will be kept confidential to the researcher and the supervisor
- My name will not be used in reports and utmost care will be taken not to disclose any information that would identify me.

would like a copy of the transcript of my interview:

es o o o

would like to receive a copy of the final report and have added my email address below. es o o o

Signature of participant:

Name of participant:

Date:

Contact details:

Appendix F: Participant Interview Guide

Effects of Psychedelics on Mental Health

Interview guide/questions (participants who experienced psychedelics)

Loose guide - keep similar to conversation

Intro/Background

- Had you used psychedelics previously, for recreational purposes?
 - What substance was used?
 - How often?
- What was your attitude towards psychedelics prior to using them for mental health/wellbeing purposes?
- What type of psychedelic substance have you had experience with, for treating mental illness/wellbeing?
 - When did you start using it?
- Where did you first hear about using psychedelics for mental health/wellbeing?

Follow Option A for mental health and option B for wellbeing, then return to specifics

Option A: Mental health

- What mental health issue were you hoping to treat?
 - How long had you had this issue?
- Had you tried conventional medicine?
 - For how long?/ are you still on it?
 - Were there any adverse side effects?
- Have you been to therapy for this mental health issue?
 - Does your therapist know about your use of psychedelics?
- Why did you think that psychedelic-assisted therapy would help?

Option B

- What was the aim of using psychedelic substances for wellbeing?
- Had you been having issues with this or did you simply want to improve it?
- Had you tried any non-psychedelic methods?
 - For how long?
 - What kind of effect did you notice?
 - Any adverse side effects?

Specifics

- What was your dosage and frequency? How did you decide this?
- Do you currently use psychedelics to help with mental health/wellbeing?
 - If no, why did you stop?
 - How long have you been using it for?
- How did you access the substance?

Experience

- How did you find the experience?
- Did you notice any effect on mental health once you started using psychedelics?
- Did you notice any adverse effects from using psychedelics?
- [If they said yes to using conventional mental-health medication - did you use the conventional medication while using the psychedelic substance?]
 - How was that?
 - Did one change the effect of the other?

Social

- Is this method of treatment something that you tell family and/or friends about? Why/why not
- Have you experienced any stigmatisations around the usage of psychedelics?
 - How did this impact your experience?
- Would you like to see psychedelics become legal for mental health treatment?
 - Do you think this is a possibility in New Zealand's future?
 - Based on your experience, do you think there would need to be parameters set on how the treatment was carried out?
 - Do you believe there would need to be a criteria for eligibility?

Effects of Psychedelics on Mental Health

INFORMATION FOR PARTICIPANTS [Anonymous Surveys]

You are invited to take part in this research. Please read this information before deciding whether or not to take part. If you decide to participate, thank you. If you decide not to participate, thank you for considering this request.

Who am I?

My name is Daisy Lutyens and I am a Masters student in Criminology at Victoria University of Wellington. This research project is work towards my thesis.

What is the aim of the project?

This project aims to identify whether there is a future for mental-health related psychedelic research in New Zealand. This project will explore how people in New Zealand may have used psychedelic substances to alleviate their mental health issues. Your participation will support this research by contributing to the understanding of psychedelics as an alternative to conventional mental health treatment in New Zealand. This research has been approved by the Victoria University of Wellington Human Ethics Committee #29937.

How can you help?

You have been invited to participate because you have experience using a psychedelic substance during a time where you suffered from a mental health issue. If you agree to take part, you will complete a survey. The survey will ask you questions about your personal experience using psychedelic substances. The survey will take you approximately 10 minutes to complete.

What will happen to the information you give?

This research is anonymous. This means that nobody, including the researchers will be aware of your identity. By answering it, you are giving consent for us to use your responses in this research. Your answers will remain completely anonymous and unidentifiable. Once you submit the survey, it will be impossible to retract your answer. Please do not include any personal identifiable information in your responses.

What will the project produce?

The information from my research will be used in Masters thesis.

If you have any questions or problems, who can you contact?

If you have any questions, either now or in the future, please feel free to contact either:

Student:

Name: Daisy Lutyens

University email address: [REDACTED]

Supervisor:

Name: Fiona Hutton

Role: Associate Professor

School: Social and Cultural Studies

Phone: [REDACTED]

Email: [REDACTED]

If you have any concerns about the ethical conduct of the research you may contact the Victoria University of Wellington HEC Convenor: Associate Professor Judith Loveridge. Email hec@vuw.ac.nz or telephone +64-4-463 6028.

Appendix H: Participant Survey Questions

1. Psychedelics (e.g. LSD, Magic Mushrooms/psilocybin, MDMA) are substances which can produce a change in perception, mood, and cognition. Have you ever used psychedelics recreationally (i.e. not for therapeutic purposes)?
2. Have you ever used a psychedelic substance for mental health and/or wellbeing purposes?
3. What is the main psychedelic substance that you have used for mental health/wellbeing purposes? Please use the extra text box provided for any extra information you want to add
 - LSD/Acid
 - MDMA
 - Mushrooms (Psilocybin)
 - Other (please explain)
4. If you feel comfortable, please describe the specific mental health/wellbeing issues that the substance was used for
 - Sleep
 - Anxiety
 - Depression
 - To cope with past trauma
 - PTSD
 - Productivity
 - Creativity
 - Other (please explain)
5. Do you currently (in the last 3 months) use psychedelic substances to help with mental health/wellbeing?
6. If you do not currently (in the last 3 months) use psychedelic substances to help with mental health/wellbeing, why did you stop?
7. How frequently did/do you use the psychedelic substance to help with mental health/wellbeing?
 - Daily
 - 2-3 times per week
 - Weekly
 - Once every 2-3 weeks
 - Monthly
 - Other (please explain)
8. Have you noticed a positive effect on your mental health/wellbeing when using this substance for therapeutic purposes? If yes, please explain
9. Have you noticed a negative effect on your mental health/wellbeing when using this substance for therapeutic purposes? If yes, please explain
10. Have you noticed a mixed effect on your mental health/wellbeing when using this substance for therapeutic purposes? If yes, please explain
11. Have you noticed any other side effects from using this psychedelic substance to help with your mental health/wellbeing?
12. When using the psychedelic substance for mental health/wellbeing purposes, did/do you microdose (a small dosage that has little perceived effect) or take a higher dose?
 - Microdose
 - Higher dose

13. What is/was your average dosage – i.e. how much did you take per session?
14. How did you determine the best dosage for you?
15. How did you access the substance?
 - Friends
 - Discord
 - Dark web
 - Other online source (please add in textbox provided)
 - Other (please add in textbox provided)
4. Can you tell me your age?
5. Can you tell me your ethnicity?
6. Can you tell me your gender identity?
7. Can you tell me what area you are from?

Would you like to further participate in an interview on your experiences with psychedelic substances? There will be a \$20 supermarket voucher given as koha

- If yes, what is your email address?

Appendix I: List of Support Services Offered

At the end of the survey and interview a list of national support services will be made available to participants. This is listed below.

[Lifeline](#) – 0800 543 354 (0800 LIFELINE) or free text 4357 (HELP)

[Suicide Crisis Helpline](#) – 0508 828 865 (0508 TAUTOKO).

[Healthline](#) – 0800 611 116

[Samaritans](#) – 0800 726 666

[Depression Helpline](#) – 0800 111 757 or free text 4202

[Anxiety NZ](#) – 0800 269 4389 (0800 ANXIETY).

Appendix J: Analysis – Codes

Key:
Pink - LSD
Orange - MDMA
Green - Psilocybin

Substance	Codes	Location (letter/page)
LSD	Tried psychedelics recreationally	M1, S1, J1, P1
	Belief that psychedelics change the brain	M2
	Prior attitudes: positive towards LSD	M2, J2
	Feel LSD experience more controllable than psilo	M2, P27, P28, P29
	Cautious attitudes to psychedelic/drug use	M2, E1
	Source of substance knowledge - friends	M2, P3
	Source of substance knowledge - own research	M2, S1, J2, P3
	expectation of trip plays a role	M2
	supportive friends	M3, M12, J11, E11, P3, P8
	self-made therapy technique helped by LSDm	M3, M4, M7, M8
	LSD + anxiety	M, J, E, P
	Issues with conventional therapy: financial	M4
	Believes therapy + LSD best combo	M4, P5
	Issues with conventional medicine: weight gain	M5
	Set: Would not take in bad mindset	M5, E2, E10
	LSDm for root of issue: clarity and focus	M6, P10
	Believes microdose most effective for LSD	M6, P9
	Later can recall mindset	M6, M8, E6, E10
	Setting: music	M7, J6, P2, P23
	Preparation for session: writing down issues	M7, M9
	LSDm more in tune with self	M7
	Self-therapy techniques: CBT	M7
	LSDm not the cure, need therapy	M8 M13, E12, P6
	Root of issue: questioning cause	M8, J6, J14, P4, P5
	Prior LSD recreational use made more comfortable	M8
	Set: needs to be focused	M9
	Currently still used LSDm	M9

	LSDm safety: infrequent usage due to addiction concern	m10
	LSD as a therapy tool	M10, M13, M14, J14, E13, P3
	Same therapy techniques don't work sober	m10
	LSDm as last resort	m10
	Access: Friends	m10
	Adverse effects: none	M11, R13
	Not open with parents: anti-drug	M11, M12, S9, J9, E11, P7
	Not open with parents: Protect from extent of MH	M11
	Can talk about it with younger gen of family	M12, P8
	Future of LSD for MH: yes	M12, S10, J11
	Future of LSD for MH: more research needed	M12, P16
	Future of LSD for MH: public need education	M12, J12, P16
	Future of LSD for MH: believes NZ will follow other countries	M13
	Eligibility of LSD for MH: concerned about schizophrenics	M13
	No plans to ever stop LSD m	M14
	LSDm for focus	M15, P10
	LSDm facilitates introspection	M15,
	LSDm for calm	M15
	LSD for productivity	R2
	LSDm stops cyclical thinking	M16
	LSD for alcoholism	S
	LSD for PTSD	S
	little prior knowledge of psychedelics	S2
	Source of substance knowledge - forums	S2, P10
	LSD retroactively realise MH issues	S2, S3, P1, P4, P11
	Issue with conventional therapy: not helpful	S3, S6, E3
	Sentient LSD	S3, S4, S13, P3, P4, P20, P29
	LSD leads to confrontation of trauma	S3, S6, S13
	Importance of setting intention	S3, P4, P21
	LSD: high dosage to get into right headspace for session	S4
	LSD too distracting and social for MH	R3
	Root of issue: discovering trauma	S4
	LSD safety: strong social support	S4,
	Therapist encouraging and well researched	S4

	LSD use lead to less conventional therapy needed	S5
	Drop off rate of LSD usage for MH	S5, J5, J8
	Access: Dark web	S5
	During Trip removal of trauma fear	S6
	LSD + Alcoholism: no need to be abstinent	S6
	LSD + Alcoholism: no interest on trip = weaned off	S7
	Adverse effects: feeling 'dirty' - not negative	S8
	Not open with family: no impact on LSD effect	S9
	Family opinions change after observing effects	S9, J10, E11
	Future of LSD for MH: guides needed	S10
	Future of LSD for MH: needs to be accepted as a medicine	S10
	Future of LSD for trauma therapy: P would need prep	S11
	Eligibility of LSD for MH: everyone	S11
	Very knowledgeable of science behind LSD and MH	S11
	Belief that psilocybin less confrontational than LSD	S13
	LSD for depression	J
	Source of Substance knowledge: Family	J2
	Only used one psych for MH	M, J
	Has used multiple psych for MH	S
	LSD for pandemic-exacerbated anxiety	J3, P21, P22
	Conventional Medicine: antidepressants helpful	J3, J4, E3
	Issues with conventional therapy: bad experience	J4
	Safety with LSD: tests the tabs	J5, E1, E4, P9
	Currently still used LSD	S, J
	LSD safety: no fear of dependency	J6
	Setting: comfortable environment	J6
	LSD can see issues more clearly	J6
	LSD makes it okay to feel negative emotions	J7
	Looking for root: can't focus when sober	J7
	LSD introspection, reflect on issues	J7, J14, P24
	LSD facilitates new perspective, observer	J7, J13, J14, E6, E8, E9, P4, P5, P13, P22, P29
	LSD work through issues with positive mindframe	J7
	LSD appreciate life more	J8, E6
	Lasting effect on MH	J8, J14, E2, E9, E10, P11, P12, P22, P29, R2, R11, R12, R14

	Conventional medicine + LSD: no cross-effect	J9
	Setting is important	J9, P26
	One supportive parent	J9, E12
	Future of LSD for MH: loss of faith after cannabis	J11, J12
	NZ stigma source: isolated country	j11
	NZ stigma source: no public discourse	J12, P7, P15
	NZ legalisation: concern about potential abuse	J12, J13
	Eligibility debate: age + MH vs. access for all	J13, P18
	LSD helped with motivation	J13, P22
	One time usage of LSD	E
	Prior attitudes towards psychedelics: cautious	E1
	Lack of education of psychedelics growing up	E1
	Supportive dealer friend	E4
	Setting: Safe and supportive social environment	E5, E10, P6, P26
	LSD helped to release control/anxiety	E6, P13, P19, F6
	Adverse effects: didn't care for self during trip	E8
	Adverse effects: Exhaustion	E8
	Set importance: Don't take in bad mindset	E10, E12
	NZ environment: Public knows it's not a harmful drug	E13
	Cannabis referendum due to misinformation	E14
	Other countries legalise psychedelics for money	E14
	NZ barrier: small size means harder for research	E14, R28
	Belief that LSD more helpful than psilo	P2
	Root of issue: discovering trauma	P5
	Issue with conventional therapy: disbelief of LSD potential	P6
	Social stigma in medical profession	P6, P7
	Class A nature increases usage anxiety	P9
	Setting: nature	P9
	LSD lifts mood	P10, A25, R2
	Determination of dosage: self-test	P10
	Adverse Side effect: led to eco-anxiety (not negative)	P12
	NZ stigma source: poor drug education	P13, P14
	NZ is anti-drug	P13, P14
	NZ stigma source: binge culture supercedes psychedelics	P15
	Eligibility: Should have age limit	P16

	Parameters: Should have purchase limit	P16
	Future of LSD for MH: should not be up to the public as not knowledgeable	P17
	Peace in life	P22
	LSD facilitates social bonding	P25
	LSD forces confrontation of trauma/too intense for trauma	A25
MDMA	MDMA useful for social bonding/relationship building	F2, F3, F5, R9
	MDMA facilitates openness	R9
	MDMA useful for smoking cessation	F2
	Tried psychedelics recreationally	F1, A1
	Recreational cannabis led to anxiety	F1
	big part of NZ party scene	F1, A2
	improved perspective on life	F2
	Needs to be directed in positive way	F2
	Positive prior attitudes to psychedelics	F2
	MDMA facilitates intimacy	F2
	MDMA facilitates meaningful personal connections	F2, F5
	Barrier to MDMA: financial	F2, F5, R12
	Never felt addicted	F2
	Source of knowledge: Podcasts	F2
	Source of knowledge: Research	F3, A1, A9
		F3
	MDMA facilitates meaningful conversations	F3, R8
	Lessens comedowns by taking supplements	F3, R11
	Believes comedowns to be cathartic - positive	F3
	Prior methods of smoking cessation: willpower. Not work	F4
	Setting: Lighting	F4
	Setting: nature	F4, R8, R19
	Setting important	F4, A15
	Setting: With a friend	R6, R8
	Setting: Music	F4, M18, M19
	Sacredness of MDMA sessions	F5, R17
	Does not set intention	F5
	Access: European travellers	F5
	Family opinions change after observing effects	F6

	Future of LSD for MH: yes	F7, A30, A31
	Future of LSD for MH: more research needed	F7, A30
	Future of LSD for MH: public need education	F7, A30
	Shock after cannabis referendum	F7
	Eligibility: Age limit	F7, A31
	Does not think there would be potential for abuse	F7
	MDMA+PTSD severe, incl SA	A
	Recreational use of MDMA triggered PTSD flashbacks	A1
	Source of knowledge: recreational experiences	A1
	MDMA decision: 'safest' b/c most literature	A2
	MDMA decision: most available	A2
	Safety: Tested with KnowYourStuff	A2, A14
	Access: Friend	A2, A14
	Parent that is pro-drug	A3, A29
	Good education on illicit substances growing up	A3
	One-time therapeutic session of MDMA	A3
	MDMA helped to get past therapy 'block'	A3, A9, A17
	MDMA helped therapy session	A3
	Set: Conscious of a bad mindset	A4
	Set: Preparation is important	A4
	Presence of a tripsitter	A4
	Facilitated change of perspective/observer	A4, R7, R15
	Lasting effect	A4, A11, R7
	Setting: Supportive social environment	A5, A12, A16, R18
	Unable to talk to parents about trauma - burden	A6
	PTSD prevented daily functioning: work, uni	A7
	Doctors disbelieving of PTSD	A7
	ACC difficult for obtaining MH treatment	A8
	Conventional therapy helpful	A8
	MDMA facilitated self-love and self-acceptance	A9, A11, A17
	MDMA made therapy exercises more comfortable	A9
	Possible to deal with trauma without fear-response	A9, A15, A16, A24
	removed observer of memories	A9
	MDMA facilitates cathartic release of emotions	A9, A12, A17, R9, R11
	Source of knowledge: Therapist	A9

	Therapist aware and interested in MDMA therapy	A9, A12
	Long-considered decision to try MDMA	A9
	Recreational use of MDMA helped preparation	A10, A16
	Therapist helped plan session	A10, A15
	Pre-planned exercises	A10, A15
	Able to do therapy exercises without 'embarrassement'	A10, A11
	MDMA took away discomfort of revisiting trauma	A10, A15
	Wrote insights during trip	A10
	Setting: Alone	A11, A15
	Setting: Clean environment	A11
	MDMA ought to be combined with therapy	A12, A21, A30
	MDMA is a therapeutic tool	A12, R3, R8
	Therapist keen for MDMA as legal MH treatment	A12
	Adverse effect: emotionally and physically draining (neutral)	A13
	4 out of 6 hours of trip was therapeutic	A13
	Cannabis good as end to MDMA trip - may offset restlessness	A13
	Supportive dealer	A14
	MDMA unusually pure	A14
	Setting: Preprepared	A15
	Safety: Pre-prepared for bad trip	A16
	Sentient MDMA	A16
	MDMA brings trauma to surface (gently)	A16
	No comedown after session	A17
	Less PTSD flashbacks after session	A17
	Now is able to talk openly about trauma/PTSD	A17
	Adverse effect: Long sleep after session	A17
	MDMA helped work through guilt of trauma	A18
	Session was helpful but not vital to recovery	A18
	After session, more open to therapy exercises	A18
	Understanding of Trauma is key prior to session	A19
	Tried multiple conventional medicine	A19
	Issue with conventional medicine:worsened symptoms	A19
	Issue with conventional medicine:worsened symptoms	A20
	Doctors misdiagnosed PTSD as anxiety	A19
	MDMA not cure	A21

	ADHD medicine helped with PTSD nightmares	A21
	Not open with family: wants to protect from MH	A27
	Strong social support	A27, A28
	Has not told friends because feels trauma is difficult to hear	A28
	No stigmatisations experienced	A28
	Family open to hearing about recreational psyc. use	A29
	Supports decriminalisation of psychedelic substances	A29
	Double stigma of MDMA & therapy (drug and MH)	A30
	Eligibility of LSD for MH: concerned about schizophrenics	A30
	Loss of faith after cannabis referendum	A31
	Eligibility should be determined based on research	A31
	NZ enviro: conservative lobby groups	A32
	NZ enviro: misinformation	A32, R16
	Purity of MDMA key to experience & negating comedowns	R5
	Fear of MDMA impurity/cut with uteline	L9
	Before legalisation: Societal roots of MH issues need to be addressed	A32
	MDMA to talk out of mental rut	R6
	MDMA for depression and anxiety	R6
	MDMA facilitates motivation & finding solutions	R7, R8, R10, R15
	Same techniques won't work sober	R7, R8, R17
	Replaces alcoholism	R13
	Access: most easily accessible psyc	R13
Psilo	Access: foraging	A22, L8, C9, O1
	Access: growing	A22, T1, T2
	Psilo preferred over LSD	A22, L10, C9, R10
	Setting is important	A22, L12, C8, C9, T7, T8
	Set is important	L12, C8, T6, T7, T8
	LSD and psilo not as 'safe' as MDMA because no emotional cushion	A22, A24
	Psilocybin facilitates reflective thinking/introspection	A22, L6, R3, R9, R11
	Psilo and LSD very different to MDMA	A23
	Perspective gained from psilo and LSD could be achieved in therapy	A24
	Psilo for mood elevation	A25 O3, O16, T6
	Lasting effect of psilo	A26, L14, C7, O9, T8, R11, R14

	has not tried psychedelics recreationally	L1
	Decided to after seeing effect on family member	L2
	Source of knowledge: research	L2, O2, T1, T2, R1, R3
	Helped migraines	L2
	helped fibromyalgia	L2
	Psilo + PTSD	L2, T2
	Psilo + Anxiety	L2, L15, O, T3, R6
	Psilo + depression	L2, O, T2, R6
	Tried several forms of therapy without effect	L3
	Currently with good therapist	L3
	Therapist interested in impact of psilocybin, well researched	L3, L4
	Issues with conventional medicine: severe side effects	L4, L5
	Issues with conventional therapy: over-prescribed	L4, L6
	Issue with conventional medicine: induced psychosis	L4
	Issues with conventional therapy: not listening	L4
	Issues with conventional medicine: addiction	L5
	Issue with conventional medicine: did not work for migraines	L15
	No impact of psychedelics on conventional medicine	L5
	Uses combo of micro and macro	L6, L10, C4, O4, T4
	macro for healing/therapy	L6, C4, T4
	micro for balance between macro doses	L6, L7, C4, T6
	macro for root of issue	L6, C5, L11, R10
	Psilo invokes a spiritual connection	L6, L9, L12, C6, O16
	Best would be combined with therapy	L6
	Supportive & safe psychedelic community	L8, R4, R5, R11, R12, R17, R20, R21
	Fear of legal ramifications	L9
	The Knocking: brings issues you need to address	L9, L10, C5, C6
	Intention is important	L9, O8, O16, T7, T8
	Sentient Psilo	L9, L10, L11, L12, C6, C7, C8, R10
	Societal stigma around criminality = impacts	L9
	Same techniques don't work sober	L10, R17
	Used as a therapeutic tool	L10, R1, R8
	Unlocks hidden memories	L10, C6
	Psilo gives bravery to deal with trauma	L10
	Can choose not to deal with the issues on a trip	L11

	Would work best to combine with therapy	L11, L12, T5
	Resorted to form of self-therapy	L11
	Drop off rate	L12, C7, C8
	Greater societal stigma	L12
	Setting: Nature	L13, T7, R8, R19, R26
	Setting: Alone	L13, C8, C9
	Setting: Familiar environment	L13
	Setting differs depending on aim	L13
	Safety: makes others aware of trip	L13
	Setting: With 1 or 2 friends to bounce ideas off	R8, R9, R18
	Setting: dark	L13
	Psilo gives feeling of mental reset	L14, C4, C7
	Psilo significantly alleviated MH symptoms	L15, C5
	No adverse effects	L15, C9, O10, T8
	Supportive family	L15, C9, R22
	One parent supportive	T9, R14, R16
	One parent anti-drugs	T9
	Family is anti-drugs	O11
	Supportive friends	L16, C10, O12, T9, R17, R20
	Change of Family opinion	L16, R16, R17, R22, R29
	Encountered skepticism	L16
	Possible to be made legal for NZ MH	L16, C10, O14, T9, R25
	Wants it to be made legal for NZ MH	L16, C10, O14, T9, R25
	Barriers to being made legal: NZ behind rest of world	L17
	Barriers to being made legal: NZ is conservative	L17
	Concern about potential synthesising of psilo	L17, C11
	Future psyc-therapists should have experience using	L17
	Eligibility: no criteria, accessible for all	L17, C12
	Prior recreational use	C1, O1, T1, R1
	Psilo retroactively realised it helped MH issues	C2, O1, O3, R1, R10
	Source of knowledge: self-experimentation	C2, O2, T1, T2
	Issue with conventional medicine: Numbing effect	C3, T3
	Issue with conventional therapy: hindered by psychosis	C3
	Currently still uses psilo	C4
	Psilo facilitates deeper connection to consciousness	C4

	Dosage determination: trial and error	C4
	Regularly microdoses	C4, O7
	Psilocybin sessions akin to meditation	C4
	Psilocybin for addiction	C5
	Microdosing for mental sharpness	C7, O3, T4, T6
	Bad trips are when people don't understand how to use	C8, R1, R21, R24, R27
	Experienced no social stigma	C10, O13, T9
	Hypocrisy of Class A category	C10, O14
	Loss of faith after cannabis referendum	C10, O14, T9
	Barriers to being made legal: Big Pharma	C11
	Parameters and eligibility are difficult, esp. when natural	C12, O14
	Access: Friend	O1, R14
	Source of knowledge: Podcasts	O3
	Never felt addicted to psilo	O3
	Macro to get out of mental rut	R6
	Psilo not a cure	O4
	Psilo for getting another perspective on life	O4, O5, R24
	difficult but useful macro experience	O4, O5
	Macro reduced death-anxiety	O5
	Outer-body experience	O5
	Finds micro more useful	O7
	Micro makes more socially aware	O7
	Micro makes more intune with body's needs	O7
	Micro increases attention	O7
	Micro facilitates productivity	O7
	Micro more work/day friendly	O7
	Micro to get out of mental rut	O7, O8
	Better outcome of psilo if already looking after self	O8
	Psilo's increased mental sharpness can increase anxiety	O9
	Setting: Music	O9
	Preparation: empty stomach	O10
	Set & Setting not that important, bad trips are personal issue	O10
	Macro - lasting tiredness	O11
	Open with GP	O11
	Generational differences in family acceptance	O11, R22, R24

	Does not believe psilo laws are followed by police	O14
	Eligibility: Go through medical professional	O15
	Parameters: Supervision	O15
	NZ legalisation for MH: accompanied with education	O15, R28
	Current, exaggerated anti-drug education inspires distrust	O15
	Psilo increases empathy	O16
	Prior positive attitudes	T2, R6
	Therapist is aware of psilo use	T4, T5
	Macro for focus in sporting	T4, T5
	Macro for productivity	T5
	Set: bad trips can be detrimental	T6, T7
	Set: good mental headspace prior for macro	T7
	Setting: for macro good social support	T7
	Macro can increase social anxiety during trip if in social setting	T7, R13
	NZ legalisation for MH: needs more research	T9
	Barrier to NZ legalisation: need to look at other countries	T9
	Eligibility: age limit	T10, R27
	Eligibility: No MH criteria, accessible for all	T10
	Source of knowledge: Friends	R1, R3
	Psilo last resort	R1, R15
	Uses Psilo, LSD and MDMA for diff MH reasons	R2, R3
	Issue with conventional therapy: financial	R3
	Psilocybin facilitates motivation after session	R9
	Access: Difficult because seasonal	R10
	Micro not as effective for finding root of issue	R15
	Issue with conventional therapy: just didn't work	R15
	Issue with conventional medicine: made sluggish	R19
	Pandemic led to need for psychedelics	R20
	Geographical Differences in drug use throughout NZ	R23
	Anti-drug family members damages rel with family	R23
	Parameters: Safe setting important	R25
	Illegalisation causes dangerous usage	R27

Appendix K: Analysis - Initial Themes

Key:
Pink - LSD
Orange - MDMA
Green - Psilocybin

Themes	Codes	Location (letter/page)
Access	Access: Friends	m10
	Access: Dark web	S5
	Barrier to MDMA: financial	F2, F5, R12
	Access: European travellers	F5
	Access: Friend	A2, A14
	Access: most easily accessible psyc	R13
	Access: foraging	A22, L8, C9, O1
	Access: growing	A22, T1, T2
	Access: Friend	O1, R14
	Access: Difficult because seasonal	R10
	MDMA decision: most available	A2
Adverse effects	Adverse effects: none	M11, R13
	Adverse effects: feeling 'dirty' - not negative	S8
	Adverse effects: didn't care for self during trip	E8
	Adverse effects: Exhaustion	E8
	Adverse Side effect: led to eco-anxiety (not negative)	P12
	Never felt addicted	F2
	Lessens comedowns by taking supplements	F3, R11
	Believes comedowns to be cathartic - positive	F3
	Adverse effect: emotionally and physically draining (neutral)	A13
	No comedown after session	A17
	Adverse effect: Long sleep after session	A17
	Purity of MDMA key to experience & negating comedowns	R5
	No adverse effects	L15, C9, O10, T8
	Never felt addicted to psilo	O3
	Macro to get out of mental rut	R6
	Psilo's increased mental sharpness can increase anxiety	O9

	Macro - lasting tiredness	O11
	Macro can increase social anxiety during trip if in social setting	T7, R13
Alcoholism	LSD + Alcoholism: no need to be abstinent	S6
	LSD + Alcoholism: no interest on trio = weaned off	S7
	Replaces alcoholism	R13
Carthatic release of emotions	MDMA facilitates carthatic release of emotions	A9, A12, A17, R9, R11
	LSD facilitates new perspective, observer	J7, J13, J14, E6, E8, E9, P4, P5, P13, P22, P29
	Facilitated change of perspective/observer	A4, R7, R15
Clarity of issues	LSD can see issues more clearly	J6
Comparison to sober	Same therapy techniques don't work sober	m10
	Looking for root: can't focus when sober	J7
	Same techniques won't work sober	R7, R8, R17
	Same techniques don't work sober	L10, R17
Conventional methods	Issues with conventional therapy: financial	M4
	Issues with conventional medicine: weight gain	M5
	Issue with conventional therapy: not helpful	S3, S6, E3
	LSD use lead to less conventional therapy needed	S5
	Conventional Medicine: antidepressants helpful	J3, J4, E3
	Issues with conventional therapy: bad experience	J4
	Conventional medicine + LSD: no cross-effect	J9
	Issue with conventional therapy: disbelief of LSD potential	P6
	Prior methods of smoking cessation: willpower. Not work	F4
	Doctors disbelieving of PTSD	A7
	ACC difficult for obtaining MH treatment	A8
	Conventional therapy helpful	A8
	Tried multiple conventional medicine	A19
	Issue with conventional medicine:worsened symptoms	A19
	Issue with conventional medicine:worsened symptoms	A20
	Doctors misdiagnosed PTSD as anxiety	A19
	ADHD medicine helped with PTSD nightmares	A21
	Tried several forms of therapy without effect	L3
	Currently with good therapist	L3

	Issues with conventional medicine: severe side effects	L4, L5
	Issues with conventional therapy: over-prescribed	L4, L6
	Issue with conventional medicine: induced psychosis	L4
	Issues with conventional therapy: not listening	L4
	Issues with conventional medicine: addiction	L5
	Issue with conventional medicine: did not work for migraines	L15
	No impact of psychedelics on conventional medicine	L5
	Resorted to form of self-therapy	L11
	Issue with conventional medicine: Numbing effect	C3, T3
	Issue with conventional therapy: hindered by psychosis	C3
	Open with GP	O11
	Issue with conventional therapy: financial	R3
	Issue with conventional therapy: just didn't work	R15
	Issue with conventional medicine: made sluggish	R19
	Therapist interested in impact of psilocybin, well researched	L3, L4
Criminal status	Class A nature increases usage anxiety	P9
	Fear of legal ramifications	L9
Currently uses	Currently still used LSDm	M9
	Currently still used LSD	S, J
	Currently still uses psilo	C4
decision	Decided to after seeing effect on family member	L2
Dosage	LSD: high dosage to get into right headspace for session	S4
	Determination of dosage: self-test	P10
	Dosage determination: trial and error	C4
	Regularly microdoses	C4, O7
Drop off	No plans to ever stop LSD m	M14
	Drop off rate of LSD usage for MH	S5, J5, J8
	Drop off rate	L12, C7, C8
Drug combination	Cannabis good as end to MDMA trip - may offset restlessness	A13
Effect on discussion of issues	MDMA facilitates openness	R9

	MDMA facilitates meaningful conversations	F3, R8
	MDMA to talk out of mental rut	R6
Effect on social bonds	LSD facilitates social bonding	P25
	MDMA useful for social bonding/relationship building	F2, F3, F5, R9
	MDMA facilitates intimacy	F2
	MDMA facilitates meaningful personal connections	F2, F5
Eligibility opinions	Eligibility of LSD for MH: concerned about schizophrenics	M13
	Eligibility of LSD for MH: everyone	S11
	Eligibility debate: age + MH vs. access for all	J13, P18
	Eligibility: Should have age limit	P16
	Eligibility: Age limit	F7, A31
	Eligibility of LSD for MH: concerned about schizophrenics	A30
	Eligibility should be determined based on research	A31
	Eligibility: no criteria, accessible for all	L17, C12
	Eligibility: Go through medical professional	O15
	Eligibility: age limit	T10, R27
	Eligibility: No MH criteria, accessible for all	T10
	Parameters and eligibility are difficult, esp. when natural	C12, O14
Expectations	expectation of trip plays a role	M2
Finding root of issue	LSDm for root of issue: clarity and focus	M6, P10
	Root of issue: questioning cause	M8, J6, J14, P4, P5
	Root of issue: discovering trauma	S4
	Root of issue: discovering trauma	P5
	macro for root of issue	L6, C5, L11, R10
Focus	LSDm for focus	M15, P10
	LSDm stops cyclical thinking	M16
	Microdosing for mental sharpness	C7, O3, T4, T6
	Micro increases attention	O7
	Macro for focus in sporting	T4, T5
Frequency	Only used one psych for MH	M, J
	One time usage of LSD	E
	One-time therapeutic session of MDMA	A3
In tune with body	LSDm more in tune with self	M7

	Micro makes more intune with body's needs	O7
Intention	Importance of setting intention	S3, P4, P21
	Needs to be directed in positive way	F2
	Does not set intention	F5
	Intention is important	L9, O8, O16, T7, T8
Introspection	LSDm facilitates introspection	M15,
	LSD introspection, reflect on issues	J7, J14, P24
	Wrote insights during trip	A10
	Psilocybin facilitates reflective thinking/introspection	A22, L6, R3, R9, R11
Lack of understanding	Bad trips are when people don't understand how to use	C8, R1, R21, R24, R27
Last resort	LSDm as last resort	m10
	Psilo last resort	R1, R15
Lasting effect on MH	Lasting effect on MH	J8, J14, E2, E9, E10, P11, P12, P22, P29, R2, R11, R12, R14
	Lasting effect	A4, A11, R7
	Lasting effect of psilo	A26, L14, C7, O9, T8, R11, R14
Life appreciation	LSD appreciate life more	J8, E6
	Peace in life	P22
	improved perspective on life	F2
Loosen up	LSD helped to release control/anxiety	E6, P13, P19, F6
MDMA in party scene	big part of NZ party scene	F1, A2
meditative	Psilocybin sessions akin to meditation	C4
Mental reset	Psilo gives feeling of mental reset	L14, C4, C7
Mental rut	Psilo not a cure	O4
	MDMA to talk out of mental rut	R6
	Micro to get out of mental rut	O7, O8
Micro and Macro	Uses combo of micro and macro	L6, L10, C4, O4, T4
	micro for balance between macro doses	L6, L7, C4, T6
	Finds micro more useful	O7
	Micro more work/day friendly	O7
	Micro not as effective for finding root of issue	R15
	Believes microdose most effective for LSD	M6, P9
Mood	LSDm for calm	M15
	LSD for mood elevation	R2, R3,
	LSD lifts mood	P10, A25, R2

	Psilo for mood elevation	A25 O3, O16, T6
Motivation	LSD helped with motivation	J13, P22
	MDMA facilitates motivation & finding solutions	R7, R8, R10, R15
	Psilocybin facilitates motivation after session	R9
Moving past mental wall	MDMA helped to get past therapy 'block'	A3, A9, A17
Neuro changes	Belief that psychedelics change the brain	M2
NZ environment	Cannabis referendum due to misinformation	E14
	NZ stigma source: isolated country	j11
	NZ stigma source: no public discourse	J12, P7, P15
	NZ environment: Public knows it's not a harmful drug	E13
	Other countries legalise psychedelics for money	E14
	NZ barrier: small size means harder for research	E14, R28
	NZ stigma source: poor drug education	P13, P14
	NZ is anti-drug	P13, P14
	NZ stigma source: binge culture supercedes psychedelics	P15
	Frustrated with lack of NZ research progress	F3
	Double stigma of MDMA & therapy (drug and MH)	A30
	NZ enviro: conservative lobby groups	A32
	NZ enviro: misinformation	A32, R16
	Greater societal stigma	L12
	Barriers to being made legal: NZ behind rest of world	L17
	Barriers to being made legal: NZ is conservative	L17
	Hypocrisy of Class A category	C10, O14
	Barriers to being made legal: Big Pharma	C11
	Does not believe psilo laws are followed by police	O14
	Current, exaggerated anti-drug education inspires distrust	O15
	Barrier to NZ legalisation: need to look at other countries	T9
	Geographical Differences in drug use throughout NZ	R23
	Illegalisation causes dangerous usage	R27
Okay to feel negative emotions	LSD makes it okay to feel negative emotions	J7
Opinion on future	NZ legalisation for MH: accompanied with education	O15, R28

	Future of LSD for MH: yes	M12, S10, J11
	Future of LSD for MH: more research needed	M12, P16
	Future of LSD for MH: public need education	M12, J12, P16
	Future of LSD for MH: believes NZ will follow other countries	M13
	Future of LSD for MH: guides needed	S10
	Future of LSD for MH: needs to be accepted as a medicine	S10
	Future of LSD for trauma therapy: P would need prep	S11
	Future of LSD for MH: loss of faith after cannabis	J11, J12
	NZ legalisation: concern about potential abuse	J12, J13
	Future of LSD for MH: should not be up to the public as not knowledgeable	P17
	Future of LSD for MH: yes	F7, A30, A31
	Future of LSD for MH: more research needed	F7, A30
	Future of LSD for MH: public need education	F7, A30
	Shock after cannabis referendum	F7
	Does not think there would be potential for abuse	F7
	Therapist keen for MDMA as legal MH treatment	A12
	Supports decriminalisation of psychedelic substances	A29
	Loss of faith after cannabis referendum	A31
	Before legalisation: Societal roots of MH issues need to be addressed	A32
	Possible to be made legal for NZ MH	L16, C10, O14, T9, R25
	Wants it to be made legal for NZ MH	L16, C10, O14, T9, R25
	Concern about potential synthesising of psilo	L17, C11
	Future psyc-therapists should have experience using	L17
	Loss of faith after cannabis referendum	C10, O14, T9
	Therapist interested in impact of psilocybin, well researched	L3, L4
	NZ legalisation for MH: needs more research	T9
	Therapist encouraging and well researched	S4
	Therapist is aware of psilo use	T4, T5
	Therapist aware and interested in MDMA therapy	A9, A12
outer-body	Outer-body experience	O5
Pandemic MH	LSD for pandemic-exacerbated anxiety	J3, P21, P22

	Pandemic led to need for psychedelics	R20
Parameter opinions	Parameters: Should have purchase limit	P16
	Parameters: Supervision	O15
	Parameters: Safe setting important	R25
	Parameters and eligibility are difficult, esp. when natural	C12, O14
Preference of psyc	Feel LSD experience more controllable than psilo	M2, P27, P28, P29
	LSD too distracting and social for MH	R3
	Belief that psilocybin less confrontational than LSD	S13
	Has used multiple psych for MH	S
	LSD forces confrontation of trauma/too intense for trauma	A25
	MDMA decision: most available	A2
	Psilo preferred over LSD	A22, L10, C9, R10
	LSD and psilo not as 'safe' as MDMA because no emotional cushion	A22, A24
	Psilo and LSD very different to MDMA	A23
	Perspective gained from psilo and LSD could be achieved in therapy	A24
	Belief that LSD more helpful than psilo	P2
	MDMA decision: 'safest' b/c most literature	A2
Preparation	Therapist helped plan session	A10, A15
	Pre-planned exercises	A10, A15
	Understanding of Trauma is key prior to session	A19
	Better outcome of psilo if already looking after self	O8
	Preparation: empty stomach	O10
Prior attitudes	Prior attitudes: positive towards LSD	M2, J2
	Cautious attitudes to psychedelic/drug use	M2, E1
	little prior knowledge of psychedelics	S2
	Prior attitudes towards psychedelics: cautious	E1
	Lack of education of psychedelics growing up	E1
	Positive prior attitudes to psychedelics	F2
	Good education on illicit substances growing up	A3
	Prior positive attitudes	T2, R6
Prior use	Tried psychedelics recreationally	M1, S1, J1, P1
	Prior LSD recreational use made more comfortable	M8

	Tried psychedelics recreationally	F1, A1
	Recreational cannabis led to anxiety	F1
	Recreational use of MDMA helped preparation	A10, A16
	has not tried psychedelics recreationally	L1
	Prior recreational use	C1, O1, T1, R1
Productivity	LSD for productivity	R2
	Micro facilitates productivity	O7
	Macro for productivity	T5
Psychedelic best with therapy	Believes therapy + LSD best combo	M4, P5
	LSDm not the cure, need therapy	M8 M13, E12, P6
	MDMA helped therapy session	A3
	MDMA made therapy exercises more comfortable	A9
	Session was helpful but not vital to recovery	A18
	MDMA not cure	A21
	Best would be combined with therapy	L6
	Supportive & safe psychedelic community	L8, R4, R5, R11, R12, R17, R20, R21
Psychedelics best with therapy	MDMA ought to be combined with therapy	A12, A21, A30
	Would work best to combine with therapy	L11, L12, T5
	Psilo for getting another perspective on life	O4, O5, R24
Psychedelic community	Supportive dealer friend	E4
	Supportive dealer	A14
PTSD	PTSD prevented daily functioning: work, uni	A7
	Now is able to talk openly about trauma/PTSD	A17
Recall mindset	Later can recall mindset	M6, M8, E6, E10
Reduction of symptoms	Less PTSD flashbacks after session	A17
	Psilo significantly alleviated MH symptoms	L15, C5
Removal of fear response	During Trip removal of trauma fear	S6
	Possible to deal with trauma without fear-response	A9, A15, A16, A24
	removed observer of memories	A9
	Psilo gives bravery to deal with trauma	L10
Retroactively realised MH	LSD retroactively realise MH issues	S2, S3, P1, P4, P11
	Psilo retroactively realised it helped MH issues	C2, O1, O3, R1, R10

revisit memories	MDMA took away discomfort of revisiting trauma	A10, A15
	Unlocks hidden memories	L10, C6
Safety measures	LSDm safety: infrequent usage due to addiction concern	m10
	LSD safety: strong social support	S4,
	Safety with LSD: tests the tabs	J5, E1, E4, P9
	LSD safety: no fear of dependency	J6
	Safety: Tested with KnowYourStuff	A2, A14
	Long-considered decision to try MDMA	A9
	MDMA unusually pure	A14
	Safety: Pre-prepared for bad trip	A16
	Fear of MDMA impurity/cut with uteline	L9
	Safety: makes others aware of trip	L13
Self-love	MDMA facilitated self-love and self-acceptance	A9, A11, A17
Self-therapy techniques	Self-therapy techniques: CBT	M7
Sentient substance	Sentient LSD	S3, S4, S13, P3, P4, P20, P29
	Sentient MDMA	A16
	Sentient Psilo	L9, L10, L11, L12, C6, C7, C8, R10
Session preparation	Preparation for session: writing down issues	M7, M9
Set	Set: Would not take in bad mindset	M5, E2, E10
	Set: needs to be focused	M9
	Set importance: Don't take in bad mindset	E10, E12
	Set: Conscious of a bad mindset	A4
	Set: Preparation is important	A4
	Set is important	L12, C8, T6, T7, T8
	Set: bad trips can be detrimental	T6, T7
	Set: good mental headspace prior for macro	T7
Set + Setting	Set & Setting not that important, bad trips are personal issue	O10
Setting	Setting: music	M7, J6, P2, P23
	Setting: comfortable environment	J6
	Setting is important	J9, P26
	Setting: Safe and supportive social environment	E5, E10, P6, P26
	Setting: nature	P9
	Setting: Lighting	F4
	Setting: nature	F4, R8, R19

	Setting important	F4, A15
	Setting: With a friend	R6, R8
	Setting: Music	F4, M18, M19
	Presence of a tripsitter	A4
	Setting: Supportive social environment	A5, A12, A16, R18
	Setting: Alone	A11, A15
	Setting: Clean environment	A11
	Setting: Prepared	A15
	Setting is important	A22, L12, C8, C9, T7, T8
	Setting: Nature	L13, T7, R8, R19, R26
	Setting: Alone	L13, C8, C9
	Setting: Familiar environment	L13
	Setting differs depending on aim	L13
	Setting: With 1 or 2 friends to bounce ideas off	R8, R9, R18
	Setting: dark	L13
	Setting: Music	O9
	Setting: for macro good social support	T7
Smoking cessation	MDMA useful for smoking cessation	F2
Social awareness	Micro makes more socially aware	O7
Social bonding	Psilo increases empathy	O16
Social network	supportive friends	M3, M12, J11, E11, P3, P8
	Not open with parents: anti-drug	M11, M12, S9, J9, E11, P7
	Not open with parents: Protect from extent of MH	M11
	Can talk about it with younger gen of family	M12, P8
	Not open with family: no impact on LSD effect	S9
	Family opinions change after observing effects	S9, J10, E11
	One supportive parent	J9, E12
	Family opinions change after observing effects	F6
	Parent that is pro-drug	A3, A29
	Unable to talk to parents about trauma - burden	A6
	Not open with family: wants to protect from MH	A27
	Strong social support	A27, A28
	Has not told friends because feels trauma is difficult to hear	A28
	Family open to hearing about recreational psyc. use	A29

	Supportive family	L15, C9, R22
	One parent supportive	T9, R14, R16
	One parent anti-drugs	T9
	Family is anti-drugs	O11
	Supportive friends	L16, C10, O12, T9, R17, R20
	Change of Family opinion	L16, R16, R17, R22, R29
	Generational differences in family acceptance	O11, R22, R24
	Anti-drug family members damages relo with family	R23
	Therapist enouraging and well researched	S4
	Therapist aware and interested in MDMA therapy	A9, A12
	Therapist is aware of psilo use	T4, T5
Social stigma	Social stigma in medical profession	P6, P7
	No stigmatisations experienced	A28
	Societal stigma around criminality = impacts	L9
	Encountered skepticism	L16
	Experienced no social stigma	C10, O13, T9
Source of substance knowledge	Source of substance knowledge - friends	M2, P3
	Source of substance knowledge - own research	M2, S1, J2, P3
	Source of substance knowledge - forums	S2, P10
	Source of Substance knowledge: Family	J2
	Source of knowledge: Podcasts	F2
	Source of knowledge: Research	F3, A1, A9
	Recreationall use of MDMA triggered PTSD flashbacks	A1
	Source of knowledge: recreational experiemces	A1
	Source of knowledge: Therapist	A9
	Source of knowledge: research	L2, O2, T1, T2, R1, R3
	Source of knowledge: self-experiementation	C2, O2, T1, T2
	Source of knowledge: Podcasts	O3
	Source of knowledge: Friends	R1, R3
	Sacredness of MDMA sessions	F5, R17
	Psilo invokes a spiritual connection	L6, L9, L12, C6, O16
	Psilo facilitates deepr connection to consciousness	C4
Substance addiction	Psilocybin for addiction	C5

The Knocking	LSD leads to confrontation of trauma	S3, S6, S13
	MDMA brings trauma to surface (gently)	A16
	The Knocking: brings issues you need to address	L9, L10, C5, C6
	Can choose not to deal with the issues on a trip	L11
Therapeutic tool	self-made therapy technique helped by LSDm	M3, M4, M7, M8
	LSD as a therapy tool	M10, M13, M14, J14, E13, P3
	Able to do therapy exercises without 'embarrasement'	A10, A11
	MDMA is a therapuetic tool	A12, R3, R8
	4 out of 6 hours of trip was theraputic	A13
	After session, more open to therapy exercises	A18
	macro for healing/therapy	L6, C4, T4
	Used as a theraputic tool	L10, R1, R8
Treated MH	LSD + anxiety	M, J, E, P
	LSD for alcholism	S
	LSD for PTSD	S
	LSD for depression	J
	MDMA+PTSD severe, incl SA	A
	MDMA for depression and anxiety	R6
	Helped migraines	L2
	helped fibromyalgia	L2
	Psilo + PTSD	L2, T2
	Psilo + Anxiety	L2, L15, O, T3, R6
	Psilo + depression	L2, O, T2, R6
	Macro reduced death-anxiety	O5
	Uses Psilo, LSD and MDMA for diff MH reasons	R2, R3
	majority of P had long history with MH	
Well researched	Very knowledgable of science behind LSD and MH	S11
Work through guilt	MDMA helped work through guilt of trauma	A18
Work through issues	LSD work through issues with positive mindframe	J7

Appendix L: Analysis - Final Themes

Potential Themes	Final Themes/Key
Adverse effects	The psychedelic treatment + the Knocking
Carthatic release of emotions	The NZ environment
Clarity of issues	The sub-therapy
Comparison to sober	
Conventional methods	
Criminal status	
Currently uses	
decision	
Dosage	
Drop off	
Drug combination	
Effect on discussion of issues	
Effect on social bonds	
Eligibility opinions	
Expectations	
Finding root of issue	
Focus	
Frequency	
In tune with body	
Intention	
Introspection	
Lack of understanding	
Last resort	
Lasting effect on MH	
Life appreciation	
Loosen up	
MDMA in party scene	
meditative	
Mental reset	
Mental rut	
Micro and Macro	
Mood	

Motivation	
Moving past mental wall	
Neuro changes	
NZ environment	
Okay to feel negative emotions	
Opinion on future	
outer-body	
Pandemic MH	
Parameter opinions	
Preference of psyc	
Preparation	
Prior attitudes	
Prior use	
Productivity	
Psychedelic best with therapy	
Psychedelic community	
PTSD	
Recall mindset	
Reduction of symptoms	
Removal of fear response	
Retroactively realised MH	
revisit memories	
Safety measures	
Self-love	
Self-therapy techniques	
Sentient substance	
Session preparation	
Set	
Set + Setting	
Setting	
Smoking cessation	
Social awareness	
Social bonding	
Social network	

Social stigma	
Source of substance knowledge	
Spiritual	
Substance addiction	
The Knocking	
Therapeutic tool	
Treated MH	
Well researched	
Work through guilt	
Work through issues	