

**Experiences of opioid detoxification using  
ibogaine in various treatment settings:  
Exploring ibogaine users' motivations,  
understanding of risks, and effects of  
ibogaine treatment**

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# ABSTRACT

## Introduction

Opioid dependence is a significant health concern in New Zealand. It has been estimated that there are 10,000 people who are daily or almost daily intravenous users of opioid drugs, half of whom are receiving opioid substitution treatment (OST) Similar to overseas countries. It is also estimated that there is a growing number of people in New Zealand who are dependent on prescribed opioids. However how many is currently unknown (Adamson et al., 2012). One alternative intervention for opioid dependence is ibogaine treatment. Ibogaine is a hallucinogenic drug that alleviates opioid withdrawal symptoms for up to three months. (Alper, Lotsof, Frenken, Luciano, & Bastiaans, 1999). However, ibogaine's metabolites interfere with cardiac centres in the brain, in some cases causing heart arrhythmia and death (Maas & Strubelt, 2006). Ibogaine providers promote pre-treatment tests (bloods and electrocardiogram (ECG)) reducing this risk (Alper, Lotsof, & Kaplan, 2008). Anecdotal reports suggest ibogaine treatments can occur with support from ibogaine treatment providers, ranging to; 'peer to peer' use with unknown medical advice. The aim of this study was to explore the experiences of people who had used ibogaine in New Zealand; and to discover what, or if, any medical tests had been sought and/or accessed.

## Method

A qualitative, collective case-study research design was used. Ten people who used ibogaine for their opioid detoxification were recruited. Face-to-face interviews were conducted with each of the participants, in participants' homes or public cafes. The interviews were recorded and

transcribed. Common experiences were coded then grouped into themes and analysed.

## **Findings**

Seven identified themes and their described interactions collectively related an ibogaine user's experience. It began with 'not sitting comfortably on opioids', due to associated low moods, physical side effects, stigma and despair. Hope of a successful and quick opioid detoxification treatment, with no opioid withdrawal experience was the main motivator for people choosing ibogaine. All participants sought medical testing before ibogaine treatment but those who had the support of an ibogaine treatment provider (ITP) received the most appropriate medical screening and recommended test. People had more positive treatment experiences when medical supports such as nausea control, sleep management, use of ibogaine booster doses and psychological support after treatment were available. Ibogaine treatment had major positive effects on mood and anxiety reduction for the participants, and was the main contributing factor for seven respondents who remained opioid-abstinent. Respondents described seeking and obtaining a spiritual or deep psychological change regarding their drug use and attributed this to ibogaine treatment.

## **Conclusions**

The collective experience of the ten participants provided implications for possible future practise of ibogaine treatment. Use of an ibogaine treatment provider (ITP) afforded safer, more positive treatment outcomes. The continued legality of ibogaine is supported by this study, where respondents, supported by an ITP, had better access and greater medical support when ibogaine was legal. The use of additional doses of ibogaine and medical management of nausea and sleep appeared to affect better treatment results. This case study participants sought the hallucinogenic

effect of ibogaine as part of the treatment and had better treatment results when psychedelic experiences were achieved. Best treatment results were described as, no opioid withdrawals, positive effects on mood and anxiety and ultimately, opioid abstinence.

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# GLOSSARY AND TERMINOLOGY

**Ibogaine:** An hallucinogenic drug with anti-addictive properties (refer chapter two – Literature review for fuller literature)

**Ibogaine treatment providers (ITP):** This term is used broadly and risks losing true meaning to what may be reported. The term is used to label new establishing services or even single person advocate ‘services’, to more organised medically orientated ‘clinics’ that treat opioid dependence with ibogaine. For the purpose of consistency for this study a single term must be used, however when an ibogaine treatment provider has limited capabilities, this may be described as an ibogaine support service or other such more descriptive terms.

**Opioid / Opiate:** These terms describe, in order, the synthetically made and naturally occurring, narcotic drug; Opioids’ (Martin, 1983). This term may be used interchangeably however by respondents to refer to a range of both synthetic and natural forms of this drug.

**Opioid dependence:** This is defined as per the Diagnostic Statistic Manuel for Psychiatric disorders (DSM-5) (American Psychiatric Association, 2013) as amongst other features, people having physical tolerance and withdrawal features to opioid use or their absence. For the purpose of this study this term is interchanged with New Zealand literature defining opioid dependence as using daily or almost daily (Deering, Sellman, & Adamson, 2014).

**People with opioid dependence:** This term is used to define people with an opioid dependence. However the literature and interview data interchange

this term with opioid dependent population and opioid dependent individuals, groups and populations.

**OST:** Opioid Substitution Treatment (OST) is the term used to define New Zealand AOD treatment services which use substitution opioids for long term replacement of illicit opioids (New Zealand National Guidelines for OST, 2014). Although this incorporates multiple substitution opioids such as buprenorphine, this term mostly describes the drug methadone and in a New Zealand context often refers to methadone maintenance treatments (MMT) and may be referenced by respondents as; methadone

**Service user:** Is the definition used for people utilising the OST services. Throughout this study, in the literature and in the participants interviews this definition may be interchanged with ‘client’ or ‘patient’.

**Detoxification:** The process of withdrawing off drugs that a person is physically dependent on. For this case study it and its abbreviation; ‘**detox**’ is often used to describe opioid detoxification

**VTA:** Ventral Tegmental Area (VTA) area of the brain – refer chapter two.

**GDNF:** Glial cell derived neurotrophic factor (GDNF) – refer chapter two.

**Respondents / Participants:** These terms are used interchangeably throughout this study due to basic grammar and sentence structure. The terms describe the people who responded and participated for the recorded interviews of this study.

**General Practitioners (GPs):** The New Zealand term used for medical doctor who treats primary care in the community

# **CHAPTER ONE: INTRODUCTION**

## **Overview of chapter**

Chapter one will introduce the background to this thesis. It starts with opioid dependence being a health concern for New Zealand and the standard treatments that are currently available for this vulnerable population. As one of many alternative treatments for opioid dependence, ibogaine will briefly be described and its context, internationally and within New Zealand, outlined. Ibogaine's anti-addictive properties and associated cardiac risks are briefly explained and the professional background of the researcher is declared.

Clinical decisions in standard treatment services have caused people seeking alternative treatments to not receive needed medical input and psycho-social support. This problem will be outlined as a direct experience of the researcher. The research question will be introduced and explained along with the outline of how this thesis will be presented.

## **Background**

### **Opioid dependence in New Zealand**

Opioid dependence is a significant health concern in New Zealand with an estimated 10,000 opioid dependent people in New Zealand, with half this number involved in OST (Adamson et al., 2012). People with opioid dependence are described as using daily or almost daily and are a 'vulnerable and hard-to-reach group'. It can be difficult to research this group due to the illegal nature of the substance use (Adamson et al., 2012;

Kemp & Aitken, 2004; Stimmel, 2005). In New Zealand people with opioid dependence have a high rate of intravenous drug use, along with the additional health risks associated with this using needles. Opioid dependency is associated with high crime rates, poor health and increased 'at risk behaviours' (Degenhardt & Hall, 2012; Judson et al., 2010). In addition to the estimated number of people dependent on opioids, there is a largely unknown number of people in New Zealand society that problematically use opioid-based, prescription medications (McMinn, 2012). There are other 'secretive by nature' groups which appear to use seasonal, opportunistic opioids such as opium plant users and poppy seed tea drinkers (Braye, Harwood, Inder, & Beasley, 2007). It appeared most of the research regarding treatment of opioid dependence was focused on those using illicit opioids, and mostly on injecting populations. Prior to the 1970s in USA and New Zealand, this group had poor treatment outcomes in terms of drug abstinence using traditional methods such as detoxification and abstinence-orientated, short-term rehabilitation programmes (Deering, Sellman & Adamson, 2014). OST revolutionised the ability to effectively treat this relapse-prone population and methadone substitution soon became the 'gold standard', with high treatment retention rates, and with most having improved health scores and committing less crime (Deering et al., 2011; Degenhardt & Hall, 2012).

### **Alternative treatments**

Alternative treatments now include alternative opioids for substitution such as buprenorphine, available in New Zealand since 2012, which for many offers a different experience or effect to methadone, described as less sedating (Bickel & Amass, 1995). Internationally other opioids have been trialled with similar success to the more commonly known methadone. These included levomethadyl acetate hydrochloride (LAAM), now no longer medically supported; slow release oral morphine (SROM); and even dia-morphine (heroin) (Drucker, 2001; Ferri, Minozzi, Bo, & Amato, 2013; Finn & Wilcock, 1997). Interestingly 'heroin substitution' services increase retention rates in services in countries that trial them. Away from OSTs

there have been other pharmacological approaches to managing opioid dependency. These included the antagonist (blocking neuro-receptors) action of naltrexone, both as oral medicine or implants under the skin, causing there to be no desired effect from opioid use (Carreno et al., 2003). Other pharmacological approaches, too numerous for the purposes of this background, do include interesting and possibly effective plant compounds trialled in Iran (Ebrahimie, Bahmani, Shirzad, Rafieian-Kopaei, & Saki, 2015). One of many alternative pharmacotherapies is ibogaine. It entered the opioid scene in the 1970s as an under-ground, sub-medical, peer-led treatment, and even ‘cure’ for opioid dependence (Alper, 2001).

## **Ibogaine**

Ibogaine is a partial hallucinogenic alkaloid drug (Strassman, 1995) extracted from the bark of the Tabernanthe iboga tree, originating in West Africa. As well as being historically used in ancient African tribal ceremonies, it was discovered and marketed by the French in the 1920s as a relief tonic to be ingested after suffering a viral illness. In the 1970s it was discovered by chance, and later proved through research, that its ingestion and psychedelic experience assisted in the withdrawal and subsequent cravings associated with illicit heroin (diamorphine) use (Alper, 2001). Its benefits to opioid and alcohol detoxification, and abstinence rates after ingestion, are referenced in over 80 uncontrolled and open label studies but are best summarised by Alper (2001) in chapter one of his alkaloids book: *Ibogaine: A Review*. It appeared a one-off use of ibogaine interrupted the neurological and physical withdrawal symptoms of opioids. Rodent studies determine some of the anti-addictive properties relate to Glial cell-derived neurotrophic factor (GDNF) expression in the Ventral Tegmental Area (VTA) area of rats brain and has a mediating effect on dopamine expression in reward pathway circuitry (Mash, et al., 2003; Glick, Maisonneuve, Hough, Kuehne & Bandarage, 1999). The exact pharmacodynamics in humans remains unclear (Mash et al 2003). However Radioligand binding assays report ibogaine has numerous molecular interactions with mu and kappa opioid receptors, serotonin 5-HT2 and 5-HT3 and M1 and M2



muscarinic receptors (Mash et al 2003). From anecdotal reports and uncontrolled studies, its use is attributed to absence or reduction in opioid-related cravings and elimination or reduction of withdrawal symptoms for dependent persons. This effect, following cessation of opioid use, is reported to last from 48 hours to three months. The effects of ibogaine use for the majority of people included an initial six-eight hours of nausea and vomiting, then two-three days of a dream-like hallucinogenic state, often experienced whilst asleep, followed by one-three months of markedly reduced cravings to use opioid drugs.

In New Zealand ibogaine has been legal to prescribe by medical practitioners since 2010 largely due to application to the Medicines Authority by ibogaine support networks (Patterson, 2015). As reported above, internationally, treatment with ibogaine began in the 1970s, mainly in people's homes and peer-to-peer administered. It appeared through overseas literature (Alper, Lotsof, & Kaplan, 2008) and through clinical conversations within New Zealand that this form of underground ibogaine treatment is continuing, without the use of pre-treatment, medical health tests. This is significant as there are medical reports of 15 fatalities, excluding one in New Zealand in 2013, associated with ibogaine use prior to death. These deaths appear related to cardiac arrhythmias, possibly related to interruption in magnesium channels in cardiac centres in the brain, caused by ibogaine and ibogaine's metabolites (Maas & Strubelt, 2006). This same group of ibogaine cases was investigated by Alper, Stajić, & Gill (2012) who attributed other determinates to the fatalities such as pre-existing lung, kidney and liver disease and co-morbid drug use. Which may have been indicated had pre-treatment assessments been carried out. However pharmacological research and Emergency department case studies still indicate cardiac arrhythmias can occur with ibogaine use without other QTc prolongation causing drugs or conditions being present (Alper et al., 2012; Schenberg, de Castro Comis, Chaves & da Silveira 2014).

## **Research problem**

Upon exploring this topic there emerged considerable variation in the nature of treatment provided amongst different ibogaine treatment providers available to New Zealanders, including providers overseas. Some treatment settings provided medical assessment and testing and psychological support throughout treatment, while other providers appeared to focus on the spiritual and emotional effects of the treatment, perhaps unaware of the medical risks.

The research began with a clinical issue at an OST service in the South Island, New Zealand. Two clients prescribed methadone, chose to utilise ibogaine detoxification. One did not disclose this until after ibogaine treatment and had a negative experience with it. The other approached the OST service for support (travel arrangements mostly) and was declined. This service user utilised ibogaine regardless, reported a positive experience but was discharged from the OST service for not collecting prescribed methadone doses. This resulted in the loss of support of that person's established case manager. The service decision not to support this client was based on emergency department case study reports of death attributed to the use of ibogaine. There appeared to be mixed messages in the available literature, especially for consumers, with some medical trials supporting the effectiveness of ibogaine treatment where risks are minimised, and some medical articles stating there are major cardiac safety concerns and that ibogaine treatment should not be supported. While ibogaine was available as a treatment option in New Zealand, the journey of an ibogaine user, what they encountered and perceived as facilitators and barriers to safe treatment, were not currently known.

## **Aim/Research objectives**

The purpose of this study was to explore the experiences and practises of opioid-dependent individuals who have used ibogaine as an intervention for

opioid dependence. This included exploring each individual's motivations for the treatment, their understanding of health risks, utilisation of pre-treatment health tests and the effects of ibogaine treatment in relation to any subsequent opioid use.

## **Research question**

The question, not answered in current literature, and relevant for New Zealand prescribers:

‘What are the experiences and motivations of opioid-dependent people using ibogaine?’ With the sub question: ‘What safety measures and medical tests were ibogaine users aware of and utilised?’

## **Description of researcher**

The researcher of this paper is a registered nurse with mental health and addictions experience and qualifications. Working as an opioid substitution treatment case manager in England (London) and New Zealand (Christchurch) afforded many opportunities to work with people during their journey of opioid recovery. A psychiatric nurse initially, there has always been an interest in people's mental health experience and wellbeing. The clinical gaze of the researcher for this study is therefore tinted with a mental health, bio-medical and nursing perspective.

## **Thesis outline**

Chapter two comprises the literature review on five major relevant topics related to this study. These are: opioid dependence in New Zealand is a significant health problem; ibogaine has anti-addictive qualities; ibogaine

has cardiac concerns; medical-supported ibogaine clinics are safest; and lastly, people are motivated to use hallucinogenic treatments.

Chapter three argues the case for the chosen methodology. The case study method sits under the umbrella of qualitative research. The philosophies and paradigms driving this qualitative study are selected and described. An argument for a naturalistic and interpretive approach is submitted, why it was the best fit for the type of data obtained and the conclusions that were derived. The method and data analysis is also outlined and the ethical considerations examined.

Chapter four is the results chapter. Here the 38 codes found throughout the ten interviews are categorised into seven broader themes, the table for which is at the end of chapter four, 'results'. The themes are: 'not sitting comfortably on opioids'; 'motivations for using ibogaine'; 'safety conscious and support-seeking'; 'the best practise'; 'ibogaine treatment effects on depression and anxiety'; 'ibogaine treatment effects on dependence'; and 'the spiritual effect'.

Chapter five is the discussion. The seven themes are again outlined and discussed. Six of the major themes were placed into related pairs. These pairs were examined as to how they effected and interplayed between each other. The overall relationship between the themes described the experience of an ibogaine user in New Zealand. The strengths and limitations of the study are also addressed in this chapter.

Chapter six, the conclusion. This thesis, its background, its reason, its participants and their contribution will be summarised. The journey and experience of an ibogaine user will be outlined, including what factors afford safest, best practise. This final chapter considers the research overall and raises implications for future ibogaine treatment practice and areas for further research.

## **Conclusion**

The origins of this research began with the fact that opioid dependence and misuse are health concerns for New Zealand. The legally-prescribed drug ibogaine has been demonstrated to alleviate opioid withdrawal symptoms for up to three months, and may be a successful treatment for detoxification. However, ibogaine metabolites have been shown to interfere with cardiac centres in the brain causing arrhythmia and death. Ibogaine treatment providers promote pre-treatment tests (bloods and ECG) to reduce this risk. Anecdotal reports suggested ibogaine treatments occurred in ‘supported’ clinics with medical input, and unsupported in people's homes, via ‘peer-to-peer’ use, despite medical risks. This study sought to understand the experience of an ibogaine user, what factors motivated people to choose this treatment, and what factors achieved safest, best practise when using ibogaine. The gathered information was coded and organised logically into similar themes and patterns, and through the results and discussion sections, the study outlined the experience of an ibogaine user in New Zealand.

# CHAPTER TWO:

## LITERATURE REVIEW

### Overview of chapter

The following review of literature will address three primary questions: firstly, is ibogaine an effective and safe treatment for opioid dependence? Secondly, what are the motivations for its use and are there observable trends in ibogaine use and alternative treatments amongst New Zealand's opioid-dependent population? And thirdly, if motivation or drivers to use alternative treatments do exist within this population, can we predict the continued use of ibogaine in New Zealand?

These primary questions will be addressed through consideration of the following five argument statements:

1. Opioid dependence is a significant health concern for New Zealand (NZ).
2. Ibogaine has beneficial effects on opioid drug withdrawal symptoms and cravings during opioid detoxification.
3. Ibogaine use has cardiac concerns which are attributed to cases of death.
4. Ibogaine use for detoxification of opioids is safest and most effective within medically-supported treatment centres with pre-treatment testing, counselling and follow-up care.
5. People are motivated to use ibogaine as a treatment for opioid dependence.

## **Literature review methodology**

Using Databases; Ovid, Embase, Science Direct, Informa Healthcare and Proquest, key words were entered in relation to the scope of this study. International articles were included with English translation and the range of years was kept open. This was because some topics were specialized and limited in article numbers. Many key words were used and entered interchangeably to capture all available data. Such as Prescription Drug Misuse, Opioid use, Opioid dependence, Opioid Substitution Treatment, Opioid dependence harms. When exploring ibogaine's anti-addictive properties; 'ibogaine' alone was entered and over 80 articles were manually reviewed as per Cooper (1982) guidelines for integrative review which categorises articles determined by validity of research methods. Due to lack of randomized clinical trials (RCT) on the efficacy of ibogaine for opioid detoxification this review included open label trials. It excluded personal stories and reports of ibogaine use. Fourteen ibogaine open label trials and case studies were selected and one closed label randomised controlled study was found. In regards to neurological function, nine relevant animal studies were chosen that had particular attention to the cerebral actions of ibogaine to help build understanding, although severely limited to being only animal studies at this point. The same data bases were systematically searched for 'ibogaine', 'cardiac' 'fatalities' and 'arrhythmia'. All 18 articles related to this search were selected but mostly the human studies are reported on. When exploring 'motivations to use ibogaine' no direct results were found however information was derived from articles referring peoples experiences of the negative effects of opioid dependence treatment and from articles referring to wider hallucinogenic treatment experiences that allude to spiritual motivations for people seeking this type of alternative treatment.

# **Statement 1: Opioid dependence is a significant health concern for New Zealand**

## **Introduction**

Opioid dependence is a significant health concern for New Zealand (NZ). Information from the NZ Ministry of Health's (Government) New Zealand Alcohol and Drug Use Survey (Ministry of Health, 2009) demonstrates the scale and diversity of New Zealand's opioid use disorders are scantily known. More precise measuring of opioid-dependent populations are explored through the National Addiction Centre (Otago University) studies (Adamson et al., 2012; Deering et al., 2011). The NZ trends of use are explored and reviewed including the 'subculture' definitions of this opioid population. These findings are matched with world statistics of opioid dependence. The harm associated with opioid use, both towards the community and users, is then explored. The literature review also explores the hard-to-quantify data, that long-term opioid use, even prescribed for pain, produces lower life satisfaction scores compared to not using opioid drugs. Treatment of opioid dependence is explored in the literature, from a New Zealand perspective, to determine the influence this has on opioid-related harm. The review exposes 'problematic prescription opioid use', with growing world and NZ statistics showing people are over-using pain (opioid-based) medications, and using them for longer periods than prescribed or medically expected.

## **New Zealand opioid use trends**

Opioid drug dependence is a health problem for New Zealand, both for those dependent and the community affected. Effects range from crime against the individual, their family and society, to the cost on the health sector and communities (Degenhardt & Hall, 2012). Firstly let's look at trends of opioid use in NZ.



Total numbers of New Zealand's opioid drug dependence population appear to be around 10,000 of the total population (a country of 4 million) with up to 17,000 using opioids problematically (Ministry of Health, 2009; Adamson et al., 2012). A government-initiated telephone survey of sample populations helped estimate these figures (10-17,000 people dependent or problematically using) and distinguished, within the survey, types of opioids used, whether it be prescription painkillers or more illicit forms of opioids, such as street manufactured heroin (Ministry Of Health, 2009). Of respondents that reported using opioids, 67% had used prescription pain analgesia and 33% used illicit forms. A University study (Adamson et al., 2012) provided more robust estimations of opioid dependence within the population, using calculations, such as, snow-balling technique to contact other people that use and contacting treatment centres, as opposed to telephone surveys alone (Adamson et al 2012). This study targeted specific populations through needle exchange and opioid substitution services. A calculated 9,142 of the total population of NZ were believed to be using opioids daily or almost daily, with half this number (4,537) actually in opioid substitution treatment (OST) (Adamson et al., 2012). However this study was specifically targeting one user group; opioid dependent people as defined by 'using every, or almost every day'. The authors acknowledges it did not measure other groups of opioid users such as those who misuse opioid prescriptions, poppy-seed tea drinkers and other sub-culture groups. These pockets of users who have adopted one source and method of opioid use (such as smoking morphine, or drinking poppy-seed tea) are easily missed through specific targeting of injecting populations (Moshier et al., 2012).

With around 5,000 opioid-dependent people in OST, there still remained a further 5,000 users actively sourcing illicit opioids, with the majority intravenously injecting (Adamson et al., 2012; Kemp & Aitken, 2004) Studies suggest within the treated population there is on-going, though much reduced injecting of drugs and other drug-use harm (Fountain, Griffiths, Farrell, Gossop, & Strang, 1998; Judson et al., 2010). One study also reported that after a year in OST, with sufficient substitution dosing,

injecting behaviour and other drug use decrease significantly (Deering et al., 2004).

### **Prescription Drug Misuse (PDM)**

PDM is briefly reviewed here from the literature, as this is a pathway to opioid dependence and treatment for some people. PDM is a broad definition incorporating all available prescribed drugs which may be abused (Benzodiazepines, Opioids, Methylphenidate) (Birnbaum et al., 2011). A general accepted definition in literature appears to be: use in larger amounts than prescribed, for longer periods than prescribed, or use without a physician's prescription (Currie, Schopflocher, & Wild, 2011). Opioid analgesia prescription misuse is often defined as the main sub-group of prescription drug misuse (PDM) with much of the literature stating PDM is mostly opioid prescriptions. When exploring international literature around opioid dependence, PDM is widely recognised as a significant concern, causing harm to individuals involved and the health system (Currie et al., 2011). The manufacture of opioid analgesia has increased four-fold between 1997 and 2002, and in this same period overdoses from prescription medicines doubled at emergency departments across the United States (Savage, Kirsh, & Passik, 2008). In 2008, an estimated 10% of 12- to 17-year-olds used (opioid) pain medication not prescribed for them, for purposes other than pain relief (Wu, Pilowsky, & Patkar, 2008). New Zealand's rate of prescribing opioids has increased in line, though fortunately not to the same degree, with the United States and some EU European countries (McMinn, 2012). In North America and Western Europe, it is estimated problematic prescription opioid misuse was four times greater than the number of people injecting opioids (Holmes, 2012; Potter et al., 2015). New Zealand data on PDM has not yet been estimated however, the Ministry of Health 2007 survey suggested 17,000 of the total population had used an opioid drug, mostly a prescribed pain analgesia, for recreation in the past year. A cohort study in the USA found a PDM individual had an annual medical cost of US\$15,884 versus US\$1,830 of a non-PDM counterpart (Strassels, 2009). The treatment options for PDM

appear limited with most treatment focus being on illicit opioid use, as this is the more socially observable problem (Potter et al., 2015). It appears Opioid Substitution Therapy (OST) and gradual withdrawal and cessation and switching to non-opioid pain relief remains the most effective treatment (Potter et al., 2015).

### **Sub-groups and subculture**

Opioid drug use in New Zealand culture is illegal and secretive, and society generally has a negative view of dependent individuals (Moshier et al., 2012). Medical professionals often share this view which may lead to fewer people seeking treatment (Sheridan & Butler, 2008), and contribute to an increase in subculture populations that are difficult to target and measure. The role of perceived 'belongingness' and even identity to a 'drug subculture' was explored by Mosihier et al (2012). In literature the opioid users' subculture is defined in four phases: alienation from social peers; connectedness with using peers; the shared degree of excitement in drug procuring; and, finally, the mastery of the trade, which includes the skills to efficiently use and produce a complicated narcotic. This subculture relies on a degree of manipulation and deceit to achieve their needs and is very secretive (Fountain et al., 1998). The pharmacology of opioid dependence means a dependent person requires very regular usage (multiple times a day, every day), (Savage, Kirsh, & Passik, 2008) and this drug use population also has the highest rate of intravenous injecting (Degenhardt & Hall, 2012). Obtaining accurate estimations of populations, especially those not seeking treatment, is difficult, as many do not wish to participate in medical studies, which may expose them as users (Degenhardt & Hall, 2012).

### **Associated harm with opioid use**

The evidence of harm associated with opioid dependence and opioid prescription misuse is based on an overseas perspective. Internationally, the global opioid dependent population has been estimated at 12–21 million

(Degenhardt & Hall, 2012). In the same report it revealed the amount of drug-related deaths, mostly overdoses, had doubled in the ten years from 1990–2000, and most of those were from opioid-based drugs. Four areas of harm were commonly recognised: the risks of acute intoxication; overdose (respiratory depression and death); effects of drug dependence; and chronic use associated risks, such as poor nutrition and infections. From this study of global statistics there also emerged individual risk factors for becoming opioid-dependent, including being male, having a novelty-seeking personality, and early oppositional and conduct disorder behaviours in childhood. Other risk factors included early school leaving; associating with an opioid drug network; and familial factors such as alcoholic or drug-dependent parents (Degenhardt & Hall, 2012). The report acknowledged not all the data from all countries was equal in quality and detail, and in some countries opioid usage had to be estimated due to no government data. Nonetheless the report concluded illicit opioid use was a major cause of mortality and disease worldwide.

The ‘harms’ of opioids, even substitution opioids, is well captured in a large Australian sample and survey of OST clients. Over 500 telephone interviews with OST clients on OST for over three months and more, found that over half respondents had sought treatment for side effects related to using their substitution opioid. This ranged from Dental concerns, constipation, sweating and 12% reporting long term headaches, and appeared no difference between which substitution opioid was used. Sedation was also listed but appeared less often for those on buprenorphine than those on methadone. Mood and anxiety was not listed but was not the focus of the study either. The study concludes nearly half OST users have side effects related to their OST but this is dose related with those on higher doses above 100 milligrams having more concerns. It discusses that this could be a cause of poor retention rates in OST internationally, but this was not directly measured (Winstock, Lea, & Sheridan, 2008). A well-designed study by a New Zealand university used the health survey SF-36 (Ware Jr, 1999) to measure the health status of clients on methadone maintenance therapy. It used a timeline study technique and although it reported many

benefits from substitution treatment of the individual, including not being incarcerated, it still reported health scores, including life satisfaction scores, lower than the general population. It also reported concurrent drug use with 30% having used a benzodiazepine in the past four weeks, 9% had used alcohol and 18% had used another opioid drug (Deering et al., 2004).

## **Opioid dependence treatment**

Opioid dependence treatment in New Zealand is three-tiered. Firstly, the needle exchange program, initially peer developed, is now government-funded as a harm reduction method since the late 1990s (Kemp & Aitken, 2004). Secondly, New Zealand publicly funds long-term (12-18months) residential, rehabilitation, abstinence-based services with some evidence of treatment success (Toumbourou, Hamilton, & Fallon, 1998). Thirdly, and with international, evidence-based knowledge, New Zealand has offered opioid substitution treatment since the early 1990s, mostly in response to blood-borne diseases prevalent within the injecting community (Deering, Sellman & Adamson, 2014). Methadone was the first synthetic substitution opioid used, in line internationally, and typically has a high retention rate (Deering, Sellman & Adamson, 2014). Historically, New Zealand has shared similar issues to other countries. These include concerns about overdose potential and inadequate doses provided, lack of access and long waiting times, lack of treatment attractiveness and stigma associated with methadone (Deering, Sellman & Adamson, 2014). Reluctance from opioid substitution services (OST) to extend the time users required to naturally reduce injecting and drug-taking behaviour, often caused poor retention outcomes (Deering et al., 2011). Perhaps these initial learning curves for service providers contributed to the obstacles New Zealand's opioid dependent population encountered when requesting substitution treatment. With nearly ten thousand people opioid dependent nationally, half were formally engaged with the fourteen OST services across NZ (Adamson et al., 2012; Sheridan, Goodyear-Smith, Butler, Wheeler, & Gohns, 2008). Other studies promoted the effectiveness of, and perhaps preference for, other substitution opioids, including slow release oral morphine (SROM),

buprenorphine and even, dia-morphine (heroin). From a pharmacological view these can have full agonist action on opioid receptors (heroin, SROM) or partial agonist, high receptor affinity action (buprenorphine). This, it was argued, may attract a wider opioid-dependent population base into treatment, as those who don't like the mental sedating effect of methadone may be attracted to the effects of 'clearer minded' buprenorphine or the full agonist effects of heroin (Ferri, Davoli, & Perucci, 2011; Ferri, Minozzi, Bo, & Amato, 2013). Although buprenorphine is currently, since 2013, prescribed in NZ, SROM and heroin are not. Internationally, evidence suggests they both have equal treatment effectiveness as methadone therapy (Ferri et al., 2013). Although New Zealand has slightly better treatment retention rates than some other countries around the world, there are studies which suggest New Zealand's historical perspective of long wait-lists for treatment, and strong enforcement of treatment regulations have played a part not achieving above the 50% in-treatment rate (Sheridan et al., 2008). These barriers to treatment are reflected in international studies (Ferri et al., 2013). A study exploring barriers to OST treatment in NZ reported 55% of individuals not on OST stated they did not like the drug methadone (its effects), so it will be interesting to discover if the introduction of buprenorphine to NZ in 2013 has captured more of the dependent population (Deering et al., 2011).

### **Statement 1: Conclusion**

Illicit or traditional opioid-dependent populations of New Zealand have remained steady, with half of this population in substitution treatment. While literature suggests harms from drug use decrease after approximately a year on OST, there is an unavoidable theme around poor life satisfaction scores, for individuals on long-term opioid prescription as compared to the general population (Deering et al., 2004). Choice of opioid substitution medication has increased in New Zealand to include buprenorphine (in combination with naloxone and marketed as Suboxone). More recently concerns about misuse of prescribed opioids has increased in accord with other countries although the nature and extent of this issue hasn't been

clearly identified (Crowley, Jones, Coffman, & Greenberg, 2014; MacIntyre, Huxtable, Flint, & Dobbin, 2014). The harm from opioid dependence, not treated, is acknowledged as negatively affecting the individuals, their families and society, with crimes of property damage and theft, and increased prostitution all correlated to opioid dependence. It is clear opioid dependence remains a significant health concern for New Zealand (McMinn, 2012).

## **Statement 2: Ibogaine has beneficial effects on opioid drug withdrawal symptoms and cravings during opioid detoxification.**

### **Introduction**

This argument will briefly address available literature on the pharmacology and effectiveness of ibogaine as a treatment for addiction. It will very briefly outline nine relevant rodent trials, which help understanding of the complexity and unique pharmacological function of ibogaine. It will then explore initial stage one human trials, which used FDA approved low doses, assumed sub-therapeutic. These studies are followed by exploring many open label or non-controlled human studies from various private clinics around the world. As stated in the literature review methodology section above these data are reported on as they are the main form of available information around ibogaine use. This is despite the lower evidence base of open label studies and associated methodological issues, especially poor research control conditions. Lastly, around human trials, it will explore the one known, double blind randomised controlled non-ibogaine trial. Further, other hallucinogenic drug trials and participant's experiences, with regard to treatment for addiction, will be briefly reported to attempt to understand the complexity and limitations of undertaking hallucinogenic research.

## **Historical context**

Firstly, however, in reviewing literature on ibogaine's anti-addictive properties, the historical and political context of ibogaine's discovery and research require understanding, as it has influenced the scope and nature of research. Although used by forest-dwelling tribes in Africa's Gabon region for ancestral ceremonies as far back as 2,000 years ago, and marketed by French pharmaceutical companies in the early 20th century as a post-viral relief tonic, its anti-addictive properties were not discovered until the mid-1960s, by a New York film student, Howard Lotsof (De Rienzo & Beal, 1997). Lotsof was experimenting with many hallucinogens at the time and used ibogaine, by chance, with a group of friends who were heroin users. The effect for some of this group was to not have the desire or need to use heroin for a period of time afterward (De Rienzo & Beal, 1997). Howard's subsequent 'vision' of bringing ibogaine to the world to cure addiction however, was thwarted by America's classification of LSD and all hallucinogenic drugs, including ibogaine, as 'class A' narcotics, citing potential harm to the public (Strassman, 1995). Ibogaine became embroiled in the hysteria surrounding hallucinogens but Howard Lotsof sought and gained legal patent for ibogaine as an anti-addictive drug (Lotsof, 1992). The claimed motive was to keep ibogaine's potential from being 'locked away' by pharmaceutical companies who are not interested in 'one off' treatments. However, another outcome of this patent was very limited scientific research. Money was gained through 'imaginative' research applications and in 1993 the USA, through the Food and Drug Administration (FDA), allowed the first animal, and then human, ibogaine drug trials - the rodent trials and two human clinical trials resulted. However, lack of money and the FDA continually declining research applications eventually lead to a private, user-pays, research clinic in the West Indies, where legal permission for trials was gained. Thus, ibogaine use was limited to private clinics, and research can appear somewhat 'unauthorised' or otherwise discreditable.



From a New Zealand perspective, a group of people who had successfully used ibogaine in Australia and New Zealand initiated the application to New Zealand Medicines Authority, Medsafe in the early 2000's for ibogaine to be prescribed as an anti-addictive medicine. In 2009 ibogaine became available on the medicines schedule as a non-approved medicine. A Dunedin group informally emerged as an ibogaine treatment provider providing their first 'legal' ibogaine treatment in 2010. A further ibogaine treatment provider emerged in the North Island, founded and operated by a General Practitioner around the same time. This has afforded more open access to studying ibogaine to include valuable information and participation of treatment providers (Paterson 2015). Noller, Frampton and Yazar-Klosinski (2017) were able to capture 12 month longitudinal data on 14 users of ibogaine for opioid detoxification across the two New Zealand treatment providers. This has been perhaps a pivotal human clinical study internationally as the article provides participant data that was able to be cross-checked with the treatment providers without fear of prosecution.

### **Animal studies**

The anti-addictive effects of ibogaine were first explored in rodent trials. In brief, ibogaine was found when administered directly into the Ventral Tegmental Area (VTA) of rodents' brains to reduce alcohol, heroin and cocaine self-administration (He, McGough, Ravindranathan, Jeanblanc, Logrip, Phamluong, Janak and Ron, 2005). The effect of ibogaine on this region (VTA) was to increase the expression of glial cell line-derived neurotrophic factor (GDNF) which increases the activity of the MAPK pathway (Carnicella, Kharazia, Jeanblanc, Janak and Ron 2008). Mesolimbic dopaminergic pathways between the VTA and Nucleus Accumbens (NAC) usually demonstrate an increase in dopamine release after using drugs, and this is thought to be part of the larger reward pathway, which mediates drug-taking behaviour. Following use of 18-MC (synthesized ibogaine) with the above drugs, microdialysis showed decreased levels of dopamine in this pathway (Glick, Maisonneuve, Hough,

Kuehne and Bandarage, 1999). 18-MC also worked as an antagonist on alpha3 and Beta4 nicotine receptors, which are highly dense in the diencephalic cerebral pathways. Suppression of these nicotine receptors modulated the diencephalic pathway, which in turn modulated the mesocortico-limbic pathway, directly involved with drug-use reinforcement behaviour (Maisonneuve and Glick, 2003). When exploring ibogaine alkaloids on extra-cellular serotonin (5-HT) levels in Nucleus Accumbens (NAC) and striatum areas (STR) of the rodent's brain a study found that ibogaine had the highest affinity for serotonin transporters and produced large increases in extra cellular serotonin levels in the NAC (25 times greater, compared to base-line levels) and STR (10 times greater). Suggesting the long-lasting effects of serotonin re-uptake on these regions by ibogaine, may enhance mood (Glick, Kuehhne, Maisonneuve and Wei, 1998). The peripheral nervous system of rats was explored and it appears ibogaine at 40mg/kg administered *after* morphine injections significantly decreased morphine's pain-reducing ability, that is, the rats had a normal baseline pain response when their tails were burnt. Contrary to this result was the other conclusive outcome that Noribogaine (metabolite of ibogaine) at 40mg/kg administered *with* morphine injections significantly increased pain-reducing ability by 15 – 20%, and increased four-fold the length of time the pain blockade occurred (from 30min to 120+min) (Bagal, Hough, Nalwalk and Glick, 1996).

## **Ibogaine trials**

Leading the charge for medical-clinical research on the effect of ibogaine on heroin-dependent patients is Doctor Deborah Mash, who gained Food and Drug Authority (FDA) approval in 1993 for stage one human trials in the U.S.A., sponsored by the University of Miami. Stage three clinical trial approval was rejected in 1999 by the FDA and Mash has since run ibogaine clinical trials on heroin-dependent patients in St Kitts Hospital in the West Indies (Vastag, 2002; Alper 2001). The data from this clinic is not published directly, believed to be mired in a disagreement with ibogaine's patent holder, Howard Lotsof. The stage one and two trial data are reported

in a chapter in a book, titled, 'Ibogaine in the Treatment of Heroin Withdrawal'. In this chapter, Mash, Kovera and Pablo (2001) reviewed the pharmacokinetics of ibogaine and its longer-lasting metabolite, noribogaine. Results reported from her stage one, low dose, trials in 1993, were that ibogaine was eliminated from blood within 25-30 hours, with noribogaine taking up to 72 hours (Mash Staley, Baumann, Rothman, & Hearn, 1995). Her stage one trials also indicated a similar response to ibogaine in all the same neurotransmitter systems as the rat studies. The chapter also reviewed other West Indies studies, concluding ibogaine is metabolised with greatest effectiveness by the CYP2D6 cytochrome, and patients with higher CYP2D6 metabolised the most ibogaine, and consequently had higher levels of noribogaine after dosing.

Mash et al. (2001) and Mash et al. (2000) explored ibogaine's anti-addictive properties with a 14-day inpatient hospital study involving 27 heroin (n=18) and cocaine-dependent (n=9) persons. The trial was mainly focussed on medical observations of withdrawal signs, and scales of depression and cravings, using DSM-4 (1984) criteria for both heroin and cocaine dependence. The Addiction Severity Index, heroin/cocaine craving questionnaires and depression self-rating tests were administered pre-treatment, an average of eight hours since last use of heroin, on each day of the 14-day treatment, and at a one-month follow-up assessment. The participants were encouraged to attend counselling and post-treatment support groups such as Narcotics Anonymous. The treatment trial itself had limited 'motivation counselling', and focussed on clinical observations and questionnaires on physical and mental withdrawal symptoms. A limiting factor of the trial could have been an inadequate dose of 10mg/kg being administered. Alper, Lotsoff and Kaplan (2008) argued 19-30mg/kg was the average 'therapeutic' dose of ibogaine used effectively in most ibogaine clinics they investigated around the world. Mash et al. (2000) study, however, demonstrated a significant decrease in Objective Opiate Withdrawal Scale (OOWS) scores. Measurements for depression and negative self-beliefs were also significantly reduced and still maintained one month following treatment. The study concluded ibogaine effectively

and safely helped ‘detoxify’ or withdraw heroin-dependent patients, and helped maintain positive behaviour patterns away from drug use because its pharmacological targets modulate or interrupt the drug-reward circuits.

Stage two trials additionally ran extensive cardiac and neurological tests and investigations. Most study participants experienced a slower heart rate, a decrease of 15-20%, including one patient who became ataxic (no coordination). Decreased blood pressure was observed, contrary to expected heroin withdrawal which increases blood pressure. No other ill-effects were recorded. The chapter extensively discussed cardiac studies with ibogaine, highlighting risk of heart arrhythmia associated with ibogaine sometimes prolonging electro-cardiac ‘QTc’ intervals – again this is discussed later. Anti-addictive results were the same for the smaller cocaine group, however their craving index scores were higher than the opiate group at one month follow-up, though lower than their pre-treatment score. The discussion mentioned that patients reported changes to thinking patterns and an increased desire to not use drugs.

## **Wider ibogaine trials**

Escaping the limitations of the FDA and difficulties applying for clinical trials have been the world-wide independent ibogaine treatment providers who have provided many ibogaine treatments for opioid detoxification since early 1990’s. Alper, Lotsof and Kaplan (2008), in their investigation, ‘The ibogaine medical sub-culture’, tracked down a variety of ibogaine providers and estimated 3414 people had used ibogaine through their connected clinics as of February 2006. Sixty-eight percent of these providers claimed to have administered ibogaine for drug dependency, 53% of those specifically for heroin/methadone (opiate) dependence. The study found the average dose of ibogaine was 19mg /kg +/- 12mg/kg. Most human examples of ibogaine administration for opioid dependency came through local drug and alcohol communities operating sub-medically, drug-using peer groups, or in some countries, from medical clinics. Alper, Lotsof, Frenken, Luciano and Bastiaans (1999) further studied 33 cases of ibogaine

used for heroin withdrawal and dependency in an inpatient clinic over five days. With an average dose of 19.3mg +/- 6.9mg/kg, at the end of the five-day, in-clinic stay, 25 of the sample of 33 reported they had no withdrawal symptoms and were objectively observed not to have drug-seeking behaviour. Four patients had drug-seeking behaviour but no withdrawal symptoms; two clients had withdrawal symptoms for the duration of the five-day treatment but maintained drug abstinence; and one participant had withdrawal symptoms and drug seeking behaviour.

### **New Zealand research**

A 'closed label', and perhaps the only double blind randomized control study on Noribogaine was conducted in Dunedin (Glue et al. 2016). This study investigated both the efficacy of anti-addictive properties and the safety profile of this active metabolite of ibogaine. Measures included opioid withdrawal symptoms and time taken to resume current methadone treatment/use of opioid drugs and electrocardiogram (ECG) after administration of noribogaine doses. The 27 participants who were, mostly dependent on methadone were divided into four groups, a control (placebo) group, a group administered 60mg of noribogaine, a group administered 120mg and a last group administered 180mg. Non placebo groups reported mild light sensitivity and nausea as the only symptoms likely to be perceived as the 'active' dose. The authors concluded there were non-significant differences between control and test groups on mean time to return to opioid (methadone) use and withdrawal symptom scores, except for the 120mg group who had slightly better scores, but not statistically significant, for both withdrawals and return to use of methadone times. While the authors reported limitations related to study design they considered further trials where warranted as although not statistically significant there were differences found. Indeed the results are confusing, as two of one test group did not return to methadone use at end of the study (3 months). In addition, the study provides evidence for dose related cardiac QTc prolongation with administration of noribogaine with mean differences in time of 16, 28 and 42 milliseconds in the 60, 120 and 180mg groups

respectively. Reports of lesser anti-addictive properties of ibogaine have been interpreted in subsequent literature citing Glue et al (2016) study concluding there should be caution for prescribers due to over-reported anti-addictive properties of ibogaine by authors of lesser quality open-label designed studies (Dos Santos, Bouso, & Hallak 2016). Perhaps wider limitations of this trial is noribogaine being accepted and referenced as superior to ibogaine because of its research design compared to open-label non-controlled trials and case studies and other factors of treatment including the effects of a hallucinogenic experience not being considered.

In a further New Zealand study Noller, Frampton and Yazar-Klosinski (2017) followed-up 14 people who were opioid dependent and underwent ibogaine treatment with two different providers over 12 months. This longitudinal study had access to the treatment providers and participants before, during and after ibogaine treatments for each person using ibogaine. This is an important study as it afforded objective, systematic third party assessment of primarily the effects on drug addiction following ibogaine treatment using the Addiction Severity Index-Lite (ASI-Lite). The study also assessed opioid withdrawal symptoms using the Opioid Withdrawal Scale (SOWS) as well as Beck Depression Inventory-II (BDI-II). These measures were administered before and immediately post treatment, monthly up to three months, and then three monthly until the 12-month final assessment. Eight participants (57%) completed the 12-month assessment. The authors concluded there was a significant reduction in scores from baseline to 12 months for both ASI-Lite and BDI-II, with significant drops at the one-month post treatment point but continuing to decrease up till 12 months. There was a reduction in scores for those who did not complete as well. The limitations of the study, and although not directly studying effects on mood, were the limitations with the quantitative data recording of the BDI-II. This limits understanding if the cause of better moods was influenced by the absence of opioid and other drug use and better lifestyle prospects, by the effect of ibogaine itself, or a combination of factors. Kaplan & Alper (2010) reports from case-studies with St Kitts private ibogaine treatment provider, used qualitative interviews and discussions and

found participants described ibogaine itself as the mood enhancer, describing participants 'knowing' when it (ibogaine) had 'worn off'.

## **Hallucinogens used with psychotherapy for addiction**

Although ibogaine is characterised as a hallucinogen (Strassman, 1995), its chemical grouping doesn't fit with the 'classical' three types of hallucinogens: phenethylamines (e.g., mescaline); indolealkylamines (e.g., psilocybin and N,N-dimethyltryptamine [DMT]); and lysergamides (e.g., LSD). These three chemical families represent the most 'psychoactive' or 'psychedelic' chemicals for humans (Strassman, 1995). Other types of hallucinogenic drugs cause different intensity 'psychoactive' experiences and are from an 'overlap' of the drugs' other actions, for example MDMA and phenethylamine stimulate the serotonin pathways and cause the user to have 'psychedelic moments'. Ketamine and other anaesthetics, before too high a dose renders one unconscious, can have the same effect. It would appear from anecdotal reports and Strassman (1995) that ibogaine, combined with other chemical actions within the cerebellum, 'overlaps' and causes 'phantasticant' or 'psychotogen' (dream-producing) type hallucinogenic experiences. Dos Santos, Bouso, & Hallak (2016) reports there are anti-addictive effects involved with other hallucinogenic substances such as LSD and Ketamine with greater evidence of efficacy through Randomised Controlled Trial (RCT). The authors dispute ibogaine's anti-addictive properties and/or this being unique to ibogaine and found only one RCT trial on Noribogaine, which did not demonstrate significant anti-addictive effects. Therefore, wider literature is briefly outlined of other hallucinogenic addiction treatments. This appears relevant as it helps understand the nature of research involved with hallucinogenic treatments, often thwart with inability to operate Double Blind Randomised Controlled Trials because of the noticeable effect of the drugs for both participants and researchers (Oram 2012). Similarly, in relation to LSD, in a review of LSD psychotherapy research, Oram (2012) found promising research with LSD in the treatment of alcoholism. This author also argued

that a limitation of the greater focus on randomised controlled trials after the early 1960's was the lack of attention paid to qualitative data and its contribution to understanding the experiences of participants in such studies.

Thirty-one treatment studies conducted on alcohol-dependent patients using various hallucinogens and psychotherapies were reviewed by Strassman (1995), but again, the effectiveness was unable to be ascertained due to inconsistent study designs. Common reported benefits of this type of treatment included 'religious type epiphanies' for patients who felt the issues behind their drinking were instantly resolved, and a sense of being able to 'work through' mental issues/depression related to alcohol use for those who reported long-term improvements. The review advocated the future use of hallucinogens in modern psychotherapy treatments for dependence and depression from an economic perspective, stating: *"Economic constraints create increasing pressure for cost effective medical psychotherapy...high dose hallucinogen assisted sessions should be considered in a model combining the psychedelic and psychoanalytic models"* (Strassman, 1995., pp 134). Similarly, in a later review of LSD psychotherapy research, Oram (2012) found promising research with LSD in the treatment of alcoholism.

## **Spirituality and addiction treatment**

Strassman's review (1995) and other articles cited exploring hallucinogenic addiction treatments all reported greater success rates than conventional treatments. The reported positive effects were linked with greater internal resolve of issues or a spiritual-like epiphany, induced by the use of a hallucinogenic. A general, deeper sense of understanding, or connectedness, during the psychotherapy sessions has been described. Purely medical-clinical, observational human trials on ibogaine struggle to represent as data patients' reports of spiritual effects from the treatment. Information on ibogaine users from various case studies, from different countries, generally all described spiritual changes or awakenings, to which the subjects



attributed their success at avoiding further drug use. Other treatment philosophies such as the '12-step program' developed by Alcoholics Anonymous (AA), also incorporated growth or development of the spiritual self (Mattson, 1993). Although the AA spirituality is religious-based, the limited success of the 12-step abstinence program promoted an internal sense of connectedness, which they labelled 'inner peace', to help resolve emotional issues behind the urge to use drugs. Development of 18-Methoxycoronaridine (18-MC) to both manoeuvre around legal patents of ibogaine and to eliminate the hallucinogenic 'side effects', risk missing the potential enhancement of counselling or psychotherapy, the 'spiritual' element (Lotsof, 1992).

## **Statement 2: Conclusion**

Ibogaine affects parts of the brain, in both rodents and humans, believed to be involved with mood, drug-use reinforcement behaviour, and the ability to sense drug withdrawal and pain. It initiates the expression of glial cell line-derived neurotrophic factor (GDNF) in the VTA region of the brain, and directly reduced alcohol and opioid self-administration in rats (Glick, Maisonneuve, & Szumlinski, 2000). GDNF increased the activity of the MAPK brain pathway, which also decreased self-administration of alcohol and opioids in rats (when the pathway was inhibited, self-administration continued). It appeared the effects of GDNF on the VTA, and increased stimulation of MAPK pathways reduced self-administration of alcohol and continued to do so for some time after these regions had been affected (He et al., 2005; Kamlet & Alper, 2010). Human clinical trials have shown evidence of decreased drug-using behaviour, significantly less withdrawal symptoms, increased mood indicators and periods of drug abstinence from days, to three months, after one ibogaine dose. However, while ibogaine research, including that conducted in New Zealand shows promising results on its effect on reducing withdrawal effects of opioid drugs and limiting return to opioid use, the methodology of many studies limits the nature of the evidence available. There is limited evidence of increased anti-addictive effects of the hallucinogenic drug treatment when enhanced with

psychotherapy (Alper, Lotsof, & Kaplan, 2008). Relatedly it is suggested that better treatment outcomes were achieved when addiction treatment incorporates a 'spiritual' aspect for consumers (Oram, 2012; Strassman, 1995).

### **Statement 3: Ibogaine use has cardiac concerns, which are attributed to cases of death.**

#### **Introduction**

In this section, relevant literature is explored and reviewed considering the safety of ibogaine in the treatment of opioid withdrawal. Especially articles related to irregular heart rhythms, and cardiac centres of the brain being affected by ibogaine and its metabolites. Accounts of death associated with ibogaine use will be examined. Firstly, four neurological articles are reviewed regarding the effects of ibogaine on various centres of the brain. Then eight case studies from emergency departments are summarised. The latest research on human studies in New Zealand using noribogaine are reviewed. Countering these concerns, are articles examining and supporting the neurological safety of ibogaine, when cases of death are matched to other causes. Finally, literature supporting protective medical testing will be critiqued.

#### **Adverse effects**

The main adverse effects include prolonged QTc intervals and affected cardiac action potential, sometimes causing cardiac arrhythmia and potentially death (Koenig et al. 2013). The authors explored ibogaine and its metabolites effects on ECG and heart rate through ibogaine's effect on ion channels within cardiac tissue (simulated by a computer for humans and tested on guinea pigs). The results demonstrated ibogaine affected cardiac

action potential, effecting QTc prolongation, and this was at lower doses than would be used for treatment of addiction (Koenig et al., 2013). 18-MC had less effect and the authors concluded this was the first avenue for future investigation on safely administering ibogaine as an anti-addictive treatment. The paper also investigated the effects of low potassium on hERG channels and noted that low extracellular potassium increased the blockade effect of ibogaine on hERG channels. This was significant when 5 of 8 reported cases of death from ibogaine had known hypokalemia (low potassium) (Koenig et al., 2013; Alper 2012 ).

### **Further effects on the brain**

Prior to the above study, Maas & Strubelt (2006) reviewed eight cases of death attributed to ibogaine ingestion, investigating toxicology reports and emergency department data including records of their attempts to reverse arrhythmia prior to death. They ‘hypothesized’ through literature searches and discussions with ibogaine treatment providers that ibogaine deregulated the autonomic nervous system by influencing neurotransmitter systems and the fastigial nucleus. They concluded that arrhythmia is more likely if there is also sympathetic (nervous system) stimulation, e.g. a fright, or a coincidence of parasympathetic tones and a left-sided sympathetic stimulation (in the brain). This coincidence could occur in circumstances of patient fatigue and high vagal tones (emotion-induced, fast heart rate). Despite being referenced by literature (Galea et al., 2011) as definitive proof that ibogaine is medically dangerous, the actual article referred to ways in which ancient Gabonian and Bwiti tribal practices mitigated these risks by using patient isolation and ‘trance-like states’ to promote rest before ibogaine use (Maas & Strubelt, 2006).

### **Mortality**

With ibogaine clinics throughout the world, there is available human data, but access to sensitive data, such as cases of death, requires permission from each centre involved. One recent study (Alper et al., 2012) had access

to multiple, world-wide clinics through relationships already established by the authors. The study medically examined 19 cases of death attributed to ibogaine ingestion, as stated on death certificates, between 1990 and 2008. The subjects ranged in age from 24 to 54 years. Twelve of the 19 had pre-existing medical complications, mostly cardiovascular but also brain neoplasm and liver disease. Fourteen of 19 cases (where toxicology reports are available) had comorbid drug use, mostly alcohol and stimulants. Four subjects used ibogaine for detoxification of cocaine. It appears where there is adequate toxicology and medical reports available, there exists some medical or other drug use comorbidity (Alper et al., 2012). The paper naturally concludes the importance of protective medical testing before ibogaine use. In direct contrast, the same lead author along with other medical practitioners, reports at a toxicology conference on the case of an otherwise healthy, 63yrs male, who had five-day prolongation of the QTc interval, and arrhythmia resistant to medical intervention post-ibogaine treatment. The subject had healthy ECG results prior to treatment, and was cleared to use ibogaine at an established treatment centre. The authors concluded cardiac arrhythmia can occur following ibogaine treatment despite medical and blood screening tests (Shawn et al., 2012).

### **New Zealand perspective**

In New Zealand, although ibogaine is an unauthorized prescription (off-license) medication, Galea et al (2011) concluded in a letter to the editor for a widely-distributed medical magazine that with the above evidence of prolongation of ECG and QTc intervals, prescribers in New Zealand “*should be cautious in promoting or prescribing ibogaine as a treatment option*” (pp87). They endorsed this with an agreement to this prescribing caution by the NZ Drug Foundation, a non-government organization promoting drug education in NZ.

In 2013, New Zealand had its first fatality of an ibogaine user under prescription from a medical practitioner (Stewart, 2015). The 45 year old patient died of suspected cardiac arrhythmia two days after ingesting 1.5

grams of ibogaine as treatment for heroin addiction. She had received medical screening, including an ECG, prior to treatment. The medical council's findings concluded there was insufficient aftercare/medical monitoring, and the patient had not been advised of the medical risks (Stewart, 2015). Neither the council nor the newspapers reported that this same patient had previously been excluded from another New Zealand ibogaine treatment facility, for concurrent drug use and not being 'ready for treatment', raising the question of whether a true alcohol and drug assessment was achieved (Paterson, 2015). This case is still awaiting the coroner's report at time of writing.

### **Statement 3: Conclusion**

In conclusion of this argument, there is sufficient medical and human evidence that ibogaine and its metabolites, at doses used for addiction treatment, can interrupt cardiac centres in the brain, causing cardiac arrhythmia, and if not medically treated, can lead to death (Koenig et al., 2013, Glue et al., 2016, Zhang & Cuevas 2001). This appears to be the case despite pre-treatment medical screening tests (Alper et al., 2012). However medical screening prior to ibogaine treatment does appear to reduce this risk by advising against ibogaine treatment when people present with co-morbid medical and addiction conditions (Alper et al., 2012). Conditions that also effect the cardiac QTc wave prolongation are believed to be at higher risk of developing arrhythmia, from ibogaine treatment including other psychiatric medications and drug use (Alper et al., 2012). The inhibition effect of ibogaine and its metabolites directly on HeRG ion channels in the cerebral cardiac tissue are present at therapeutic/treatment doses of ibogaine and effect cardiac QTc prolongation which can lead to arrhythmias and death (Koenig et al., 2013). However, this effect was potentiated by hypokalaemia (low cerebral magnesium) which was involved with one case of death, and this can be screened and potentially protected from (Koenig et al., 2013). Outside of HeRG channels there are other autonomic dysfunction raised

with ibogaine use which can cause heart arrhythmia (Mass & Strubelt 2006). However, Noller et al (2017) made the important point in that the number of deaths associated with ibogaine use, was less than the mortality rate of people with opioid dependence whilst in opioid substitution treatment programmes. Which of course is far less than people with opioid dependence not in opioid substitution treatment.

## **Statement 4: Ibogaine use for detoxification of opioids is safest and most effective within medically-supported treatment centres.**

### **Introduction**

1. Ibogaine use for detoxification of opioids is safest and most effective within medically-supported treatment centres (Alper, Lotsof, & Kaplan, 2008; Harrison, Mojeiko, & Jerome, 2009). It should be noted that much of the available accounts of ibogaine treatment comprises case study reports, personal accounts and data from ibogaine treatment providers. However ibogaine treatment providers have released data which, though it may have a bias in favour of their own centre/service, still provides accounts and follow-up data for individuals who have not been successful in treating their addiction by other means. Treatment providers have generally been influenced by or directly follow the ‘Manual for Ibogaine Therapy’ prepared by Howard Lotsof (Lotsof & Wachtel, 2002), in consultation with experienced, operating ibogaine treatment centres. Within it are chapters dedicated to the need for ‘therapy’ to coincide with treatment. Ibogaine treatment centres need to perform pre-treatment medical testing, rigorous through-treatment monitoring, and be ready to medically intervene (Alper,

2014). Case studies of ibogaine users from around the world suggest there are improved treatment outcomes, including abstinence rates, when additional psychological support is provided (Harrison, Mojeiko, & Jerome, 2009).

## **The evolution of ibogaine treatment**

Launching the argument for ibogaine therapy to be administered in conjunction with medical and emotional support, is Lotsof and Alexandra (2001) who present qualitative reports of ibogaine use in opioid-dependent people, in a variety of treatment settings. Following their discussions with people who have used ibogaine, they determined that having a ‘guide’ or someone trustworthy to talk through personal issues with, before, during and after treatment provided better drug abstinence reports. They found most ibogaine providers fall into one of three categories: self-help organisations; drug-using peer groups; and medically-supported clinics in countries where ibogaine is legal. As with case study methodology, people's experiences were captured and briefly summarised. They were all notably similar, describing a three-stage, 24-36 hour process from consumption of ibogaine. Firstly, patients often experienced nausea and vomiting, then for about four hours, subjects felt the greatest intensity of the experience and visualised dreams with their eyes closed. Dream material was as varied as sleeping dreams, and interestingly, the experience was interrupted if subjects opened their eyes. The next 8-20 hour phase consisted of cognitive evaluation, often involving memories and contemplation of past traumatic experiences or important personal relationships. Kamlet and Alper (2010) described this cognitive phase as clients described it: “the working-it-out phase”. Most subjects stated they made important life decisions in this phase. The third phase is the ‘residual’ effects period and can last up to another 36 hours in some cases. This involved lasting euphoria for some, determination and resolve in others, most reported an increase in self-efficacy or self-belief that they could achieve drug abstinence. Most reported an improvement in overall mood. The sample presented included subjects that ibogaine did not work for: reasons given included further life

events; partners still using; nil profound effects of treatment; and residual, non-resolved withdrawal symptoms. The report asserted the effectiveness of ibogaine, citing the majority of users rated ibogaine treatment as the most beneficial among detailed histories of other attempted addiction treatments. Case studies were presented over a year since treatment began, and considered successful where drug abstinence and non drug-seeking behaviours were maintained. Some cases used up to three sessions with ibogaine. The case studies and excerpts highlighted the importance of having therapy. *"..as I treated other addicts, I realized that in order to stay clean, most people need some kind of therapy... and to provide aftercare"* (Lotsof & Alexander, 2001, p. 8). One may argue the evidence in support of psychotherapy as an adjunct to ibogaine drug therapy is solely through qualitative case study analysis.

## **Support and discussion around treatment**

The theme was continued in a retrospective study on patients who used ibogaine for drug dependence in a Brazilian treatment centre, which used a combined approach of ibogaine and psychotherapy. Here the centre routinely offered and encouraged psychotherapy before and after treatment, and provided support and follow-up. The study measured 75 patients who had ibogaine treatment variously for poly-drug dependence, heroin, and alcohol dependence. 72% recorded drug abstinence one year following treatment, with the study concluding that psychotherapy was a contributing factor to success rates, though to what extent was unmeasurable by this study design (Schenberg, de Castro Comis, Chaves, & da Silveira, 2014). Of interest and perhaps one of the few studies to report the use of multiple doses of ibogaine.. These authors commented that multiple doses of ibogaine seemed to lead to longer abstinence rates, from 5.5 months for single dose compared to 8.4 months for multiple.

In Hittner and Quello's (2004) data analysis they concluded many ibogaine studies referenced the 'psychological' impact of the drug. There seemed to be value in having psychological support, whether in a formal clinical



setting or with a friend at the beach. They went so far as to recommend ‘potential’ types of useful therapy, including ‘cue exposure therapy’ (CET), to enhance treatment success, at both pre-treatment and post-treatment stages. Their analysis found that studies used abstinence rates for measurement of treatment success, but there was qualitative, descriptive self-reported evidence that psychological support improved patient outcomes, even if some returned to some form of drug use.

### **Interwoven effects of treatment**

Harrison and Mojeiko (2010) embarked on an observation study of over 30 case studies of drug-dependent clients using ibogaine and ‘associated therapies’, including psychology and counselling services, at the Ibogaine Association treatment facility in Mexico. They attempted to provide evidence of longer-term effectiveness with a one-year follow-up interview to record current drug-use with voluntary drug screens. The report does not establish why the Ibogaine Association include psychological intervention in their treatment protocol, just described what the overall 5-day ibogaine therapy entails. Thus, the evidence, which does support the long-term effectiveness of ibogaine therapy, is clouded by what aspects of the therapy had the effect – the drug ibogaine, the counselling, or a combination of both. The report did not call for control studies but rather drew on evidence for hallucinogen-enhanced psychotherapy in other mental health disorders (Strassman, 1995) to support the likely notion that it was the combination of both. Baastiaans (2004) also achieved a year-long, follow-up study on 21 individuals who used ibogaine in various non-medical centres in Holland, though interestingly most of the clients were from the USA. This study concluded 67% made significant changes, maintained at one year, on the primary and/or secondary drug they wanted to change, mainly heroin. The study design again was to measure drug use, abstinence and current health status, compared to measurements taken before treatment. Respondents reported better medical health, but also better psychological health, with improved depression and anxiety states (although these were not formally measured in the study). The study did not report respondents mentioning

their support person during treatment, but they did mention the ‘work’ they still had to do, to maintain their changes. The non-medical treatment centres approached for respondents were not described in full, but operated by ‘experienced’ alcohol and drug workers.

#### **Statement 4: Conclusion**

In conclusion, there has evolved and been maintained, a well- developed manual that includes reference including medical screening and testing, various forms of psychological therapy and follow-up support and advice, that goes alongside pretreatment medical screening and testing and ibogaine treatment in most established treatment centres. With the evidence from statement three around cardiac safety of ibogaine, it is fairly conclusive that ibogaine treatment is ‘safest’ with full medical support. Psychological interventions, especially around managing cravings of other drugs (Kamlet & Alper, 2010), appear woven throughout the case studies and other data. Most cases of independent use of ibogaine, alone and without any support, rarely get captured in the literature, except for talk forums on internet sites, where there is unsubstantiated claims of independent use. Talking therapy and discussion of drug-use issues appears widely supported and has some limited evidence of effectiveness, especially when exploring individual case studies and testimonials. This appears to be in-line with reports of other forms of hallucinogenic drug treatments, such as with LSD, which utilise the drug as an enhancement to psychotherapy sessions (Strassman, 1995). This is perhaps the reverse of ibogaine, where the pharmacodynamics of the drug and its long-acting metabolites are the focus of the literature, not the seemingly peripheral psychotherapy. Albeit, there are no double-blind control studies available on drug therapy verse drug therapy with psychotherapy, there are indications that ibogaine treatment is safest and most effective when provided through a medical centre with psycho-social components.

## **Statement 5: Opioid-dependent people are motivated to**

### **use ibogaine as a treatment for opioid dependence**

#### **Introduction**

A systematic search of medical and therapy data bases through Proquest, Ovid, Embase and many more, and a search of unpublished material, turned up no results on people's 'motivations' to use ibogaine as a dependency treatment. A wider search for studies on people's motivations for using any hallucinogenic treatment also provided few results. Database searches on 'negative' experiences with current addiction treatments and barriers to access, were also explored, along with success rates of current treatments. Lastly, current data discussing ibogaine case studies is reviewed again, with regard to individual comments about why participants chose ibogaine treatment – even though this may not have been the article's point of discussion.

#### **Current trends of use**

The literature searched contains just one article that mention ibogaine use is continuing and even increasing as a treatment option for dependence, from anecdotal reports (Alper & Glick, 2001). There are no specific studies undertaken to determine and verify if ibogaine use is increasing. There are no specific studies anywhere internationally about current ibogaine use in any populations. Numbers of total treated, world-wide, have been estimated at 5000 since the 1990s (Alper et al., 2008), but this estimate was obtained only from known established treatment centres and the authors themselves

mentioned that there is an unknown number who have used ibogaine independently or through unknown, word-of-mouth, treatment providers.

### **Studies on motivations to use ibogaine**

To determine if ibogaine therapy is likely to continue the literature was re-investigated, with an eye to finding what motivates addicts to specifically seek ibogaine treatment. The search resulted in no studies, or even findings, of what motivates people to choose ibogaine.

Wider categories were searched including motivations for hallucinogenic treatment in general. Only one article was found that explored the concept of ‘redemption’, a spiritual motivation for the use of hallucinogens in treating addiction (de Rios, Grob, & Baker, 2002). Here the authors explored the historical use of hallucinogens to treat addiction by the Native American Church and the UDV Church in Brazil, both of which used Peyote and Ayahuasca, as far back as 200 years ago; up to the current use of ibogaine and LSD for the medical treatment of dependence. The article concluded there was a spiritual component to hallucinogenic treatment, and that people were driven from their addiction by a religious-type ‘redemption’. They indirectly inferred the same motivation existed for people currently seeking treatment, but within a medical context, and named ‘medical redemption’.

### **Barriers to mainstream treatments**

To further explore people's motivations for alternative addiction treatments, the literature was searched for barriers to current mainstream treatments. Deering et al (2011) explored barriers to opioid substitution treatment (OST) in New Zealand, where there is a population of 10,000 opioid dependents, with just under 5000 of those in OST. Two surveys were conducted, on both methadone clinic clients and methadone clinic staff and four main areas were identified as barriers to OST: waiting times (to commence OST treatment); a lack of flexibility in the program; poor

treatment by staff; and a regime of impractical take-away doses. Interestingly, the effectiveness of the drug methadone, compared to that of other opioids, was not amongst the main areas of concern; but methadone being the only available substitution drug was rated as the 5th-highest barrier.

Barriers and motivations for methadone treatment in the USA were reviewed by Koester, Anderson & Hoffer (1999). Where in a qualitative study, heroin-dependent persons were interviewed and directly asked what their motivations for OST were when they entered programs. Abstinence and major drug use changes were not always the desired goals for respondents. The main theme seemed to be wanting a 'time out' from their addiction, usually with a short time period in mind and often with the intention of returning to drug use when they could better afford it or were in a better living situation. 'Managing a drug habit' appeared to be the other main motivator for OST treatment - a last resort to avoid prison or drug debts, and again with a focus to returning to drug use if 'out of trouble'. Some used their first episode on methadone therapy to 'try the waters', to see if worked for them. The study recommended a wider tolerance of methadone therapy being used for reasons other than solely achieving abstinence, and different methods of measuring successful treatment, as patients' goals often appeared to be risk management, not always abstinence. A Chinese study on barriers to OST by Lin, Wu and Detels (2011) found, unsurprisingly, that registration with local police authorities and public discrimination are the two biggest obstacles to people who want treatment. In Vietnam, where a methadone maintenance program was recently adopted, the main obstacles to treatment are the sparsity of clinics and available chemists, meaning long, inconvenient travel times for those seeking help (Nguyen, 2012). A final barrier to treatment may be willingness to enter a longer term residential treatment such as Therapeutic Communities with demonstrated efficacy in the treatment of opioid dependence, particularly individuals with families and who are employed (Deering et al., 2004; Sheridan et al., 2008).

## **Pharmacological effects deterring people from mainstream treatment**

Aside from the stigma and logistics of entering methadone programs, there are also the negative effects of long-term opioid use that appear throughout the literature. These range from cardiac QTc prolongation (Mohamad et al., 2013), to chronic constipation (Yuan et al., 2000) and some negative effects on the immune system (Neri et al., 2005). Clients can overdose while in substitution treatment, but incidence of this decreased the longer clients were in methadone therapy. Emergency department records were examined and revealed 57% of non-fatal opioid overdoses were unintentional and 40% were suicide attempts, perhaps linked back to lower mood scores associated with opioid use (Pfab, Eyer, Jetzinger, & Zilker, 2006; Deering et al., 2004). Other mortalities related to chronic opioid use were measured assessing the medical records of 43,000 Canadians, and showed a 17 times higher mortality rate for chronic opioid users (Leece et al., 2015). The authors found double the mortality rate amongst opioid substitution patients who were concurrently taking anti-psychotics and/or benzodiazepines. Lung disease, cardiac events and alcohol-related disorders featured as the most common causes of death for long-term opioid users. Sexual dysfunction in males on methadone therapy featured in the literature. One study measured prolactin levels in clients' plasma, and found much higher levels in, firstly heroin users and secondly methadone users, with correlated results of sexual non-performance in affected clients (Trajanovska, Vujovic, Ignjatova, Janicevic-Ivanovska, & Cibisev, 2013). Another Canadian study found employment difficulties seemed to arise for people who chose methadone therapy over those who chose non-substitution treatments. This is interesting when many methadone programs use employment as a marker of successful treatment (Richardson, Wood, Montaner, & Kerr, 2012).

## **Matched treatment styles to patients**

A Turkish study used a mixed method, but still a controlled study design, to explore if higher motivation for treatment correlates with better treatment

outcomes. They found the group rated as highly motivated for treatment achieved 'significantly better treatment results' than the group who were rated as having low motivation. The study concluded that using motivational interviewing techniques encouraged better patient outcomes for any treatments offered (Bilici, Tufan, Ugurlu, Tan, & Tuyluoglu, 2011). However, the study did not state what the various motivators for people were. Exploring the question, 'what motivates people for addiction treatment?', opens up a very broad subject that could support a literature review of its own. In brief, motivations for addiction treatment generally range from 'threat of firing squad' (death) in Northern Thailand (German et al., 2006) to social discrimination in Vietnam (Nguyen, 2012), from the threat of AIDS and HIV (Koester et al., 1999), to the many social, physical and mental effects of addiction (Adamson & Sellman, 1998; Deering et al., 2004). A few articles argued some so-called motivations for AOD treatment are in fact threats, such as threat of incarceration or children being removed. This may encourage a 'play the game' or 'go through the motions' mind-set towards seeking treatment where the goal is to avoid punishment, rather than make significant changes. Worse still, these 'motivators' may deter people from seeking treatment at all (Simpson, 2002). However interesting, Simpson's article was a speculative discussion article with no specific data to support the claim.

## **Other Motivations**

In relation to opioid dependence and New Zealand one study collected information about other motivations for people seeking treatment of opioid dependence. As well as seeking treatment to reduce drug use (84%), 75% of participants had sought treatment to improve their general health, 73% for family/children-related reasons, 69% to reduce contact with undesirable associates, 68% for debt or financial reasons, 65% to reduce involvement in crime and 33% for employment-related reasons (Deering et al., 2004). The study comments that females appeared more strongly motivated to make changes for family and children than men. The success rate of OST is well-documented and thus, still remains the standard treatment for opioid

dependence (Deering, Sellman, Adamson, 2014). It appears this is the most likely motivator for seeking this treatment, the success of it. Even if that success is only measured by the client. With the many peer reports available on the internet of ibogaine's success, this could be argued as a possible motivator for ibogaine treatment.

As discussed with hallucinogen treatments for addiction, there were themes of people with addiction wanting and seeking some spiritual resolve for issues related to their drug use (Oram, 2012). This theme was not directly captured through articles related to ibogaine.

### **Exploration of other case studies**

Lastly, ibogaine case studies were re-examined and people's statements sifted for themes as to why they chose ibogaine. This was far from conclusive as it was not the original study's purpose, however, in Lotsof's (2001) case study report of 16 individuals, there was twice mention of 'failed' rehabilitation or treatment and twice mention of restrictions to their current OST. Other case studies did not publish interview transcripts.

### **Statement 5: Conclusion**

In conclusion, there was no current literature on exactly what motivates people to choose ibogaine for opioid dependence treatment, though there are certainly recurrent themes. Firstly, there are barriers, restrictions, risk of potential exposure and some negative health related aspects associated with chronic opioid substitution treatment. From specific case studies on ibogaine use there was mention by two people of having tried, and been disappointed by, mainstream treatments. OST may still be the best and most effective treatment available, but it is reasonable to infer a willingness, on the part of users, to try something different. Secondly, the perceived success of a treatment may attract people wanting to make changes. Ibogaine's



success, though mostly anecdotal, is very attractive, especially given that it is a one-off treatment, sometimes described by users as having an epiphany producing, almost 'miracle' effect.

Ultimately, people are motivated to seek addiction treatment for a variety of reasons. From the available literature, it was not possible to conclude whether ibogaine use is likely to continue in New Zealand. However many of the themes that potentially motivate people to seek alternative treatments are present in New Zealand's opioid-dependent population.

## **Summary of literature review**

Opioid over-use, dependence and overdoses remain significant health concerns for New Zealand (Ministry Of Health, 2009). There is limited neurological research knowledge on the pharmacodynamics of ibogaine. Its anti-addictive properties have been explored using mainly rodent brain studies to determine how the drug and its metabolites affected opioid and serotonin systems. One influence appears to be with Glial cell line-derived neurotrophic factor (GDNF) expression into the VTA, interrupting the complex dopaminergic pathways in the nucleus accumbens and the VTA areas of the brain (Mash et al., 1998; He et al 2005). A system known to help reinforce drug use (Glick, Maisonneuve & Pearl, 1997). The results were a near 80% reduction in observable opioid withdrawal symptoms in opioid-dependent rats. Many human case studies and open label trials have reported the reduction in opioid withdrawal and cravings-to-use for an extended time of up to three months. Reports of a better sense of well-being or mood was also reported for 4-12 weeks after ibogaine treatment (Alper, 2001; Mash et al 2001). More cardiac studies have taken place recently, in light of deaths around the world associated with ibogaine treatment and it is clear ibogaine and its metabolites at doses used for addiction treatment, cause and effect prolongation of the QTc cardiac interval leading to cardiac arrhythmia and possible death (Koenig et al., 2013). This has occurred in isolation of any other co-morbidities or conditions which could be

medically screened for (Vlaanderen et al., 2014; Zhang & Cuevas, 2002; Mass & Strubelt, 2006; Apler et al., 2014 ). However, there is some clinical evidence that cardiac risks can be medically mitigated through rigorous medical history assessments, monitoring current alcohol and drug use, medical observation and possible intervention, during the three days of ibogaine treatment (Kamlet & Alper, 2010; Alper et al., 2014). This lends much support to the need for ibogaine to be medically supported and operated. Throughout the literature was the theme found through Qualitative research highlighted a role for psycho-social interventions and support and this was incorporated in a Ibogaine Treatment Manual (Lotsof & Alexander, 2001; Harrison et al, 2009). It was unclear, through lack of investigation, exactly what motivated people to try ibogaine treatment, except for perhaps an indication of frustration and failure with conventional treatments, and an attraction to the possible one-off, 'spiritual' healing with hallucinogenic treatments like ibogaine (Lotsof & Alexander, 2001; Oram, 2012). In summary, it appears ibogaine was an effective treatment option for some people who are opioid-dependent, and was safest when medically supported to reduce cardiac risk (Alper et al., 2012).

# **CHAPTER THREE:**

## **METHODOLOGY**

### **Overview**

Chapter 3 explains the rationale behind why both qualitative and case study research have been selected as methodologies for this thesis. It also describes how the research was conducted and the parameters of the study. The research question and purpose are first defined, explaining that the nature of the phenomenon of ibogaine use is awash in social, political and personal influences. For the purposes of this thesis, and chapter, methodology is explained as identifying and defending the epistemology, or philosophical views on how, or even if it is possible, to obtain objective knowledge about the world (Travers (2001, p. 9). These various philosophies are explained, along with why a qualitative case study approach was undertaken. The method of the conducted study is also been outlined.

### **Research topic, question and goals**

The nature and extent of ibogaine use in New Zealand is, as identified in the literature, intertwined with New Zealand's prescribed and non-prescribed opioid problem. This opioid-dependent population, within New Zealand and around the world, arrived in their position through a range of social, genetic, political, medical, family and personal experiences (Sutherland et al., 2015). Throughout the literature it is also clear that ibogaine, as a treatment for opioid dependence, has experienced many political, funding, ethical/moral and perhaps most pertinent of all, safety barriers, influencing the current status of ibogaine treatment in New Zealand and worldwide.

In New Zealand, ibogaine is available to consumers through a self-funded medical prescription. The research began over a clinical issue at an opioid substitution service in the South Island, New Zealand. Two clients prescribed methadone chose to utilise ibogaine detoxification. One did not disclose until afterwards that they had had a negative experience, and the other approached the opioid substitution treatment [OST] service for support (travel arrangements mostly) and was declined. That client used ibogaine regardless and reported a positive experience. The decision not to support was based on emergency department case study reports of death attributed to the use of ibogaine. There appears to be mixed messages in the available literature, especially for consumers, with some medical trials supporting the effectiveness of ibogaine treatment, and some medical articles stating there are major cardiac safety concerns. Ibogaine is available as a treatment option in New Zealand, but the individual journeys of ibogaine users, what they encountered, and how and what they knew about the treatment beforehand, are not currently known.

## **Research question**

This led to the question, not answered in current literature, and relevant for New Zealand prescribers, AOD and other practitioners and opioid dependent people and their families:

‘What are the experiences and motivations of opioid-dependent people using ibogaine?’ With the sub question, ‘What safety measures and medical tests were ibogaine users aware of and which were utilised?’

The answer lies beneath complex social, political, medical and personal constructs and the interactions between them. The nature of these interactions between political and social influences has historically been best examined through qualitative, case study research (Swanborn, 2010, p. 11).

The purpose of this study therefore, was to explore the experiences and practices of opioid-dependent individuals who have used ibogaine as an intervention for opioid dependence. Including individual motivations for the treatment, their understanding of potential health risks, utilisation of pre-treatment health checks, and the effects of ibogaine treatment in relation to any subsequent opioid use.

Areas explored in the literature have been around the significant health concern of opioid dependence in New Zealand, and the influence political and historical factors have had on the nature of drug use. The anti-addictive qualities of ibogaine have been scientifically explored and although results around detoxification of opioid dependence have been promising, they are limited by the nature of ibogaine use itself. Given its psychedelic nature and the fact that it is illegal in many countries, most attempts to substantiate anti-addictive reports through multiple, repeatable, peer reviewed, human clinical trials have been thwarted. Recent (past 10 years) reported fatalities involving ibogaine use in sub-medical centres, further decreased available funds, interest and research on ibogaine as an opioid detoxification treatment. However the literature clearly shows that ibogaine use continues worldwide and identifies on-going motivators for why opioid-dependent people choose this alternative treatment.

One consideration noted in the literature is that the opioid-dependent population are a high-risk, vulnerable group. They inhabit a unique, established sub-culture within the drug-using culture of New Zealand, and they are over-represented in health-related harms (Moshier et al., 2012). In interviewing this high-risk group, and as recommended by Moshier et al. (2012), a specific cultural approach employing empathy and understanding was essential, combined with clinical drug and alcohol treatment expertise. To minimise the impact of research on this vulnerable population, the study paradigm and data collection methods needed to be fully considered. Existing literature related to alcohol and drug research, especially politically-contested alcohol and drug treatments, mostly used qualitative research methodologies (George & Bennett, 2005). Qualitative research

paradigms incorporate, allow and utilise the relationship between the researcher and the subject being studied. It is through this relationship that an understanding of wider inter-related social influences of the phenomenon are obtained (Yin, 2009). Therefore, a qualitative approach was decided upon for the purpose of this study.

## **Research paradigm**

A paradigm is defined as a set of components that make up research: ontology, epistemology, methodology, and the method (Scotland, 2012). The four main paradigms are positivism, post-positivism, interpretive and critical.

The purpose of choosing the correct paradigm is to obtain the most useful collection of data and interpret it meaningfully to answer a question.

*“Questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldwide view that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways.”* (Guba & Lincoln, 1994, p. 105).

Ontology is the study of the very nature and structure of knowledge and defining what is existence. Epistemology looks at the relationship and factors between knowledge and subjective interpretation (Bloomberg & Volpe, 2012), as well as the nature of knowledge and how it was formed (Scotland, 2012). Ontology and epistemology each have their own philosophical backgrounds and viewpoints. The ontological viewpoint of positivism is that of realism, where an event exists with or without the researcher/observer present (Scotland, 2012). The ontological stance of interpretive paradigms is that of relativism. A relativism fundamental is that reality is subjective and different from person to person (Guba & Lincoln, 1994).

The debate between quantitative and qualitative research paradigms appears to agree, in most recent literature, that each has an ability to answer a scientific question (Newman & Benz, 1998). *“...we present them as interactive places on a methodological and philosophical continuum based on the philosophy of science. A researcher tests a Theory and as results feed-back to the original hypothesis, both inductive and deductive processes are operational at different points in time.”*(Newman & Benz, 1998, p. xi)

Quantitative studies often use a realist ontology (positivism) (Creswell, 2013). The researcher is viewed as another partial instrument in a replicable, often-repeated experiment. It produces numbers and statistics, and the epistemology is that of objective observer (Creswell, 2013). However trialling hallucinogens requires greater human intervention and interpretation, including a complex understanding of individual test subjects. This information is more often gathered using other paradigms (Gillham, 2000). Attempts to examine ibogaine with a purely quantitative approach run into contamination from factors such as human discussion and support which cannot be easily quantified (Harrison & Mojeiko, 2010)

## **Qualitative research**

Qualitative studies generally take the ontological position of relativity (Scotland, 2012). Qualitative research involves a mostly interpretive naturalistic approach to events in the world. *“...researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meaning to people* (Denzin & Lincoln, 2005, p. 3). A naturalistic inquiry approach is defined by Salkind (2010) as a way of *“understanding the social world in which the researcher observes, describes, and interprets the experiences and actions of specific people and groups in societal and cultural context”*(pp 2). A naturalistic inquiry approach comes under and would describe the epistemology of a study.

The personal nature of addiction, opioid dependence and ibogaine treatment means each individual studied may have a different experience and a different interpretation of that experience. While there are definite, measureable objective signs and symptoms that are common for each event, one person's treatment success could be another person's failure, relative to the desired result. For example, if achieving a sense of well-being were the goal, it may not necessarily be achieved by simply becoming drug-free. Historically, research on hallucinogenic pharmaceuticals has been mostly qualitative, capturing people's experiences and how it affects their disease (Strassman, 1995).

## **Research methodology**

In reviewing quantitative and qualitative paradigms against the context of ibogaine use, addiction and other psychological factors relating to treatment success, a qualitative study approach was selected for this paper.

Related to health, Yin (2004) revealed two qualitative case studies that provided data for both the establishment of a New York methadone programme in the 1960s, and the largest immunisation programme in U.S history, against swine flu. Both studies were critiqued and determined to have used the best methodological approach through qualitative case studies due to the cultural context around the two populations (New York heroin users, and in the swine flu case, the few deaths were localised at a U.S. army base during a cold winter). The first study needed to understand the motivations and needs of its high-risk population; the second study required more information, related to personal contacts and symptoms, than standard army medical data records could provide. Indeed George and Bennett (2005) stated in their book of case studies in the social sciences, that while over half of the political research studies in the developed world since the 1980s have used statistical analysis, most of the remainder used the case study research approach



Gillham (2000) states that this qualitative, case study style “*gets under the skin of a group and explores complexities in human behaviour which are beyond the scope of controlled experiments*” (p.11). More specifically in relation to case study research design and methods, Yin (2009, p. 9) states that utilisation of this method within a naturalistic philosophy will assist “... *to illuminate decisions, why they were taken, how they were implemented and with what?*”

To answer why people used ibogaine, the study needed respondents to fully explain previous drug use and related harms. The study also required explanation of why previous conventional treatments did not suit them. These were sensitive topics that entailed previous trauma and feelings of failure, and yet shaped the decision process for people. Their important stories and histories require context, as each choice is often shaped by political and social influences related to the field of addiction. That is, a person’s opioid substitution treatment can be deemed unsuccessful by the client if the culture of the treatment service is viewed as punitive and restrictive to lifestyle; whereas the OST service may view the absence of other opioid drugs as treatment success. These complexities and interconnections between addiction and social politics appear best captured with a case study research approach. The epistemology and philosophies best fitted to examine a social, cultural and personal interactions is a naturalistic inquiry approach. Naturalistic inquiry interprets the experiences of people in societal and cultural context (Salkind, 2010).

Therefore, a qualitative case study, using a naturalistic interpretive approach, has been selected to attempt to answer this paper's question: ‘What are the experiences of opioid-dependent people using ibogaine’.

Case studies can be defined very differently amongst the many experts on the subject. This thesis will use Robert Yin’s (2009) definition: “...*an empirical enquiry about a contemporary phenomenon (eg: a case) set within the real world context, especially when the boundaries between the phenomenon and context are not clearly evident.*” (p. 18). Yin (2009)

further explains that it's the ideal methodology to examine the complex relationships between many influences and factors in relation to people's decisions and actions.

## **History of case study research**

Case studies, as a means to gain and share a deeper understanding of an event or phenomenon within that case, appear to have evolved alongside the social sciences. At the turn of the century, Sigmund Freud used case studies to teach students and himself about social behaviours (Swanborn, 2010). Law, perhaps as far back as ancient Greece, used case studies of legal outcomes as benchmarks for future cases (George & Bennett, 2005). As a research method, with its own scientific validity, it appears to have been born mid-20<sup>th</sup> century through sociology, with published case studies: The Taxi Dance Hall (Cressy, 1932) and Street Corner Society (as cited by; Swanborn, 2010, p. 11). Early and frequent criticism of 'case study' research was that results were not applicable to the wider population, or generalisations could not be made because of the 'small sample'. The information was thought to be not as useful as larger (quantitative) samples where inference to the whole population could be drawn (Tellis, 1997). Yin (2004) illustrated that the world's largest and fastest immunisation programme (for swine flu in the USA in the 1970s), and the establishment of the first opioid substitution treatment in the 1960s, were both attributed to single case studies. Case Study research is truly evident and prominent in the literature from the 1980s to the present where nearly half the social science research in the literature involves case study methodology (George & Bennett, 2005).

Interestingly, the acceptance of case studies and qualitative relative paradigms through the 1980s coincides with realist sciences, such as physics, accepting quantum physics and other theories of relativity, where the observer affects the outcome of the experiment (Hawking, 1996).

## Research models of case studies

Yin (2009) further refined case study research models, arguing they have four scientific applications:

1. To explain complex causal links in real-life interventions
2. To describe the real-life context in which the intervention has occurred
3. To describe the intervention itself
4. To explore those situations in which the intervention being evaluated has no clear set of outcomes.

Explanatory, exploratory and descriptive case studies are also considered to be separate types of case studies. Other lead authors on case study methodologies include sub-categories of case studies such as intrinsic, (the researcher has a personal/clinical interest in the subject), instrumental (using a single case to explain many) and collective (groups of cases are examined), (Stake, 1995, as cited in Tellis, 1997). There are many other descriptors and subtypes of case studies by various authors on case studies and they vary across the different social sciences. This is another criticism of case study methodology: that due to multiple and varied types of case study methods, studies are not replicable (Tellis, 1997). Yin (2009) acknowledges this perception of case study research and defends the position mostly through good practise. Namely, for researchers to detail exactly the method, the methodology and aspects to be analysed as part of the study.

In reviewing Yin's (2009) four scientific applications, it was found that they were applicable to three aspects of the study's objectives: explanation of complex interactions; description of the treatment process; and exploration of motivations for use. The treatment process itself involves a long journey

for the client with much explanation of pharmacological and physical effects and much description of psychological experiences. Case studies allow for the value of the subject's background and/or oral history to be taken into account when making overall study conclusions. Subjects have very different histories leading up to the point where they seek ibogaine treatment, and building a case file around each interviewee allows different opioid drugs used and combinations of drugs used, to be more fully interpreted. Indeed the complexity of opioid dependence and problematic opioid use means, for example, negative outcomes reported by the ibogaine group, may not have been perceived as negative outcomes by the OST providers. Future researchers interpreting the reports statistically would also miss this nuance. The individual case file allows for subtleties and small differences to be captured from other data sources such as the demographics and history of the participants'. Although there was personal interest from the researcher, the case study sub-category 'instrumental' was best fit as a few cases were used to explain many. Also, multiple interviewees were involved, so a collective case study approach was best suited. Other qualitative approaches, such as narrative analyses, were too restrictive to capture the complex pharmacological and political influences of the study subjects.

Therefore, to clarify the paradigm and methodology chosen for this study, a naturalistic, qualitative, instrumental, collective case study, incorporating explanatory, exploratory and descriptive methods, was selected.

## **Method**

Previous sections have covered the philosophies underpinning the choice of a case study method. This section will first lay out the advantages and disadvantages of case study method and look at the role of the researcher and the participants. Then for purposes of transparency and replication it will detail the structure, framework and recommended protocols used for

this case study. The method section will also clarify the researcher's background to explain the researcher's epistemology.

## **Advantages of case study method**

Depending on the type of case study used, different authors argue different advantages. The common advantage with interviews and collected data is the 'targeted' information gathered, relating directly to the topic's original question (Tellis, 1997; Yin, 2009). The strength of data collected is related to case studies being able to 'triangulate' the data. (Tellis, 1997; George & Bennett, 2005). Four main types of triangulation can occur: theory triangulation (different investigators and view-points interpret the same conclusion); data source triangulation (data is the same in various contexts); investigator triangulation (different researchers doing 'a' study on the event); and methodological triangulation (different researchers doing the 'same' study on the event), (Denzin, 1984, as cited by; Tellis, 1997). For the purpose of this study, it is anticipated that data will contribute to future 'investigator triangulation'.

## **Disadvantages of case study method**

The common disadvantage throughout the literature is that of bias. 'Case selection bias' - choosing interviews or subjects that only support the researcher's hypothesis - and 'institution bias', where respondents and informants choose research or people that defend a particular centre's practise (Tellis, 1997; George & Bennett, 2005). This is described as both deliberate and unintentional bias. Literature mentions interviewees' eagerness to please the interviewer and give answers thought to help the project. Due to the very nature of case studies, there is an acknowledged bias in whom to examine, which can be argued as 'targeted' selection for a particular phenomenon investigated (Yin, 2009). From a statistical point of view, a limitation of case study information is the inherent inability to apply

results to broader populations (George & Bennett, 2005). This study is interested in the practises and experiences of ibogaine users, more than current estimates of use - a case study approach is not appropriate to extrapolate the behaviours of larger populations. To minimise the effects of bias on the results, an open peer review process with experienced academic supervisors occurred throughout the study.

### **The role of the researcher and the research participant in case study method**

Throughout the literature on research and as reported by Yin (2009), perhaps the main source of data collection is interviews (although environmental observations and document-sourcing are also relevant). With interviews between two people there is a complex, psychological interaction. Literature around case study method indicates that interview experience can be more beneficial than experience with the subject matter, although this is of course still recommended. Experienced interviewers are defined by Yin (2009) as those who have received training and regular feedback on interviewing technique. This is crucial for avoidance of leading and closed questions, which sway the data. An interview protocol is described in the methods section, describing a set of pre-arranged and critiqued questions, the time and environments of interviews and the interviewer's level of experience. This is to identify the position of the interviewer and the nature of the questioning (Swanborn, 2010; Yin, 2009). As further discussed in the ethics part of this chapter, the interviewer is an experienced alcohol and drug treatment nurse with 20 years' experience in the mental health field, and postgraduate qualifications in assessment.

The role of the research participant is unique with case studies. Case study respondents (people eventually to be recorded) are approached first by informants (those known both to the respondent and researcher). A respondent can also be an informant, through snowballing technique, whereby they recruit people from within their own social circle. Snowballing technique also allows wider contact with people of interest,

such as other ibogaine treatment providers, who may then potentially provide further respondents (Swanborn, 2010). It has been argued that case study respondents may have no other motive to take part in a particular study, other than to respond to their peer. This is compared with other surveys (quantitative) and random telephone survey interviews (mixed method) where the respondent is agreeing because of the purpose of the study, and what motives they have for the study to succeed or not succeed, not because they know the person calling. This issue of informed consent is therefore an important consideration for the researcher, as he/she must be aware a respondent has partially agreed to the study because of their relationship to the informant (Travers, 2001). The criticism of this method of course, which concerns the statistical researchers, is sample selection bias. Great efforts with recruitment and snowballing allowed for a mixed response to this study including those for whom ibogaine had not been useful, and one person recruited from outside the 'known' Dunedin treatment clinic group. This was achieved through asking current respondents if they personally knew of other users, which lead to an interview with someone who had never utilised any outside assistance.

## **Case study protocols**

Yin (2009), in response to the criticism of bias and undetermined structure to case study methods, recommended the following case study protocols and framework:

1. Design the case study protocol:
  - a. determine the required skills
  - b. develop and review the protocol
2. Conduct the case study:
  - a. prepare for data collection
  - b. distribute questionnaire
  - c. conduct interviews

3. Analyse case study evidence:
  - a. analytic strategy
4. Develop conclusions:
  - a. recommendations, and implications based on the evidence

This protocol has been selected for this study and each of the four stages of the protocol were peer reviewed by the researcher's direct supervisors.

This study interviewed ten people using ibogaine for the treatment of their opioid dependence. The topics explored in the interviews were: the individual's motivations to use ibogaine; the user's understanding of the treatment risks; what if any pre-treatment health tests were completed; a description of the treatment setting; and the effects of ibogaine treatment on their opioid drug use.

## **Sample and data collection**

As participants within the target population may or may not be involved with health services, all information was gathered directly from the participant. Data was not gathered from other records or patient files, as information sought is often not reported to health centres by users (McCoy, Metsch, Chitwood, Miles, 2001), eliminating other case study research methods such as document and record analysis. For example, the not-for-profit ibogaine clinic in Dunedin, mostly utilised to recruit participants, does not keep paper records of their clients. The study sample to be discussed is a small sub-group of the opioid-dependent population in New Zealand, defined as currently or previously opioid-dependent people who have used the drug ibogaine, specifically for the purpose of treating their dependence on opioid drugs. Ten participants comprise the study sample. Participants were recruited via informants at the Iboga Association Aotearora, one through an informant at a Christchurch OST service, and one in response to snowballing. While permission was obtained to display



posters of the study at a local needle exchange service and an outpatient AOD service and Canterbury Opioid Recovery Service (CORS), no one was recruited via this means.

As this form of treatment was a significant life event for an individual, there was no time limit on respondents, as to when their ibogaine treatment took place. Two participants were accepted who had treatment overseas as this is a current treatment option for New Zealanders. Potential participants who were clearly unsure as to whether their treatment was in fact ibogaine were excluded as were individuals who had used ibogaine for other purposes such as treatment of viral illness, alcohol detoxification or mental health disorders. One person approached the study who had used ibogaine for the treatment of cannabis dependence, but they were also excluded.

Data was collected from each participant in a single interview. A brief questionnaire was administered to participants after the interview. This was to ensure standardisation of descriptive participant information. This included demographic information such as age group, gender, ethnicity, duration of opioid dependence prior to ibogaine treatment, and prior treatment history and opioid use following ibogaine treatment. Interviews were recorded, with permission, and later transcribed. As per Gillham (2000) interviewing brings with it many subtleties in the process, including different power relationships and potential interviewer bias. These potential data collection issues were discussed and explored with academic supervisors in an open, honest and transparent process. The researcher is no longer a clinician for opioid substitution services or addiction services which decreased potential power differences.

### **Location of interviews**

It was proposed to respondents that the interviews could be conducted at a designated public location such as a café or library. Alternatively, if more convenient, and if the respondent agreed, then at the participant's home. If in-person interviews could not be conducted, it was suggested they be

recorded over the phone or via social media avenues such as skype (one North Island respondent). Four interviews were conducted at people's homes (including the skype interview), two were conducted at a university, and four at cafes and bars. On completion of the interview, participants were provided with a \$20 petrol voucher to acknowledge travel/time donated.

## **Interview schedule**

The following 10 questions were designed as a standard interview schedule, to capture information from similar areas of interest, in the same way, with each case. The questions were peer reviewed prior to first interview and adjusted after the first interview to capture the area of previous hallucinogenic use, under question 1, prompt 5.

1. Would you please tell me about your opioid use and dependence, as well as other drugs of use (including alcohol)?

Prompt 1: Age of first use and length time dependent.  
Treatments / Detoxification.

Prompt 2: Other drugs of use and dependence

Prompt 3: Approximate amounts of opioids used prior to ibogaine treatment

Prompt 4: Factors which led to wanting to make changes

Prompt 5: Previous hallucinogenic use and experience of this?

2. Tell me about what led you to choosing ibogaine as a treatment?

Prompt 1: Other AOD treatments attempted

Prompt 2: Where did you hear/find out about ibogaine?

3. What was your understanding of ibogaine treatment prior to using it.

Prompt 1: Any knowledge of health risks.

Prompt 2: What were your expectations?

Prompt 3: What were your concerns?

Prompt 4: Any health checks (questionnaires, urine drug screens, electrocardiograms, blood tests, medications, vitamin/mineral supplements)?

4. Tell me about the ibogaine treatment you received, the level of support before, during and after ibogaine treatment?

Prompt 1: Pre-treatment meetings and counselling

Prompt 2: During the experience/treatment

Prompt 3: After treatment and type of support

5. Describe your experience of ibogaine treatment?

Prompt 1: Mood effects days 1, 2 and 3

Prompt 2: Physical effects days 1, 2 and 3

Prompt 3: Sleep, appetite and effects on smoking

Prompt 4: Any particular thoughts or ideas experienced, any other experiences

6. What were the effects of treatment in relation to opioid usage, opioid withdrawals and opioid cravings at:  
A) 24 hours, B) 48hours, C) one week, D) 2 weeks E) one month  
F) three months G) presently

Prompt 1: Were withdrawals and cravings experienced less/same/more than compared to experiences of other opioid withdrawals.

7. Do you know anyone else who has used ibogaine?
8. What advice would you give someone else who was thinking about ibogaine treatment?
9. Looking back would you have gone about this treatment any differently?

10. If this was illegal, would you still consider using ibogaine treatment?

## **Ethical considerations**

The data obtained from participants in the study are related to an intervention that although is legal in New Zealand, is currently not medically supported in most regions of New Zealand. The survey and advertising for the study were designed to not promote the use of ibogaine, but to obtain information about ibogaine. Had participants disclosed adverse psychological side effects from previous ibogaine use, or had they been observed by the interviewer, a list of accessible mental health resources and counsellors would have been discussed and made available. The researcher had planned to actively support the participant in accessing health services should this have been necessary. Fortunately no cases required this intervention

Ethics approval was sought and gained through the University of Otago Human Ethics Committee, April 2015. Ethics code H15/042. Initial concern was expressed and clarification was asked for regarding the interviewer's personal safety and safety of clients, as interviews were proposed in people's homes. This issue was satisfactorily addressed with the committee through the provision of information on the researcher's long-term experience in home visits in the role of mental health and addiction nurse. Also respondents' safety was addressed in the method protocol which was to attempt interviews in public places first, that also ensure privacy.

The cases or sample interviewed are people from New Zealand, from various cultural backgrounds, including sub-culture backgrounds of both addiction and opioid dependence. The interviewer was mindful of his own cultural background, which is a mix of ethnic influences of New Zealand Pakeha [Caucasian] and a career with a bio-medical focus, which could have influenced the researcher's viewpoints. This cultural impact on

respondents, such as the researcher inappropriately reacting to cultural difference, was diminished through reflection and discussion with supervisors (George & Bennett, 2005; Stein-Parbury, 2009; Bishop, 1999). There was a possibility New Zealand indigenous people would be interviewed, however no respondents identified as Maori.

## **Maori consultation**

Consultation was sought with the Kaitakawaenga Rangahau Māori (Facilitator Research Māori, University of Otago, Christchurch (refer to Appendix 2)). Discussions focussed on informing the Canterbury District Health Board Mental Health Service Maori Health Workers about the research prior to commencement. An important decision was to involve a Maori research interviewer should a Maori person be recruited and a Maori Health Worker with many years' experience and expertise in the area of addiction was very willing to participate in this role. The researcher will also inform the Maori Health Workers of the findings from the research. While no person who identified as Maori participated in the research, the findings remain applicable to Maori.

The woman Maori Health Worker was also available as an interviewer for women participants. However, no participant took up this offer.

## **Data analysis**

Consistent with, George and Bennett (2005) and Gorman and Clayton (2005) arguments that verbal descriptions of a subject is best converted to useable data through thematic analysis, this approach was selected for this study. Thematic analysis, or traditional qualitative analysis, was selected as it appeared to be the most common form of analysis used with interview

data in case studies (Swanborn, 2010). However, case study research incorporates more raw data than interviews alone and some experts on case studies have further developed thematic analysis into four or five sub-categories, depending on the author (Swanborn, 2010; Yin, 2009). For the purpose of this study Yin's (2009) definition of the sub-categories are reviewed, along with an explanation of why the sub-category 'relying on theoretical propositions' and the analytic technique of 'explanation building' have been chosen for the type of data represented in this study.

## **Analytic strategies**

Yin (2009) describes four general strategies for data analysis, and then five specific analytic techniques. The first strategy is that of 'relying on theoretical propositions'. This is defined as the author working from a theoretical proposition regarding a phenomenon, usually arrived at through clinical experience or explored literature. Due to this initial proposition, interview questions are selected around the idea and from the very beginning planning stages of the study, the hypothesis or proposition is foremost in the researcher's mind and shapes the direction and selection of data to be obtained to answer the proposition or theory. The second strategy of 'developing a case description' (Yin, 2009) involves arranging the data one has collected perhaps without an initial theoretical proposition. The researcher attempts to describe the data and the connections within the data and formulates chapters or divisions to capture each description made about phenomena. This strategy was not chosen as the researcher's clinical experience and reading of the literature meant some theoretical propositions had been made, and indeed did shape the interview questions. The third strategy is 'using both qualitative and quantitative data'. Obviously, this strategy is beneficial when the case study involves a lot of quantitative data such as: number of days abstinent, or the amount of drug used. Using this strategy the researcher can represent numerical data through statistical graphs, supporting or challenging, perhaps, the themes found qualitatively in other data such as interviews. This was also not selected as a strategy, as

the focus of the research question was not aimed at measuring periods of abstinence, but rather the person's experience and understanding of treatment risks. This strategy also involves discussion with a bio-statistician prior to the study design, which was not required for this study. The fourth strategy, that of 'examining rival explanations' is defined by Yin (2009) as one to use alongside other strategies, or as a strategy unto itself. Here the questions are asked in reverse, or to 'steal' some quantitative terminology, the null-hypothesis is tested. That is, all other explanations are explored including asking if the phenomenon could occur without the suggested or theorised causations. However, exploring rival explanations also asks how much researcher bias has affected the outcome, or what threats to validity there may be. This strategy also tests other authors or experts' theories against the new theory formed. It may even incorporate a super-rival, where the researcher asks if there could be a combination of explanations, and a greater, yet unknown, causal effect may be at work. This strategy was deployed in conjunction with the first strategy (relying on theoretical propositions), but not in isolation or as the only strategy for this study.

## **Analytic techniques**

Combined with the strategy selected, an analytic technique is chosen to group the data. Yin (2009) stipulates five analytic techniques specific to case study research. The first, and chosen, technique is 'pattern matching'. Pattern matching is described by Yin (2009) as recognising similar patterns or themes in the data and grouping them accordingly. These patterns are then used to describe or explain the phenomenon. Four other techniques are derived from this first technique and include 'explanation building', 'time series analysis', 'logic models' and 'cross-case synthesis'. Each begins with matching patterns and then either arranges the patterns over a time-line, or attempts to build logical explanations from the patterns, or, as with the last technique, compares the patterns to other cases or studies. Pattern matching was selected as it incorporates all of the above techniques, allowing the data

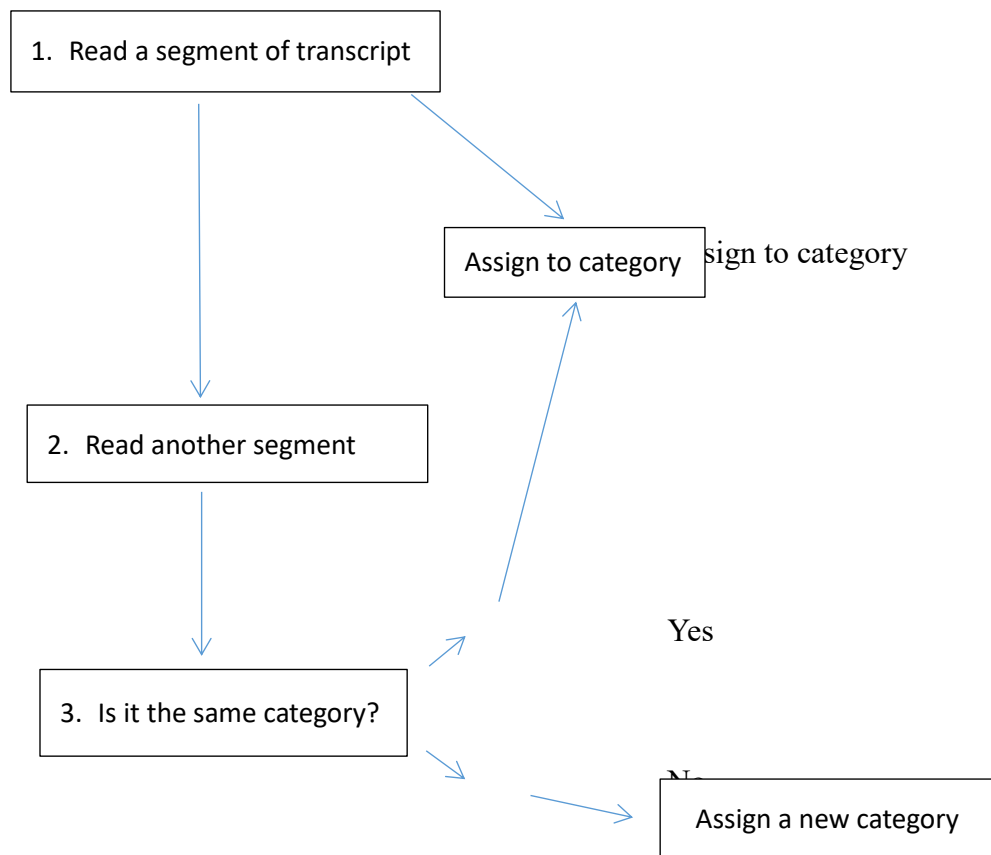
to be moved around or played with in various ways, to validate the themes or patterns found.

## **Coding format**

Data, which is the transcribed interviews and case description of each person interviewed, was read through and re-read and 22 codes were applied in relation to the separate areas of focus identified by the participants. These codes were categorised into five smaller, but related groups, and these groups of discovered themes are discussed as the findings of the study in the discussion section. Due to the small (n=10) sample, a computer programme such as CAQDAS or Nvivo was not required for this study.

To minimise bias and the subjective interpretation of discovered themes to fit the researcher's hypothesis (Tellis, 1997), the researcher maintained discussion of themes and suggested categories with supervisors. Transcripts are available in full in the reference section. The coding for this thesis followed that suggested by Gorman and Clayton (2005).





***Figure 1: Demonstrates the adapted coding format (includes collaboration)***

## **Rigour**

Data from case studies can affect large changes politically (Yin, 2004) and the researcher was aware of the importance and dedication required to maintain validity of the data produced. A criticism of a case study approach is the data is not ‘testable’ through scientifically removing variables and running experiments to test the null hypothesis. Also selection and interviewer bias, and interpretation of findings are often questioned by statisticians (George & Bennett, 2005). However, quantitative methods for testing validation are not suited for qualitative studies. Graneheim and Lundman (2004) noted the need for trustworthiness to be woven into the

study for qualitative validity. They state that credibility, dependability and transferability are better suited for the relative nature of qualitative research.

Credibility is described as how well the researcher has maintained objectivity, usually demonstrated through clear study design and structure, and peer feedback (Graneheim & Lundman, 2004). For this study the researcher had two academic supervisors. They were involved in both the study design and gave feedback on identified findings and themes. The researcher had all work submitted and reviewed prior to the next step of the research.

Dependability is detailed as the ability of the researcher to maintain the same questions and use the same pieces of data, despite the very changing, evolving nature of interviews. That is, it is common for new topics to emerge and be asked about on subsequent interviews and not the first. This is acknowledged as part of the process but must be transparent to the reader (Graneheim & Lundman, 2004). This did in fact occur, and one interview question was added to incorporate any previous use of hallucinogens by participants. Fortunately this information was obtained in the first interview and felt to be of value. The question was added after discussion with supervisors on how it would affect results. As the interview one respondent did list in conversation previous hallucinogenic experiences, it was decided adding the question would not skew the data represented and so was added to the remaining interviews.

Transferability applies to how relevant the findings are to practise; ensuring the researcher is working for scientific 'advancement', not personal gain. Again, the structure of the research with two experienced supervisors, ensured transparent processes, discussion and feedback, examination of all possible biases, and that results were indeed for the purposes of increasing understanding and knowledge around this phenomenon.

## **Conclusion - Chapter 3**

The study paradigms for this thesis have been examined and explained in terms of why they have been selected for this study. The nature of ibogaine use within the culture of opioid-dependent individuals in New Zealand, is influenced by many medical, social, personal and political factors. This makes ibogaine use complex in nature, especially as it also appears to be entwined with the many influences of opioid dependence. For this reason a naturalistic, qualitative approach was chosen to study the nature of ibogaine use. The methodology selected is a naturalistic qualitative interpretative and collective case study, incorporating explanatory, exploratory and descriptive methods. The data from the interviews and case histories will be analysed firstly through the overall strategy of relying on theoretical propositions which guided the questions in the first place. Secondly, the interviews and cases are analysed using the technique of pattern recognition and thematic grouping of patterns. The background of the interviewer is that of an opioid substitution nurse (addiction and mental health). The study's integrity and validity come from developing trustworthiness with the study process, demonstrating a transparent study process and maintaining cultural etiquette with clients.

# CHAPTER FOUR:

## RESULTS

### Overview of results

This chapter will firstly briefly describe the participants of the study and then outline the collective findings of the 10 interviews. As per the Method section, using a naturalistic interpretive approach each interview segment was assigned to a subject area or a code. The codes were reviewed with study supervisors and 42 codes were collectively agreed upon. Natural groupings of codes formed seven themes and findings for this study. These groupings emerged from the data (interviews) and in turn the interview questions were guided by findings in the literature. The themes are laid out in the order in which they were discussed in Chapter Five and in the order represented by Table 1. Each theme will be described via its represented codes, and how strongly each code was voiced. Examples from the interviews highlighted the individual codes. The themes outlined are: 1) ‘Not sitting comfortably with opioids’; 2) ‘Motivations for using ibogaine’; 3) ‘Safety conscious and support seeking’; 4) ‘The best practise’; 5) ‘Ibogaine treatment effects on depression and anxiety’; 6) ‘Ibogaine treatment effects on dependence’; and 7) ‘The spiritual effect’.

The themes are placed in order of the experienced journey through opioid dependence, ibogaine treatment and periods of opioid abstinence afterwards. Each theme has been methodically correlated back to the interview transcripts to assess how many respondents, overall, matched the theme. Respondents may have contributed to individual codes within the theme yet not have been representative of the nature of theme, so they were not counted as a respondent to the theme. The number of respondents for each theme is represented in red under the title of the theme in table 1. The

last theme, 'the spiritual effect' was ordered last due its low respondent number (four) and because it also appeared to be a described factor throughout people's journey with ibogaine.

## Description of participants

Respondents numbered ten (n=10) in total. Eight were contacted via the Dunedin ibogaine group or network through its main representative. One respondent was contacted through the Christchurch methadone programme (Now known as Canterbury Opioid Recovery Service (CORS)), and one was contacted as a result of snowballing from another respondent. Nine respondents used illicit opioids as part of their journey into opioid dependence, one respondent used opioids problematically as a result of pain management. Participants' ages ranged from 27 to 53 with an average of 40.2yrs. Ages of experiencing ibogaine treatment ranged from 21 to 49yrs with an average age of 35.1yrs. All respondents were of New Zealand European ethnicity (NZ Euro). This data is captured in tables 2 – 4.

Information about the participants provides readers with a better understanding of their experience and journey, however some information was unable to be represented in the results and discussion section of this study. Such as personal information which shapes each 'case' or person's journey. Stories of abuse and trauma, mentally and physically, were shared and emphasised as motivations or bases for anxieties. This study focussed on a drug addiction treatment and its foci was not on histories and psychological make up of this sub-group. However these histories and experiences did direct some people's decisions and are relevant. Notably was some observed personality traits which differed to the researchers experience with OST service users in New Zealand and England. The group studied was observed as being perhaps more motivated and each shared quite remarkable personal achievement's in their lives, such as successful business's, world travels and distinguished careers. All respondents are currently and historically employed. The respondent's relationship with other drugs is also significant, with nine respondents having a strong relationship with cannabis before and after ibogaine treatment. As described by one respondent, there are opioid users who want to mask emotions and feelings with narcotics and other opioid users that want the psycho-active,

thinking and stimulation that occurs with drugs especially cannabis and hallucinogens.

*....Well I know lots of people on opiates who won't smoke too much pot because its slightly hallucinogenic or you know psycho-active. A lot of people take opiates to shut down their thought processes and to block out bad experiences from the past (respondent 001).*

Ethnically the sample group all identified as New Zealand European and other ethnic groups in New Zealand were not represented. This aspect is discussed in the studies limitations section chapter five. Over-all the group interviewed and that make up the cases for this study share common attributes of the general opioid population as described by Moshier et al (2012). That of belonging to a culture of and group of opioid users who share a set of acquired skills and experiences. They are a high risk taking population but also a vulnerable population over represented in health statistics physically and mentally (Deering et al., 2004). Respondents required much correspondence and discussion to reassure them of the nature and trustworthiness of the study and the researchers. Most respondents required a peer link to 'vouch' or speak for the study. The respondents, in line with the wider opioid-dependent population, were a vulnerable, hard-to-reach group.

**Table 1: Themes and categories**

Categories	Themes
1. Desperation to be opioid-free	1. Not sitting comfortably on opioids (Nine respondents)
2. Multiple attempts at quitting	
3. Societal and self-stigma of addiction	
4. Physical and Mental aversion to substitution opioids	
5. Withdrawals and associated mood not tolerated	
6. Keep my methadone dose low	
7. Anti-establishment and critical of standard treatments	
8. Restricted achiever	
9. Anxiety of being dependent	
1. Hope and reports of treatment success	2. Motivations for using ibogaine (Ten respondents)
2. How ibogaine therapy was discovered	
3. Quickness of treatment	
4. Previous hallucinogenic use	
5. Use unaffected by legality	
1. Safety conscious and seeking medical input	3. Safety conscious and support seeking (Ten respondents)
2. Need for preparation and guidance before treatment	
3. Need for 24/7 care during treatment	
4. Need for guidance after treatment	
5. Family/Friend/General Practitioner support	
6. AA / NA self-help group dichotomy	
7. Anxiety around ibogaine treatment	
1. Negative experience of ibogaine treatment	4. The best practise (Six respondents)
2. Sleep disruption and management	
3. Morphine versus methadone	
4. High versus low ibogaine dose, use of boosters	
5. Control the vomit	
1. Positive effects on mood post treatment	5. Ibogaine treatment effects on depression and anxiety (Seven respondents)
2. Anxiety management affecting abstinence	
3. How to cope without a crutch	
4. Powerful effect of hallucinogen	
5. Mental /cognitive work after treatment	
6. Acceptance of fears, vulnerability and pain	
7. Heightened senses post treatment	
1. Absence of opioid withdrawals	6. Ibogaine treatment effects on dependence (Seven respondents)
2. Effects on opioid usage	
3. 3 month point after treatment	
4. Effects on other drug use	
5. Effects of treatment on pain and the physical body	
1. Long term effect of hallucinogen	7. The spiritual effect (Four respondents)
2. Sense of epiphany during treatment	
3. The little brown man	
4. Search of the spiritual	



**Table 2: Demographics**

	<b>Gender</b>	<b>Ethnicity</b>	<b>Region in NZ living</b>	<b>Currently employed / studying</b>	<b>Age now</b>	<b>Years since ibogaine</b>
001	Female	NZ / Euro	Canterbury	Y	26	2
002	Male	NZ / Euro	Otago	Y	42	7
003	Male	NZ / Euro	Bulls	Y	40	2
004	Male	NZ / Euro	West Coast	Y	53	3
005	Male	NZ / Euro	Otago	Y	28	7
006	Female	NZ / Euro	Otago	Y	42	4
007	Female	NZ / Euro	Otago	Y	45	8
008	Female	NZ / Euro	Otago	Y	42	8
009	Female	NZ / Euro	Otago	Y	42	4
010	Male	NZ / Euro	Otago	Y	42	7

**Table 3: Opioid drug history**

	<b>Main opioid used</b>	<b>Illicit or PDM</b>	<b>Approx. years dependent</b>	<b>Approx. years in OST</b>	<b>Other detox attempted</b>	<b>Age when used Ibogaine</b>	<b>Years abstinent of opioids</b>
001	Methadone	Illicit	1	7	1-2	24	0.25(r)
002	Morphine / methadone	Illicit	8	5	10+	35	7+
003	Codeine	Illicit	10	Nil OST	10+	38	0.25(r)
004	Methadone	PDM	15	Nil (PDM)	1-2	49	3+
005	Morphine / methadone	Illicit	2	2	1-2	21	7+
006	Morphine	Illicit	12	10	1-2	38	4+
007	Morphine	Illicit	7	2	10+	38	8+
008	Morphine	Illicit	5	5	10+	35	8+
009	Heroin	Illicit	5	7	10+	38	4+
010	Morphine	Illicit	5	13	10+	35	0.5(r)

(r) = relapsed to opioid use. (+) = remains abstinent. (PDM) = Prescription Drug Misuse

**Table 4: Other drug use before and after ibogaine treatment**

	Alcohol	Cannabis	Benzodiazepine	Stimulants	Hallucinogens	Use of AOD post Ibogaine
001	No	No	No	No	Yes	Yes (r)
002	Yes	Yes	No	Yes	Yes	Yes
003	Yes	Yes	No	No	Yes	Yes (r)
004	No	No	No	No	Yes	No
005	Yes	Yes	Yes	Yes	Yes	No
006	Yes	Yes	No	No	Yes	No
007	Yes	Yes	No	No	Yes	Yes
008	Yes	Yes	No	No	Yes	No
009	Yes	Yes	No	Yes	Yes	No
010	Yes	Yes	No	Yes	Yes	Yes (r)

(r) = relapsed into opioid use as well

## Not sitting comfortably with opioids

Theme One, 'not sitting comfortably with opioids', emerged from nine separate codes and captured an overall tone of discontentment, a feeling of 'not going anywhere' whilst on opioids. Whether through substitution treatment or illicit use, there was a consistent thread of being unable to achieve life goals, as well as feeling both physically unwell and mentally depressed. It was described more in terms of an aversion to the pharmacological properties of opioids rather than the restrictions of OST or the dependence itself.

Code 1) 'Desperation to be opioid-free', was consistent throughout all ten interviews. Mostly in response to the interview question: 'What led you to choose ibogaine treatment?' Relevant excerpts also appeared elsewhere in the discussions and interviews as participants described their journeys:

*002: Yeah yeah but that's because at the time I had lots of money. I had met my wife and things were going to be very good. And the only thing that would ruin all of that*

*was drug addiction. And I didn't want to lose her, didn't want to lose my health....and I'd already lost so much to it, I was losing too much of my life, I mean my potential to it, the other things I could be doing with my life.... I could see that I just knew I could be so much more! You know, and I could just see my life being robbed day by day and it was quite depressing you know.*

*008: Well I don't think I would have done anything. I was thinking about naltrexone, if I could do naltrexone, but I knew someone who had done it and it hadn't worked and it was hideous and it scared me... if someone said you could have a blood transfusion and that, you know, I would have said yes, sweet, I was just desperate.*

The desperation to be opioid-free flavoured many other codes such as the search for the spiritual, and physical and mental aversions to opioids. However this code captured a general and chronic feeling of frustration and wanting more out of life for themselves, even when it was not spurring some other action. It was also described as separate from low mood or the physical side effects captured later.

Code 2) 'Multiple attempts at quitting' demonstrated the many actions seven out of ten of the group were willing to go through to achieve their goal of getting off opioids prior to, and after ibogaine treatment.

*002: Yup. And then after five years, onto the methadone programme. And before that I'd probably tried 10, 15, 20 times to detox and just to no avail.. Pretty much all cold turkeys. You just end up having to knuckle down and try and get off, you know.*

*009: And actually that detox was really quite difficult. He said that they needed to give me more naltrexone.*

*Because they knock you out to it and give you the naltrexone to basically speed up the process. And they knock you out because as you can imagine it's so traumatic and hard on the body. General anaesthetic... Yeah it's like 3,000 dollars. 'We speed up the withdrawal process so you can go to work in a few days'... it was such a have... It really crippled me.*

Two of the remaining three interviewees actually used ibogaine as their first detoxification attempt. Both had felt uneasiness at the thought of a standard, gradual opioid withdrawal regime. Their data was captured in the later code of 'opioid withdrawals not tolerated'.

Code 3) 'Societal and self-stigma of addiction' was picked up in four of the interviews. The remainder of the respondents did not directly state the motivator for change was others' perceptions of them, but rather the clash and disappointment of not achieving their own expected potential. This is captured in code 8, 'restricted achiever'.

*006: No... I hated being. I hated going to the chemist every day. I hated lining up. I hated people knowing what I was doing, you know. ... The stigma. Massive... massive.... and I was working and I had a family....and that wasn't cool.... I didn't like it. I didn't like it at. I never felt like I belonged on it because I thought, far out, I'd see everyone else line up and I would be really judge-y about them myself and I thought holy shit, if I'm judging them... you know, it's really bad people judging me, you know, and no wonder they are because people are lining up for methadone going "agrhhhh" with no teeth and look like they were wasted, you know... the stigma.*

*009: And I had always battled against being an addict like hard out. I put my body through hell. I always hated the*

*idea of being addicted. But I would do it again and again and again. Like I would get clean... like I know addicts who have never been clean.*

Again the subject of societal- and self-stigma appears well-woven through the other coded areas in this theme but is worth a separate code because for two interviewees, stigma and judgemental attitudes were the only motivator for change. Their motivation was not intermixed with the 4th code, 'physical and mental aversion to substitution opioids', where respondents described not sitting comfortably on opioids due to the physical and mental side effects of the opioid drug.

Code 4) 'Physical and mental aversion to substitution opioids' emerged as respondents described being on stable, non-reducing doses of substitution opioids. It captured the list of side effects, both mental and physical, of long-term opioid use. This was a strong code, with seven people voicing it.

*004: Not good if you talk to my wife she would probably say a shitty bugger in the afternoons. It really effected my afternoon mood. And then physically there was just this raft of stuff and I couldn't really untangle it all... but my gut was just shot. I'd either have constipation or... and I pretty much had constipation all the time which I couldn't control no matter what I did... yeah yeah um... in the end I got dependent on enemas, to go. Um... all my nerves are playing up really bad I was getting numbness down both legs, numbness in my arms... um... Headaches all the time.... was getting more and more unwell. I couldn't make love to my wife. Physically. Yeah, so there was always just this sort of feeling. And I wanted to be well. Do you know I think that's probably one of the major side effects I felt was the anxiety.*

009: ...got really bad migraines and was real sick all the time. I just got real sick. I had a headache for three years after Z. was born. Like partial paralysis and going blind. Like the precursor headache never went away it was just nuts. The methadone? No, it was horrible. No I hated it. I tried swapping to Codeine... I stock piled... I got myself a script I never took and stock piled a 1000 of the bloody things and we had a whole plan of swapping to codeine and reducing... but then I ended up in hospital with problems with my bowel. And codeine just wasn't...

008: (laughter) because it was just... I thought I was going to die you know. But I didn't feel like I had an option as I felt like I was going to die anyway... I was just so... I was just so chemical-ised... I was just so... depressed and traumatised and... you know?

Respondents clearly described physical and mental side effects of opioids when on stable non-reducing amounts, as opposed to Code 5.

Code 5) 'Withdrawals and associated mood not tolerated' emerged clearly in this theme. All ten respondents commented that withdrawal from opioid drugs was especially difficult to cope with. This included short-acting illicit opioids (morphine, heroin), and longer-acting substitution opioids (methadone). Emotional and mental effects were listed ahead of physical withdrawal effects. The two respondents who had not attempted many opioid detoxifications described the fear of opioid withdrawal as being the main deterrent to trying.

001: ...yeah yeah, but I'm not very good at that ... I can't do more than... two and half days then I want to shoot myself. Yeah. Very very scary. No I couldn't do it, I couldn't do it. No the longest I ever got was three days and I wanted to shoot myself.

008: *I just wanted to get down and then I could slowly do it. But I was just so sick all the time. I mean I had two kids on my own and had other stuff going on up here which I didn't know what.... and I just couldn't afford to have that... Because my psych was.... Yeah... destabilise me. Psychologically and... you know, put me at risk of using other things, which is what I did, what I do..*

Code 6) 'Keep my methadone dose low', seemed to position into this theme, with four respondents deliberately using lower doses of methadone to either eventually come off or to limit the reported side-effects whilst on maintenance doses. However the remaining six used the as expected, prescribed doses of substitution opioids.

002: *I think I started off at 50 and went up to 60. But, but I think because I could have it every day and I didn't have to score or pay anything for it and it will.....be there waiting for you, and it was.. I was trying to get myself sorted so I tried to keep it reasonably low. I had heard of the trouble of bigger doses of people coming off, you know*

004: *Ultimately looking back at it now, I probably needed a higher dose to control the pain better and maybe I would have stuck at that higher dose.*

Code 7) 'Anti-establishment and critical of standard treatments', was expressed by eight of the respondents, describing how they did not fit in with recommended AOD treatments and were not hopeful of treatment success. This was not to say respondents did not utilise standard treatments (demonstrated in a later theme), but they all voiced criticism of the limited options from treatment services, and never accepted all the policies and protocols.

005: *No no, I was a bit of a stubborn prick eh. None of those things (treatments) seemed really like... my cup of tea (laughter).*

001: *Yeah it was going to be a big nasty cycle again, I'd have to go to CADS, go back up, take-aways cut, be punished um... ..go back up, only to have to come back down again and then was I going to feel like shit and was I going to be able to get take-aways? .....well it is a punishment (laughter)*

002: *... it is something (ibogaine) I could try and it may work, and I was open to something that may work as opposed to nothing that didn't work.*

Anti-establishment personality was a somewhat subjective perception but represented a captured tone during interviews; expressions such as cringing and rolling of eyes when discussing doctor's visits or hospital stays. It was grouped into this theme as the non-acceptance of standard treatments was felt to influence the overall discontentment with opioid substitution treatment. Likewise with the next code.

Code 8) 'Restricted achiever' was prevalent in all the interviews. The described life achievements and journeys of the interviewees were more notable and numerous, observed by the interviewer, when compared to interviews in addiction services. This code fell into the theme of 'not sitting comfortably on opioids' because for many respondents, going in to OST represented a personal failure, it contradicted their own sense of personal or life success. In the previous codes, respondents expressed barriers to OST such as the physical and mental side effects from the opioids but for this code, OST was like admitting something they did not like had control over them. It emerged clearly from the way respondents matter-of-factly described their life experiences, and their perception that opioid



dependence, even as a substitution treatment, negatively affected their achievement potential.

002: *I was really, really quite determined. I mean I've seen people get cancers and all sorts of stuff and die you know die these depressing deaths and still hooked on gear and just wondering what life would be like without it. And I was like pretty young and.. and my brain was still pretty active and I was still... even though my physicality was deteriorating I was still young enough to like well I can still build myself up and raise this family and do the best I can... Yeah and retrain and all that stuff, um.. I think I was quite motivated. But still couldn't kick the fucking habit, Yeah.*

003: *It was just you know, you're happy doing nothing... you've failed! Next thing you know 10 years have gone past and you just haven't done it, you-know?*

Code 9) 'Anxiety of being dependent' was only voiced by three respondents and appeared to relate to any substance, not just opioids.

008: *I just hated the idea of being a drug addict to be honest. Not the stigma but I felt it was a real lack of will for myself. Like I always hated the idea of being beholden to something like that. It's hard to explain.*

003: *I didn't want to be dependent on something you-know?*

004: *But... another motivating thing and I'll mention this because I don't think anyone else will mention this but it was definitely a thing for me. But the incredible underlying anxiety because you pick up every ten days. I*

*lived, live 30 kilometres away up a gorge... I even went to the point where I had a really good doctor and he is very understanding and I told him at one stage, I told him of my anxiety and I said could you prescribe some as extras that I could keep and give to my wife to hide away or something like that and so if worse was to happen or something were to happen I'd have a stash. Which he did for me so I had it.... and then I ended up using them.*

## **Overview of Theme One**

These nine codes were grouped together because they all demonstrated the mental, emotional, physical and conflicted personality 'un-ease' which most ibogaine users described when using opioids, including substitution opioids. These feelings were demonstrated and described before ibogaine therapy and for some afterwards, when they relapsed back to opioid use. The theme of 'not sitting comfortably on opioids' captured the participants' combined feeling that staying on opioids long-term was detrimental to their wellbeing. Respondents described this anti-opioid perspective happening in their life before they knew about ibogaine treatment and appeared to be the driver for both attempting opioid detoxification, and avoidance of substitution treatments.

## **Motivations for using ibogaine**

Theme Two directly emerged from the interview questions regarding the 'motivations' for why people chose ibogaine. It became a separate theme as this was when respondents became aware of ibogaine and chose it specifically for their opioid detoxification. The main findings were that the short length of time required for treatment and recovery was a strong motivator for respondents; along with hope, both that the treatment would work, and that there would be an absence of opioid withdrawal symptoms.

Whether or not ibogaine was legal did not seem to be a factor for respondents. This theme was represented by five codes.

Code 1) 'Hope and reports of treatment successes' was consistent with all ten respondents. Hope of avoiding opioid withdrawals and hope of a detoxification that might work. There was a portrayed sense of despair with available, standard detoxification treatments. This was voiced both regarding the initial withdrawal effects and the indefinite recovery time after the detoxification. In this recovery period people described a long journey with 'no light at the end of the tunnel', and it taking a long time – months - to feel normal without the use of opioids.

008: *So we went to this house and I remember this chick with a hat on and shades and not talking much and it was like, yeah you know I'm doing this thing and I met J. and it was all good - and then I went back a couple of days later and this girl was like, you know, engaged, talking, happy... and I was like yeah, OK I gotta., I just got to go for it - and I didn't know a lot about it and I didn't know a lot about the risk, I had no idea what I was getting myself into.*

009: *...a friend of mine was an opiate user who hated the idea of the thought of methadone, he was one of my best friends. And he went onto poppy tea instead and um... he disappeared for about six years and we heard he was on the Coast and we had no idea. And then I found him in Lyttelton and I visited him and I thought he was going to die, so sick and not the person I knew and loved. And then I saw him two years later... and he turned up here to tell A. and I his experience with the ibogaine. And it was like he had gone... like the last time I saw him he was 10 years older than he was. And now he had 'Peter Panned' it*

*totally and looked like he was 10 years younger than he was. And he was actually one of T.'s first treatments.*

First-hand knowledge of ibogaine treatment success and consequently having 'hope' as a motivator for ibogaine treatment is separate from the second code, 'how ibogaine was discovered', as most interviewees had heard of, or 'discovered' ibogaine prior to meeting a success case.

Code 2) 'How ibogaine was discovered' was in response to a direct question. For the purpose of this study respondents were asked how they came to know about ibogaine. This information was captured as it highlighted the method by which ibogaine users obtained knowledge, including with regard to the medical risks of treatment. Most respondents told a story of how, by chance, they had heard of ibogaine treatment.

*007: I think I'd seen a documentary about it... A while ago. But basically no one I knew had ever heard of it. I just did a lot of research online and it sounded amazing - It sounded like the ultimate, you don't want it, you know.*

*003: Just looking for it on the internet. I was just looking for yeah, yeah, opiate withdrawal medicine. And I was on an internet chat site for recovering opiate addicts... And I saw it mentioned there by some-one really.*

*005: What's it called... detox or die I think it's called. I've always been a drug geek, I'd read about stuff on 'EROWID' and I'd heard about it on there.*

Respondents researched their own information on the treatment, mainly on the internet; and through chat rooms and peer discussion the initial medical knowledge pertaining to ibogaine was discovered as well. It did appear that all respondents knew of the risks of death with ibogaine, despite giving various incorrect reasons for those deaths occurring.

Code 3) 'Quickness of treatment' was a strongly voiced code by all respondents. Treatment here incorporated both the acute, opioid withdrawal symptom phase of detoxification, and the time for recovery from dependence afterwards. Clearly separated from the 'effectiveness' of ibogaine treatment, interviewees also sought a quick solution to their dependence. One interviewee was determined to achieve an opioid detoxification in 2-3 days as that was all the time he had allowed away from his own business.

007: *I just thought there must be something out there which would make it easier to come off the opiates... Yeah...um... more of a stopping. Because with methadone it's more a solid three week hard core withdrawal and it is hard work and it's easy to go back... You've got to be so determined, so strong.... the ability to stay off as well yeah.*

004: *... I had asked about going to a rehab centre or something like that. Everything took so long and I had my own business and family, like how could I take six months out.*

Code 4) 'Previous hallucinogenic use' was identified early as a strong theme, enough for it to be added as a research question (refer Methodology section Chapter 3). All ten respondents had used hallucinogenic drugs as part of their drug using career, including one respondent, 004, who was prescribed methadone for pain.

003: *Yup.. mushrooms and Acid...yup mostly mushrooms... and LSD.*

004: *...and then at about in my mid 30's um.. I smoked pot again for a while and then experimented with a couple of other things, just because of the town I was living in and*

*the people who were there and the lifestyle I was living. So I ended up trying magic mushrooms... Yeah. I tried a couple of LSD trips and I think I was given some cactus once.*

*010: You know I first tried alcohol and stuff. And I smoked pot pretty regular, I really loved smoking pot. And then I tried the tripping, the mushrooms, LSD and.. ah.. all those things.. I was a bit of a tripper there for a while.*

All respondents stated they did not ever feel their hallucinogenic use was problematic. It was described as recreational use and fell well under diagnostic criteria for DSMV (American Psychiatric Association, 2013).

Code 5) 'Use unaffected by legality', the last code for this theme emerged strongly, with respondents clearly prepared to use the substance whether it was legal or not. As per the Method section, question ten of the interview asked directly if people's choice to use ibogaine was affected by its legality. All ten participants were indifferent to legal status, with six respondents having had their therapy when ibogaine was not a scheduled medicine, while the other four stated they would still do treatment if it were not legal.

*002: Oh ok. if, well I think... and I've said this to you before, if it was illegal I would definitely still use it. And that's the difference because the options are you can try this once illegal or you could go back and shooting heroin ten thousand times which is going to be much worse for you and I think I tried it because... nothing conventional was working and .. the whole idea that there was something out there that could work and be successful... I had to explore that path. I really had to try something that was really going to.*

002: ... *The way it's gone now and made it scheduled, it's responsible and it still gives the right people an option to use it.*

007: *Yeah if I really thought I needed it absolutely. Illegality has never stopped me with these things (laughter).*

## **Overview of Theme Two**

The respondents voiced three major drivers for choosing ibogaine. Firstly, that this treatment offered some hope of success and alleviation or even elimination of opioid withdrawals. Secondly, the potentially short length of time for treatment and recovery appeared to be a significant motivator for people. And thirdly a previous positive experience with hallucinogenic drugs and the way they heard about ibogaine was also significant.

## **Safety conscious and support seeking**

Theme Three included seven separate codes that became apparent from the interviews. Information was sought to answer the study's sub-question; 'What safety measures and medical tests were ibogaine users aware of and utilised? This theme captured the lengths people went to for medical input before, during and after ibogaine treatment. Those who did not use a clinic sought medical tests, albeit incorrect medical screening, through their General Practitioner (GP). Those with support of an ibogaine treatment provider received the correct medical assessment, even if their GP had no prior knowledge of what screening to provide. All respondents sought support before, during and after ibogaine treatment and it came in many forms - their GP, parents and family, friends, community nurses, and ibogaine experts.

Code 1) 'Safety conscious and seeking medical input' is similar to the theme's title except the overall theme incorporates all types of support ibogaine users utilised, including family and Narcotics Anonymous for example. The first code's findings emerged strongly with all ten respondents aware, to some degree, of the cardiac risks and potential death risk. Nine out of ten sought some form of medical test from their General Practitioner (GP). Of the ten respondents: three used an Australian-based ibogaine provider; six used an established New Zealand clinic which supported medical assessment prior to ibogaine treatment; and one respondent used ibogaine independently, alone. The following excerpts demonstrated awareness of the risks and that respondents sought a GP for medical tests prior to ibogaine treatment.

*002: and I think other stuff I read because it was people that had a weak heart. So that was your first, um..first thing to look into. So this was where it was decided that if you were going to try you had to have a medical. So to get a medical for something illegal, you needed to see your doctor and then go through the medical fraternity, so shit, alright, it was going to come out what you're doing. If anything does go wrong you want to be noted that you were giving it your best shot that everything was wrapped up. And if the medical fraternity was involved they couldn't say you can't use it but they could possibly advise you of the best way to go about it.*

*003: Right I did a... I C... An ECG or an EEG or something... and I did liver panel and a kidney panel and had all my bloods done and everything. Yeah you had to get those done before they would let you do the treatment.*

*010: Yeah I did. I actually did tell my GP I was going to be doing it and he didn't know a lot about it but the fact that it was better than staying on opiates meant that it was*



*a... another... you know could only.. you know even if it didn't go that well.. I was still trying to go in the right direction so he basically saw that as positive and gave me some remedial fuckin Valium... and back up help... through the other end... yeah my GP had been my GP since I was young, knew my family and knew I was a sensible character and he knew I wasn't trying to pull one over him.... And that was basically um.. I would get my blood pressure read and... make sure my heart wasn't thumping out of my chest too far and blood pressure was reasonably stable.*

Code 2) 'Need for preparation and guidance before treatment' illustrated the lengths respondents went to, to have some support before treatment. All ten believed ibogaine therapy required much preparation before treatment. Respondents felt that having a guide and someone to explain what to expect was essential. This was to help with planning, the anxiety of the treatment and the physical preparation, such as reducing other drug use and taking mineral supplements.

*002: Right because this was new and I was taking it with the only other person in New Zealand who had used it, which was T... And I had been talking to K. the other person who had been using it as well, in incremental doses. The treatment, the level of support before treatment was... for the time... was really high I think. Because I think I wasn't going into it uninformed and I had other users who... really wanted to give me all their knowledge and all their support and they helped me bring it into the country and everything. And they were like, they really backed me. And I think because their experiences were positive I followed their advice.*

004: *I think she did it very well, she gave me plenty of information.. um.. she told me as much as she could of other peoples' experiences. She linked me up to a couple of other people who had already been through it.*

Even the respondent who used ibogaine alone in his bedroom, had discussed the effects of treatment with the peer he had obtained the ibogaine from. He had also made preparations such as having a friend handy to 'come do his dishes and clear away spew buckets'.

Code 3) 'Need for 24/7 care during treatment' was related to the above code but separate in that it strongly emerged ibogaine treatment incapacitated the user, and safety measures, including hydration and even toileting, appeared to require third party assistance for eight out of ten respondents.

001: *I definitely couldn't walk by myself, no way... It was, it felt like I could take a step, and then I would take a step and just fall over. I guess it was no strength. I think I was pretty out of it for most of the first day.*

006: *...yeah... I was still pretty out there. And so it kind of stopped... it didn't... go any further than that. And I was freaking out all the next day.... Thinking it hadn't worked and how was I going to get methadone. If it hadn't been for J. being there supporting me, saying 'you'll be alright, you'll be alright, I probably would have, somehow.*

008: *Ah no the first day I was out, I was gone. I couldn't walk for a couple of days properly... that ataxia, ataxia... attacks you (laughter).. yeah because they had like the test dose and then the flood dose at night and that was... I don't remember a lot of that... I remember a lot of weird visuals and stuff and feeling hot and cold... not feeling like*

*I could swallow, not feeling like I could breathe... thinking I was going to die... a lot.*

Code 4) 'Need for guidance after treatment' was voiced by all ibogaine users, whether because they received support after treatment and found it beneficial, or did not receive follow-up care and, on reflection, considered it might have helped. The support was mostly around having questions answered regarding ongoing experiences with their treatment.

*006: I went home for two nights and realised that... I think I had two nights at home after I got home... and it was... shit! I was off... my chops and I didn't know what was going on... you know I didn't actually realise I needed more time away. I think it was the third morning I was at home... yeah two nights back at home. T. came round in the morning because she would pop in, a lot, and she came in and I was lying on my daughter's bed just crying and saying I've never felt so worse. And she said you going to K's house and you need to pack a bag. And K. came and picked me up and I stayed there for a week. And I laid there on the deck and got waited on hand and foot and I wasn't around my smelly teenagers as I couldn't stand the smell of them any-more.*

*001: Yeah, I went and stayed with M. and C., and that really fucked me up because they knew I had come back and they knew I was clean and they would sit there and shoot up and having their Ritalin and stuff...*

*009: Yeah totally. And afterwards she was just in my life here. Supporting me. The same thing like just trying to... like lots of really good recovery information...*

All respondents voiced that an ideal ibogaine clinic would have aftercare support and be available to answer questions. Most respondents described post-treatment situations they had not anticipated, and questions they had wanted answered.

Code 5) 'Family/friend/General Practitioner support'. Although this support is described and woven through the other codes, the level of support respondents received from family, and even their GP, stood out as this was an anticipated controversial, underground treatment.

002: *Yup, and my doctor came in and did my blood pressure... A home visit. Yeah yeah, she is a family doctor, very much a family doctor (laughter). Yeah right in the middle of it just to check stuff.*

002: *Yeah yeah. And I had another friend who was a um.. a ...um.. community mental health nurse... and, um, he was kind of on board. I was actually going to pay him to be a nurse on standby and stay overnight at the house. But that in the end wasn't really required. But he did come and check up and make sure my trip was going alright (Laughter). It was kind of a big deal. Weirdly I likened it to... assembling a whole surgical team to remove a splinter (laughter) that's kind of what it felt like.*

005: *A... um, it just sort of... it just sort... it's funny. Once the ball got rolling, backing out wasn't an option. Mum and dad got it all organised and paid for and it was just happening, it was beyond my control sort of thing. So I just stepped back and let it, sort of let it go and let the day come you know. My parents... I mean essentially it was smuggled in from Australia and it was probably more expensive than it was on prescription, I mean I don't know but...*

Code 6) 'AA / NA dichotomy'. This code was so labelled because some respondents clearly were against the nature and associated culture of Alcoholics Anonymous support groups. Whereas others in the group mentioned them positively and utilised them for peer support and something to focus on.

*003: Na. Nope. I haven't done any of those things. I did try Narcotics Anonymous, I went to a couple of meetings and went, like, 'fuck this'. I found the people really... didn't seem really pro... it was more of a doom and gloom approach....*

*002: Yeah I did a lot of NA, for a while. Especially after every time I done a cold turkey or something. Met some people, some like-minded people and that was a whole part of changing your playgrounds really.*

*005: Well, I actually went to NA meetings up there as well... And I wanted to meet people that knew drugs but wasn't sort... knew where I was coming from and knew the world a little bit and also actually when I first went up there I wanted... I was drinking and smoking weed pretty heavily... at the three month mark.*

Information specifically about the influence of NA/AA groups on the four respondents who had utilised them was not especially sought, but dovetailed with the theme of ibogaine users being safety aware and motivated to find peer support.

Code 7) 'Anxiety around ibogaine treatment', was placed into this theme as it appeared to be a motivator for people to be prepared and seek medical testing. It was described by eight out of the ten respondents, and was distinctly separate from the anxiety of being drug-free afterwards. This

anxiety was because of the known risks associated with ibogaine treatment specifically.

006: *...and I didn't really want to know a whole lot of stuff about it and T. gave me a whole lot of information about it and i didn't look at it. And she would tell me things and I would just go; 'la la la la', because I was terrified, I was absolutely terrified. I knew that is was a possibility that it could... it could be really dangerous. And I decided that I might die (laughter).*

008: *Yeah it scares the crap out of me and because of what happened up North it scares the living crap out of me even more... Yeah I was cutting my mum's hair the day before I left and I said to her, 'you know if I don't come back, don't ever feel like you let me down, you know' (laughter) because it was just... I thought I was going to die you know. But I didn't feel like I had an option as I felt like I was going to die anyway.. I was just so.....*

One respondent, who had used ibogaine independently and one respondent who obtained more ibogaine after the original treatment, still sought medical and social support for those treatments.

### **Overview of Theme Three**

Usually through their GP's, respondents sought medical testing prior to ibogaine treatment. Better medical testing was achieved when an ibogaine treatment provider gave guidance about which tests ought to be conducted, as often GPs were not familiar with this treatment. All respondents sought social and peer support throughout their treatment and this was crucial for at least eight respondents who said they were ataxic during ibogaine therapy.

Support was also sought afterwards sometimes through other conventional treatment settings such as NA or their addiction (CADs) case manager.

## **The best practise**

Theme Four arose from the researcher's observation during interviews and participants' accounts of ibogaine treatment, that a few key elements of the treatment process made it safer, more effective and more comfortable for people as a detoxification process. It captured how the experience of having an ibogaine support clinic and/or peer support, meant people received safer and more effective treatment through, for example, the medical control of side effects, like nausea and sleep disturbance, during and after detoxification. Another action which seemed to help was switching to a short-acting (half-life) opioid prior to detoxification as this appeared to allow ibogaine to capture the withdrawals within the time frame ibogaine was bio-active. Other indicators for better outcomes were the use of ibogaine booster doses after treatment, and the use of higher flood doses, as opposed to multiple smaller doses. Theme Four was represented by five codes.

Code 1) 'Negative experience of ibogaine treatment' was voiced by two respondents about their own treatment and, although not available for interview, respondents mentioned two others who had negative ibogaine treatment experiences. These included not having the hallucinogenic effect they had hoped for, either due to low ibogaine dose or vomiting the flood dose up, and experiencing opiate withdrawals during treatment. One respondent experienced significant physical side effects of a fast heart rate (tachycardia) for one month after treatment, related to a previous heart deformity of which symptoms may have been masked by opioids.

004: *Well, I didn't understand what an unpleasant experience I would actually have on the drug. I misinterpreted that, big time.... And also I had no idea of*

*what the ... um... couple of months following it would be on a spiritual physical level. Because that's another story in itself really*

*010: She did it through T. and got the whole thing and it didn't go all that well.... We knew we had to do it away from each other to do it properly. Um... and so she ended up getting yeah... she tried though and she actually had CK. and um... I think T. popped in occasionally... (laughter) After three days J. actually jumped out of a window and fucking (laughter) jumped into a car in her pyjamas and drove down... and her dose hadn't been closed off so she went down to the chemist and drank a dose down. I think its methadone. I think you have to do it on morphine eh?*

Awareness of what can cause negative and dangerous experiences for people fits into this theme well as it informs improved practise.

Code 2) 'Sleep disruption and management' is characterised by sleep disruption related to the effect of ibogaine, or related to the effects associated with opioid detoxification. It also captured their descriptions of what was effective in managing it. This code was voiced by nine out of the ten respondents, and was generally an expected outcome for participants.

*001: yeah basically I spent the time wandering around the hotel, lying down, getting up, not being able to sleep, lying down, lying on the couch, kind of... Um... I think it was the fourth day because I need to stop smoking, I have a very chronic cough, and every time I would lay down for sleep he would hear me cough and I... I have a really heavy cough and he would see me shaking and... like literally shaking... and he said you need to sleep and it [diazepam] would have only got me half an hour sleep it*



*wasn't much at all.... No, it was the ibogaine that caused it..*

*002: Yeah I think I did. I slept quite well. And like I said ... on the second, third or fourth night we had a short prescription of Valium. I'm sure it was Valium.*

*004: It was a bit rough eh, because I really needed this help and I had none. And she would go to bed because she was so tired and would sleep all night long. And I would wander all night long. I tried to watch the Olympics on T.V but I couldn't sit down for longer than five minutes, it was just... this terrible feeling and that just went on and on.*

Code 3) 'Morphine versus methadone'. Six of the respondents had their detoxification off methadone and four detoxified off codeine or morphine sulphate. Three who withdrew off methadone stated they would have preferred to withdraw off morphine, as the protracted effects of a methadone withdrawal lasted longer than the benefits of the ibogaine therapy.

*002: I was on, I was only on about 60mgs [of methadone] and then I'd tapered down to probably about 30. I did a reasonable rapid count-down to 30 and before I went onto the ibogaine, I went, I don't know, maybe five days, I think it may have been a week. There was a short period where I was on a reasonably high dose of DHCs... [before ibogaine treatment]*

*009: And also I jumped off methadone and went on to um used DHCs for three days... yeah just made sense to me... um... stuff from that I had learnt from Dr G. The one who told me to jump off methadone and use the... back to*

*smack before the naltrexone... T. thought it was a really good idea.*

Code 4) 'High versus low ibogaine dose, use of boosters'. This code captured the experience of two respondents who used low doses of ibogaine in their treatments, and the six who used booster doses after the initial flood dose of ibogaine. One respondent used ibogaine independently six months after their initial treatment. Of the six who used booster doses, all stated they helped with both further opioid withdrawal and pain management. Four used booster doses within 48 hours of initial treatment, which had the positive effect of further reduction of opioid withdrawals. Two used booster doses at three months after, and with good effect, for management of pain issues. One respondent who used incremental small doses of ibogaine had a negative experience with ibogaine treatment, and was disappointed regarding the lack of expected psychedelic effect.

*003: yup um.. and then they gave me a booster at that point of time. About 200mgs. I didn't want to take it, I was like what is that shit you gave me, its hard core! But I thought 'I trust these girls'.... at the time I thought they were some crazy witch doctor or something. Oh yeah, it was to make me feel a bit better and I was not really, I did not believe them.*

*006: The second night I ended up needing the booster I started kicking the second night.. um.. and I had no sleep ... and I didn't want to take the booster I didn't want to hear the noise I didn't want to hear the buzzing noise again and even though it sounds all positive and when I talk about it, it sounds positive but I didn't want to do it again, to take the booster. Because it was really hard it was the hardest thing I've done in my life. But the booster didn't take me back there... thank god... and T. told me that wasn't going to happen.*

Code 5) 'Control the vomit' was voiced strongly by most respondents. It is difficult to ascertain if all respondents experienced nausea, as the Dunedin ibogaine treatment provider administered and encouraged use of antiemetic's to good effect. Nausea and vomiting emerged as something which greatly affected the effectiveness of the ibogaine treatment, as people sometimes lost a proportion of their orally-administered ibogaine dose.

004: *I can pretty much tell you this was all in the first 6 hours because there was a marker when I started spewing... with an antiemetic on board.*

009: *...I ended up puking any way and the tablets came out mostly whole... T. deciding that I needed to have some more... and me fighting it and saying; 'no that stuff tastes gross' and 'I'll feel sick I don't want to have any more'... and then her convincing me that I was having withdrawals... I was so disorientated the way I was feeling I couldn't relate them to being withdrawals.*

010: *There was a friend of mine who was a good mate coming up and making me drinks, doing my dishes and fucking cleaning up buckets of spew...*

## **Overview of Theme Four**

The six codes represented the combined experiences of this sub-group experimenting with ibogaine for opioid detoxification. They together highlighted some of the practises that help people have more comfortable experiences, such as management of sleep and nausea. Best practise derived from the interviews would also include a transition to short-acting opioids before ibogaine treatment, and obtaining the medical and social support identified in other themes. Use of ibogaine boosters 24-72 hours after treatment appeared to help with residual withdrawals; and for pain management, a booster three months after treatment was beneficial.

## **Ibogaine treatment effects on depression and anxiety**

Theme Five was originally incorporated within ‘treatment effects on dependence’, which represented an overall theme of ibogaine effects. It separated into its own theme as it was voiced strongly by the respondents, describing marked, observed changes to their mood and anxiety after ibogaine treatment. The interplay between these themes is discussed in Chapter Five, but this theme described the positive changes respondents reported relating to their mood and feelings of anxiety which could last from one week to three months. It was directly attributed to the effects of the ibogaine and not the absence of opioids. There appeared to be a mental processing of respondents' drug use and some resolution of emotional issues which occurred during, and for some time – one to two days', up to three months' – afterwards. Seven codes were identified within this theme.

Code 1) ‘Positive effects on mood after ibogaine treatment’ became apparent from the first interview until the last and was strongly voiced by all respondents. It was described as a better outlook on their future, incorporating some hope of living life ‘without a crutch’. Others described it as simply knowing their mood was improved.

003: *Oh yeah, kind of it felt like during those days, I don't know, it felt like, it felt like, how do you describe it... it felt like all the weight on the shoulders had been lifted. It felt just free and elated. It felt like I was 16, brand new and had just woken up.*

005: *Ah I spent a lot of time in bed, I was exhausted. I was physically and mentally, every kind of exhausted. Um but I wasn't miserable um and at least I was, I was pretty happy.*

009: ...*You know like... like I just had this.. it was like this antidote to depression. It was like this natural antidepressant that was like pervasive through my entire life. Everything was new and interesting and alive. And most of the people I know... like I've been there side by side with people who have come off methadone and succeeded. I have three friends now who have come off without ibogaine... and they have just struggled and struggled you know like a year of struggling and there was none of that, none...*

The temptation was to combine this code of mood management with the second code, 'anxiety management affecting abstinence', as they were both discussed and voiced together. However most respondents discerned a difference for themselves, between anxiety and mood, and were able to describe the separate effects of ibogaine treatment on both.

Code 2) 'Anxiety management affecting abstinence'. Effects on anxiety required a separate code because anxiety featured strongly around the withdrawal from opioids for this group. Most respondents voiced specific effects on their anxiety and 'stresses' due to the ibogaine, after treatment. This was expressed as no longer feeling anxious about maintaining a personal drug supply, or more generally, as accepting or conquering one's personal fears.

002: *And... at that stage you're normally going oh maybe just one. But that was the deal-breaker at the end of it. It was the actual removal of the.. idea of going to score. You were going to think you were going to score, normally, and you get that bit of anxiety and you couldn't...that anxiety wouldn't go until you actually scored. That anxiety wasn't there! Oh it was like you might have fleeting thoughts but they were just like fleeting and there wasn't that... upwelling of; 'oh I got to go and score'.*

*And that got me through to the six month period and I've just really never looked back. It's just been, that was it. You know.*

*004: ...one of the biggest outcomes for me was that sort of in the treatment I was sort of shown this fear and anxiety and afterwards it was gone.*

Code 3) 'How to cope without a crutch' came through from half the respondents, and was a real fear for some prior to ibogaine treatment. It overlapped with anxiety management somewhat, but included other reasons why people lean on drug use. Notably, this was voiced by some as an anxiety about no longer using opioids for pain management following the ibogaine treatment, and no longer using drugs as an emotional support.

*005: Yeah there's the... just the whole fact that like I said before I kind of felt like because I'm doing this much drugs and I'm just miserable, maybe if I'm doing much less I could be more miserable, that was going on in the back of my mind as a possibility. I also read that's not common after taking ibogaine, you know so but it still nags at you that if that's your emotional sort of crutch then, like getting wasted all the time and that's not going to be there it's kind of scary to think how that would be but...*

*008: Yeah and my body got a hammering. I managed to bend them all, well you know put stress on them, on them all. And because I was on methadone I'd been using my body in ways which wasn't ideal. So I don't remember cravings... but then I did start to freak about how to live with this pain... no sorry I had a top up [ibogaine] in the January or February the next year. About four months later. I had about 400mgs I think... Yeah and my doctor*

*was like let's just give you some codeine... and I thought oh no this was a fucking bad idea I don't want to do this.*

Code 4) 'Powerful effect of hallucinogen'. This code almost had its own theme, except that ultimately it appeared the outcome of the psychedelic experience was related to mood and anxiety management. The effect of the hallucinogenic drug ibogaine was noticeably stronger for the eight respondents who took higher doses of ibogaine, and was described as much stronger in effect than previously-used hallucinogens such as LSD and magic mushrooms.

*002: Ah,. day one I remember being, I was ,about 18hrs into it, and the girls had gone outside for a cigarette, it was snowing outside and they had locked themselves out... and it was like, knock knock can you let us in the door. And I was like sure. Get up and I just found myself walking with jelly legs, walking through this massive Mechano-lego hallucinations (laughter)*

*003: Yup. It wasn't like a movie of my life or anything. It was like scenes from a freakin' horror movie.*

*005: And it was all sort of emotionally charged and all sort of apocalyptic, very apocalyptic... Like literally. It was literally like seeing scenes of different apocalyptic worlds.*

*006: Um... No I was being catapulted to outer space and then I was looking at the earth and it was breaking into three pieces... and I was getting this really strong message that if we don't sort our shit out this is what will actually happen. And... then there would be jellyfish to make it better. Because my head was actually breaking because when the earth was doing it, it was my brain that*

*was doing it. The pressure was unbelievable... the jellyfish would make it all better. The jellyfish were incredible (laughter), and then I remember thinking I was dead. Because I could see myself and I told myself wiggle your toe and I couldn't and I was like well at home they are going to have to cope with me dead... and I thought they will actually be alright if I'm dead...*

The powerful effects of ibogaine as an hallucinogenic drug tied in with the next four codes relating to the described mental effects of the experience.

Code 5) 'Mental /cognitive work after treatment' was voiced by all the respondents when they described their journey after ibogaine treatment, both immediately afterwards and in the months following. It incorporated simply thinking about their life during and after treatment, to having 'thoughts' and 'visions' that directly helped respondents to accept personal fears or grievances.

*001: No, and that was the one thing I noticed when I came home afterwards, I could sleep for 18 hours beforehand, I could lay down, read a book and fall asleep I could sleep all the time... and then I came home and I'm up at 12 researching the Yugoslav wars because my brain was still active and I couldn't turn it off... and I was up again at 5.30 in the morning, so yeah (laughter)...*

*009: ... and that ibogaine had allowed me to... kind of... to think about really clearly... um... the things in my life I needed to change. So it was actually like... the reason I think ibogaine was so successful for me was the reflecting properties in it. The state, the mind state you are in for the next three months. It created a really unique situation with my mind where I would be able to calmly look at things and analyse things. Particularly things I felt really*



*guilty about. Like part of the whole parenting thing, like being an addict and being a parent, like, I was carrying a shit ton of guilt. And... just all the negative things I was carrying in my life. It enabled me to analyse those quite clearly as well. It's really hard to explain.*

*005: But then I'd go back to bed and... like for a good week or two afterwards I would go back to bed and return to the full-on dreaming...*

Respondents described not having read about or anticipated this post-treatment effect. Interwoven with this code was the sixth code, 'acceptance of fears, vulnerability and pain'.

Code 6) 'Acceptance of fears, vulnerability and pain' emerged as a code when respondents described why they felt better after treatment. It seemed to occur more during the hallucinogenic/psychedelic phase of treatment and was often part of further described 'epiphanies during treatment'.

*004: They... when I ask... it was almost as though if I wanted to ask a question, I'd ask it and I'd get told the answer. And I said why am I seeing such demonic shit? What is this demonic shit all about? And they told me it was all the stuff I'd filled myself up with over the years and taking the drugs, the opioids, had locked it into me, in the forms of emotions and stuff like that and it had me really negative... and they were showing me so I can let it go. The fear. It was all fear-based. Um... 'they' were African!*

*006: .. I know I laughed for most of the day... but I was laughing at really awful things that had happened in my life. And telling T. every-thing that had ever happened in my life and laughing at it. I found out after that it was sort*

*of going back and attaching different feelings to negative experiences.*

*006: Yeah but after I had the death thing and had to let go of all that shit, then I was OK to go away for a week. It's the ultimate anxiety management really isn't it? Accept death.*

Code 7) 'Heightened senses post treatment' captured participants' accounts of how long the hallucinogenic effect continued, or as one described it, 'the antidote for depression for three months afterwards'. It was described in several ways, with some respondents stating their diet was severely affected - not being able to eat gluten products - and others saying it was like having LSD every day for three months, with their taste and visual senses heightened. Ultimately this after-effect appeared to benefit people's mood and anxiety.

*001: So weird yeah. And I had to wear sunglasses because I was super sensitive to the light eh?... It's the food thing. You know the food thing? You don't talk about the gluten-and dairy-free thing in here?*

*004: ... Suddenly I could smell the sea and the sea weed and a seal on the beach. I could smell the leaves rotting in the bush behind me. My senses just came alive. I had to get out of this shop because it was so overwhelming, the plastic bags, the varnish on the tables, a woman's perfume was way too overbearing. And that lasted for three days before it settled down.*

Respondents described these heightened senses as effects of the hallucinogen and not the later described (in Theme Seven) 'spiritual effects'.

## Overview of Theme Five

Respondents described in detail the effects of ibogaine and its associated psychedelic nature, on their improved mood and anxiety levels. This appeared to last from one week to three months and was directly attributed to the drug ibogaine and not to being drug-free, which was occurring at the same time. Acceptance of one's fears, and continual mental processing and reflection after treatment, was associated with the reported beneficial effects on respondents' moods.

## Ibogaine treatment effects on dependence

This sixth theme was constantly voiced in the interviews, and included changes to both opioid and other drug use. Seven out of 10 respondents reported they remained opioid-free at time of interviewing. The remaining three described periods of abstinence lasting from three to six months. Effects on other drug use were also described as positive. As in Table 4, five participants were currently abstinent from alcohol and other non-opioid drugs. The abstinence appeared to be mostly maintained as a result of improved mood and outlook, but also through the absence of opioid withdrawals. It was represented by five codes.

Code 1) 'Absence of opioid withdrawals'. All respondents reported markedly less or no opioid withdrawal symptoms both during treatment, and for various lengths of time afterward. This obviously had an effect on the interviewees' final treatment goal of being opioid-free and thus helped define this theme. Effects on withdrawal symptoms did not appear dose-related. That is, three respondents who had used low, incremental doses of ibogaine still had marked absence of opioid withdrawals.

*002: Yup. Despite everything else a severe absence of withdrawal symptoms. And this was the beginning of the clincher...*

*[seven weeks later] ...*

*Yeah pretty good.. I think the big deal was I wasn't fighting withdrawal. And, I mean that's 90 percent of the battle. Yes I'm tired, yes I've gone through a lot, yes I've done this but I don't have that kickarse...monkey on my back. Not thinking about where to score, not thinking about who to get in contact with. It was just like you know...*

*006: Oh I didn't get any. None at all for the whole time. One week? No withdrawals, nah. No I never got any withdrawals.*

*005: I remember Dr G. came round for a chat and I remember him saying 'oh you don't look like a chap who has come off methadone two days ago', and I was sitting in the kitchen talking to him like it wasn't that big of a deal.*

Code 2) 'Effects on opioid usage' captured overall effects of ibogaine on respondents' opioid dependence, which is separate from just focussing on the withdrawals. Of the 10 respondents, seven cited continued abstinence from opioids, and three relapsed. One respondent utilised ibogaine again, after an original treatment and two-month abstinence period, but then further relapsed. Of the six respondents from the Dunedin clinic five cited continued abstinence.

*007: ...and broke my wrist last year you know little things like that... which in the past would have been big triggers or an excuse or whatever you know.*

*009: No I didn't need to... I mean I had a situation where my husband had an affair and my best friend died in the*

*same week and I remember just losing my mind for a little bit thinking what do I do, what do I do and what would I normally do, and being, like, well normally I would just get stoned. And that was as close as it ever came... I was going 'well that would be a dumb idea'. So literally going well I'll still be in this situation but then I'd be really pissed off with myself as well. Like that was it. That was literally... like that was a year later. There was no... I had absolutely, like, 100% never any desire whatsoever...*

*010: Um six months [relapse] .... For me it's... I don't have any excuses apart from the fact that I ended up becoming my mother's care giver, she ended up having cancer and I ended up looking after her. That's what she finally died of...so I ended up dabbling again to help me with that process...*

Code 3) 'Three-month point after treatment' was first looked for because of the literature, but was clearly apparent in this study, as a time period after treatment where those who had maintained abstinence could struggle.

*003: [three months] Ah yes, yes, DHCs, and then started some morphine...*

*001: Literally I would pull up and lie in my car until 5 o'clock, and read a book, for seven hours, 3 days a week...and I'll go and visit M. And it was that old association, it was comfortable, and he does it. I'd come round and he'd be wasted, and I'd do that again time after time, and then you know, eventually he had something, oh I'll have a little bit...I guess, so, I... the job didn't work out and I couldn't start Uni halfway through the year, the courses were all full-year...*

005: *Yeah, and then um... I was probably um smoking ciggys daily again by two months um... and drinking somewhat regularly then. No opioid use at that point and around about, like, three and a half months I was a bit lost you know. I wasn't back at university, I still haven't got the girl friend, I still was... um... a bit lost and I used opiates again a couple of times around the three-four month mark. And it freaked me out. I thought oh shit, this is not good. So I packed my shit and went to Auckland and got a job up there, in Auckland.*

Code 4) 'Effects on other drug use' was a surprise to some of the respondents, and helped some with their treatment goals. One respondent described his partner, who used ibogaine solely for the purpose of a cannabis detoxification, but which had no effect on that substance. Other respondents noted that they wished they'd known it could help with other substances, and would have planned for more out of their ibogaine treatment.

001: *Yeah yeah I had to force myself to start smoking, in Australia, after four days of no sleep and I had nothing to do, I wasn't allowed to watch TV so I was pacing back and forward in this hotel...hotel room. The only other thing to do was smoke and I had my first one and I threw it away. It was the most revolting thing I had ever had, I had to force myself to.*

005: *So the first two weeks there was no craving for absolutely anything. No alcohol, no benzos no ciggys even. But then after about two weeks the first craving that came to me was for ciggys and that was after about two weeks um... and um... I hadn't... I think I went close to a month before I had a beer... Yeah, I guess the interesting*

*thing about that is that I had um... one beer and I felt like I was tripping again.*

Code 5) 'Effects of treatment on pain and the physical body'. In this code all respondents reported strong physical effects during treatment such as tactile sensations and 'tingling up the nerves'. Two interviewees strongly voiced that while subject to the effects of ibogaine they had received a form of physical healing.

004: ... *what was happening was, as my body was starting to wake up, the signals coming up the nervous system... this is the best way I can describe it. It would start at my feet, so I'd be talking to you now and I'd get this electric type of energy in my feet and it would go up my legs and into my spine and go to the spot where I was injured and I would hear this noise like a crackle. Then it would go shooting down my arms and I would have to shake them. If I was sitting here talking to you, you would think I was spastic. I would be shaking my limbs, my arms and my feet. It was so weird, I couldn't sit still. When I got home it took my wife three days to cut my hair because I couldn't sit still long enough*

004: *Ok three months I remember I was struggling with my pain a wee bit and, you know, that sort of came back.... just real back pain and this nerve pain and... um... I remember sort of thinking that was the first time I had this sort of doubt about future thinking, like, what am I going to do now? You know, how do I face this pain without medication?. Yeah the end of the bubble basically. And so... I took, like, a top up dose... [ibogaine]*

007: ... *and it got to that stage of, 'oh here it comes rushing up my body'. It rushed up my body... it got to the*

*tumour and it was just, it was like a really loud...two freight trains colliding, I could physically hear it, and physically felt it, it was like this bang!... And everything stopped. ...Well in hindsight it was profound, you know, because, because it literally... stopped the tumour... once we figured it out.*

The experienced physical effects fitted in well with the effects on dependence, when opioid dependence was viewed alongside pain management.

## **Overview of Theme Six**

Seven respondents reported remaining opioid-free following ibogaine treatment, and five of this number remained abstinent from other drugs as well; so there was an obvious effect on drug dependence for these respondents. The effect appeared to last from three months to an indefinite number of years, and was influenced by a lack of opioid withdrawals, and experiences of positive physical effects on the body.

## **The spiritual effect**

Theme Seven, an independent and final theme: the 'spiritual effect'. Voiced by most respondents in various forms, it appeared to be more influential with four respondents in particular. This theme recorded the information that these four participants yearned for something else, another lifestyle and mental awakening, away from opioids, which may help understand some of their motivations for use. It also captured the very vivid experiences respondents described as 'spiritual'. This includes the three respondents that mentioned being visited during their hallucinogenic experience by an African Shaman. 'The spiritual effect' was represented by four codes.



Code 1) 'Long-term effect of hallucinogen' was described by the four most affected respondents, and was described as lasting up to three months after initial treatment. Although similar to the already specified code of 'heightened senses after treatment', this emerged as a separate code in the spiritual theme because respondents described it separately, distinct from the changes in appetite and smell.

*006: No I would say three months... I was tripping balls for three months. It was kind of like I'd taken a tab of acid... a tab of local acid... for quite some time. But I often say even now... the way I feel now before ibo, I would have to take half a tab of acid to be like I am all of the time now...(laughter) it just never wore off...happiness-wise. I used to be really quite jittery and anxious all the time...ask G (laughter).*

*006: I spent a lot of time just being amazed. Which I still do actually, all I need to do is look up at the sky now and I can just go 'duuh' and switch off. Because I got to see like, the world and atmosphere from space. To see that visual layer of atmosphere just blew my mind and now I look up and go holly shit (laughter)*

*008: People were just laughing because I was just so out there, I wanted to let the grass grow, and allowing the mouse to live in my cupboard...*

This code was definitely described as the hallucinogenic effects of ibogaine that lasted well after the initial treatment. Whereas the second code, 'sense of epiphany during treatment' was described and experienced during ibogaine treatment.

Code 2) 'Sense of epiphany during treatment' captured respondents' descriptions of the hallucinogenic effects during the first, active phase of

ibogaine treatment, but with a spiritual, or some greater significance attached.

004: .. *Directly after ibogaine I had this feeling, and it's hard to describe, but after treatment I felt slightly magical in the sense I felt really positive...the music sounded better...lots of things seem better. There was just this neat feeling. And the very first pharmaceutical drugs I took edged that feeling away again. And I've read before that other people experience this... Yeah I came home and picked up a paint brush and I've never painted before in my life. And since I have done about, about 15 amazing paintings...and even been offered money for them.*

006: ... *and I was like well at home they are going to have to cope with me dead... and I thought they will actually be alright if I'm dead... And it's really funny because at about....in the middle of the night which could have been three in the morning, possibly the same time, my daughter sat up in bed, she was in bed with my husband, and she sat up and said; 'where's the body?' (laughter) and she had never said anything like that before... Yeah yeah see this is a tricky one for me too because I got the very strong message when I was under the influence of ibogaine that I should be a provider now. So... I sat up the next day and said to T. well I have to go train to be an addiction practitioner now and do what you do, because I got told that.*

Code 3) The little brown man. Tied in very closely with the sense of epiphany for four respondents, were three of the four respondents who described in detail a visitation, during treatment, of what they described as a Shaman from Africa who aided both physical healing and spiritual healing for them. This code captured their experiences.

004: *Right, the second phase was the sensation of an African person standing in front of me. And... for want of a better description because you will think I'm totally crazy and its part of my anxiety almost, in talking tonight because when I recall this stuff it seems like so much out of the frickin box.. Right OK. So I have this African dude in front of me and he is talking to me in this kind of pigeon garbled English type of thing... "oh bugger we will have to use the cell-shaking method"... And I was sitting there going what the fuck is the cell-shaking method and how is that going to work?*

006: *.... and then this wee dude came and sat on my bed and he said... you're really anxious as a person and we need to do something about that otherwise it's not going to be good and he said to me 'breathe like this' and it was really like (deep breaths) and he said 'blow your breath out as much as you can and blow your breath out as hard as you can and you will feel less anxious' and so I did that. And K... I could hear K. saying; 'are you alright in there K?' and I said I'm just exorcising some demons because this is what this man is telling me, he was sitting there, just sitting there talking to me. He was black... this wee African dude.*

Code 4) 'Search of the spiritual'. This code was originally under Theme One, 'motivations to use ibogaine', as it was represented there also. However it was moved to this theme as it was more strongly described throughout the whole treatment experience, including post-treatment recovery.

005: *... cos um definitely like um, like as I said pretty miserable, like generally a pain in the arse to be around.*

*I'd alienated friends and I was like I was...I was expecting some psychological, some emotional benefit as well.*

*007: ... and I was getting into a bit of... like Reiki and energy work and I felt it was holding me back from that too so yeah....Curiosity, I don't know. Curiosity you know thinking maybe I'll take this.... It was more the curiosity about what this may do to the tumour. That was my motivation.*

## **Overview of Theme Seven**

The four codes in this theme demonstrated a consistent description people told when using ibogaine. This description could fall under psycho-social or emotional improvements driving better treatment outcomes. However, this theme represented the respondents' detailed descriptions of subjects that perhaps went beyond the emotional and mental level, such as Shaman visitations and physical healing. It also captured other less well-described motivations for choosing ibogaine such as wanting to do Reiki healing work.

## **Summary - Chapter Four**

The findings of this case study on ten opioid-dependent people using ibogaine for their detoxification were logically grouped into common subjects, discussed, and then these subjects were logically grouped into themes. There were seven such themes.

### **'Not sitting comfortably with opioids'**

This group of respondents reported strongly a desire to be completely free of opioid use, including no longer using substitution opioids. They described it as no longer wanting the effects of the narcotic in their body and mind. Negative effects on mood were voiced the strongest followed by effects on the physical body, as related to using illicit opioids and substitution opioids, mostly methadone. Daily anxiety was reported by half the respondents and attributed to the effects of opioids. Also a sense of frustration was reported that being on substitution therapy held them back from goals they wanted to achieve. Goals ranging from energy healing work, to raising a family and running a business. These effects caused some to keep substitution doses at a sub-therapeutic level. In general, the group had an anti-establishment view of standard addiction treatments but most utilised methadone treatment (OST).

The study group reported severe low moods associated with opioid withdrawals and did not tolerate these well. However most respondents had many multiple and desperate unsuccessful attempts at opioid detoxification. Prolonged withdrawal symptoms, including that of depression, and 'an anxiety' about life without drugs were key features identified for their lack of success.

### **'Motivations for using ibogaine'**

This second theme described respondents' strong motivations to use ibogaine as an alternative treatment option for opioid detoxification. Mostly the respondents described a sense of hope that this form of treatment would have long term success and alleviate opioid withdrawals during the detoxification stage. The reported quickness of treatment time with ibogaine was also described as attractive, reducing an expected six months recovery time to sometimes less than two weeks. Legality of the treatment did not affect respondents' choice to use ibogaine but did affect the level of medical input achieved before, during and after treatment. This group of respondents

had previous positive experiences with recreational hallucinogenic drugs (LSD, mushrooms) and a strong relationship with cannabis use was described by most. A self-described attraction to ‘psycho-stimulating drugs’ appeared to be part of the motivation for choosing ibogaine. Four respondents described searching for a spiritual healing or profound psychological meaning and resolution, which they felt would be required to maintain opioid abstinence, and which hallucinogenic ibogaine treatment was believed to assist with. The strongest reported motivator was knowing someone who had been opioid-dependent, who had experienced ibogaine treatment and made changes the respondents themselves wished to achieve.

### **'Safety conscious and support-seeking'**

All ten respondents sought medical testing from their General practitioner (GP), prior to ibogaine treatment, even the independent user of ibogaine. When respondents had the guidance of an ibogaine treatment provider they obtained the safest, recommended, pre-treatment medical tests and screenings. New Zealand and Australian treatment providers used by respondents in this study provided a list of the recommended medical tests and screens and these were achieved before ibogaine treatment could continue. Respondents who did not use a treatment provider obtained non-recommended, perhaps irrelevant, pre-treatment medical screening. When ibogaine became legal to prescribe as an off-licence medicine in New Zealand, respondents described having access to medical support during and after ibogaine treatment, such as nausea control and sleep augmentation. Legality also legitimised the ibogaine treatment providers in New Zealand, and some respondents even described taking their treatment provider along to their GP with a complete list of what was required. This theme of ‘support-seeking’ clearly identified the type of support and preparation people who use ibogaine required for successful treatment outcomes, as evidenced by those who did not have support or after-care plans and relapsed into opioid use. More successful cases utilised supports including peers who had used ibogaine, internet chat sites, a knowledgeable ‘clinic’ or ibogaine peer group, and family members. Some utilised GPs and

community psychiatric nurses during ibogaine treatment. Physical care was often required for the first two days of ibogaine treatment, and rest and recovery for a further one to two weeks was described as required and with much emotional support, and often medical support where sleep was affected. Half the respondents stated they required information, support and even booster doses of ibogaine from their treatment providers. The AA (Alcohol Anonymous) treatment model was utilised by half the respondents after treatment, somewhat at odds with identified respondent traits of being anti-establishment and critical of standard treatments.

### **'Best practise'**

The theme of 'best practise' emerged when respondents described variations in ibogaine treatments and what they would have done differently. This included utilising a therapeutic dose of ibogaine, and being able to use booster doses during treatment and in the months afterwards. Other more pragmatic considerations were hydration, nausea management and sleep concerns as related to ibogaine treatment. It was emphasised that switching to shorter-acting opioids before ibogaine treatment allowed for greater effectiveness in managing opioid withdrawals, than when detoxifying off longer-acting methadone. Perhaps most intriguing was that respondents who experienced a 'spiritual effect' during the psychedelic phase of ibogaine treatment described major positive effects on their mood, and resolution of their anxiety, both of which positively affected opioid abstinence. Although this spiritual-type healing was sought by other respondents it was not always achieved, mostly because of poor nausea control or lower ibogaine dosing. It appeared the knowledge and reassurance of an ibogaine treatment provider facilitated this experience, perhaps as part of best practise.

### **'Effects of treatment on depression and anxiety'**

This theme represented the way respondents described ibogaine treatment's ability to improve mood and anxiety, even at low doses of ibogaine. This

was strongly emphasised by the respondents as the main reason they felt they no longer needed other drugs or further opioid use. Improved mood also included feeling less anxiety and in some cases complete removal of anxiety was achieved. This effects were described as being due to the hallucinogenic effects of ibogaine and not just the removal of opioids from the body. The mood improvements and less feelings of anxiety were reported to last for one to three months. During this same time period respondents described little or no opioid withdrawal symptoms which they reported also helped with anxieties and mood.

### **'The effects of treatment on dependence'**

With seven respondents reporting having remained opioid-free, and five of this number abstinent from other drugs as well, there was an obvious effect on drug dependence after ibogaine treatment for this group of respondents. The effect of ibogaine treatment was described as eliminating withdrawal symptoms during detoxification phase, and improving mood and anxiety in the recovery period after treatment. The improved mood was attributed to ibogaine, not the absence of other drug use. The effect appears to last from 3 months (for three respondents who relapsed into opioid use), to years and into recovery (for seven respondents who remained abstinent at time of writing). Other effects of ibogaine treatment, described during abstinence, included a reported positive effect on the physical body with two respondents using booster doses of ibogaine three months after initial treatment to successfully manage pain. The three participants who relapsed still achieved significant periods of abstinence (3 – 6 months), regardless of negative experiences or poorer ibogaine treatment practises.

### **'The spiritual effect'**

A consistent attraction described by the respondents for the use of ibogaine was labelled as 'the spiritual effect'. Participants often detailed they were searching for some mental or emotional resolution to the cause of their drug use and felt ibogaine or hallucinogenic treatments could facilitate this.



Some respondents went further, and described the effects of treatment as going beyond mental and emotional, to a spiritual type of change. Respondents who stated their experience with ibogaine was negative were mainly disappointed that they did not receive the spiritual effect they had hoped for, however they still achieved opioid abstinence. The 'spiritual effect' theme captured some respondents' reason for wanting off opioids altogether, even a stable substitution treatment service. Opioids themselves were described by two respondents as a 'block' to their individual spirituality; one respondent said opioid use prevented her from attaining her goal of energy healing work. This theme also captured the two respondents who described 'spiritual epiphanies' during the active phase of ibogaine treatment, and described being visited by an African shaman. They attributed their subsequent physical and emotional healing and removal of 'all' anxiety, to this hallucinogenic encounter.

# CHAPTER FIVE:

## DISCUSSION

### Overview of chapter

This study's main research question was: 'what were the experiences and motivations of opioid-dependent people using ibogaine in New Zealand?', with the sub-question, 'What safety measures and medical tests were ibogaine users aware of and utilised?'

To explore these questions a multiple case study method was chosen, as described by Yin (2009), to allow illumination of why decisions were made and how they were implemented (p 20). Ten respondents were recruited, mainly through relationships built with the Dunedin ibogaine treatment provider and contacting people who had used their service, and through previous contact with an opioid substitution service in Christchurch.

As per Chapter Four, 38 codes, or different subjects, discussed by various respondents, were grouped into seven logical themes. These were identified by the researcher with consultation with the researcher's supervisors. The seven codes were: 'Not sitting comfortably with opioids'; 'Motivations for using ibogaine'; 'Safety conscious and support-seeking'; 'The best practise', 'Ibogaine treatment effects on depression and anxiety'; 'Ibogaine treatment effects on dependence'; and 'The spiritual effect'

An ibogaine user's experience in New Zealand is described via three separate discussions. These discussions illuminate the relationships and complexities between six of the most significant themes. Discussions highlight important findings that emerged, how findings are connected and the consistencies and inconsistencies with current literature. The discussions note areas for further exploration, which lead to later sections covering

further research. The sub-question as to what medical and safety tests were achieved before ibogaine treatment are also highlighted in the discussion. The relationships between these themes are represented in Graph 1. Strengths and limitations of this research is also discussed at the end of this chapter.

## **Overview of discussions**

Discussion 1) The relationship between ‘Not sitting comfortably on opioids’ and ‘Motivations to use ibogaine’, concludes most ibogaine users in this case study experienced adverse side effects when using opioid drugs, including substitution opioids. These were described as low mood, feeling anxious, physical side effects, and a feeling of being stuck. This interplayed with the main method of dissemination of ibogaine information, which was through internet, non-medical peer forums. Most promised hope of much-reduced withdrawal symptoms, a quick detoxification from opioids, and reported that ibogaine detoxification was successful in the majority of cases.

Discussion 2) The relationship between ‘Safety conscious and support-seeking’ and ‘The best practise’ concludes that all respondents sought medical testing before their ibogaine treatment. Those who had the guidance of an ibogaine treatment provider achieved correct pre-treatment medical tests. Those who sought medical tests independently achieved non-recommended and irrelevant pre-treatment tests. Additional medical support such as managing ibogaine treatment symptoms, heart ECG monitoring, sleep disruption and nausea during treatment allowed respondents to achieve better ibogaine treatment outcomes. The ibogaine treatment providers were more effective when the drug was legal. People achieved positive outcomes when using ibogaine booster doses anywhere up to three months after initial treatment.

Discussion 3) The relationship between ‘Ibogaine treatment effects on depression and anxiety’ and ‘Ibogaine treatment effects on dependence’,

concludes that detoxification with ibogaine positively affected users mood and feelings of anxiety during, and up to three months after treatment. Most respondents stated this was a large factor in managing the withdrawals and recovery from dependence after detoxification. The theme of 'The spiritual effect' also appeared to play a part in reasons why people chose ibogaine treatment, and for some, the reasons why their mood and anxiety issues were resolved post-treatment.

## **Discussion One**

The relationship between: 'Not sitting comfortably on opioids' and 'Motivations to use ibogaine'

'Not sitting comfortably on opioids' emerged as the first theme and was described with much emphasis by all the respondents. It was a new point of view for the researcher and not widely read about in the literature, although one New Zealand study discussed lower health status comments, including that of life satisfaction scores, compared to that of the general population (Deering et al., 2004). In a European qualitative study focussing on quality of life indicators for people in OST, De Mayer et al (2011) described one theme of the opioid-dependent sample was that opioids had a paralysing effect on their emotions. This dissatisfaction with the pharmacological effects of opioids was openly voiced by the respondents of this study. The reasons people stated they were not at ease with opioids was not the anticipated restrictions of substitution programmes, but the mental and physical side effects people described of both illicit and substitution opioids. The effects were described and attributed to the actual drug, in this case methadone, not because of other life factors. This was harder to describe for illicit opioid users because of the nature and demands of an illegal drug dependence which can create its own stresses and anxieties (Adamson, Sellman, Deering, Robertson, & de Zwart, 2005). Respondents in this study mostly stated that opioid substitution gave stability compared to their illicit use periods, and that periods of illicit use were harder times physically and mentally. However, two respondents clearly outlined the low

mood and physical lethargy they felt when using a stable amount of illicit opioids and whilst in a stable life period. This dis-ease with the pharmacological effects of opioids was the same for substitution opioids: nine respondents stated low mood, anxiety and physical side effects were a strong motivator for wanting to change from, albeit a successful, substitution treatment, to something away from opioids completely.

The physical side-effects of substitution therapy were well-reported in the literature, ranging from effects on sexual dysfunction (Trajanovska, Vujovic, Ignjatova, Janicevic-Ivanovska, & Cibisev, 2013), to prolongation of the interval of the cardiac QTc wave (Mohamad et al., 2013). However, there was much less direct literature on depression scores of methadone users compared to non-methadone counterparts. One study estimated there was a 10-30% prevalence (across five studies) of major depression in a cohort of methadone maintenance populations but did not correlate this with the pharmacological effects of the drug, rather it cited the lifestyle and other co-morbidities of the population studied (Peles, Schreiber, Naumovsky, & Adelson, 2007).

Another finding from this theme of 'not sitting comfortably on opioids', was the many attempts at quitting or previous unsuccessful detoxification attempts: eight out of ten respondents had attempted to 'detox' prior to ibogaine treatment. This was re-emphasised by the respondents when they described their journeys towards ibogaine treatment. Some respondents felt it was characteristic of people who chose ibogaine treatment, to have had numerous unsuccessful attempts at detoxification using other means, such as gradual withdrawal of methadone dose. However, for two respondents ibogaine therapy was their first attempt at opioid detoxification, stating fear of opioid withdrawals and the associated low mood had previously prevented any attempts of withdrawing off a substitution programme. It was unclear from the literature if people who use ibogaine had more quitting attempts than the general opioid population. Most articles found stated this population had 'unsuccessful attempts at reducing or stopping and may exit and enter an opioid substitution service multiple times' and appeared not to

explore, for the purposes of those studies, the number of quit times attempted (Adamson & Sellman, 1998; Deering, Sellman, & Adamson, 2014).

Another interesting finding from the case study was the code ‘opioid withdrawals and associated low mood were not tolerated very well’. This group described being particularly vulnerable to low moods associated with opioid withdrawals. This was not overly described in the literature explored except that low mood was a known feature of opioid withdrawal (Kamlet & Alper, 2010). It would be worthy of further exploration to ascertain if there are groups whose main barrier to reducing substitution treatment was managing this low mood. Again, two respondents who did not attempt any previous detoxifications stated they hadn’t because of fear of withdrawal symptoms and low moods. Ibogaine specifically attracted these respondents because of the hope of less withdrawal symptoms.

Other topics related to this theme were expected and well-reported in the literature, such as the self-stigma of being an addict (Koester, Anderson, & Hoffer, 1999). Opioid-dependent populations are a marginalised vulnerable hard-to-reach group (Deering et al., 2004), and not well-tolerated in the medical world or society generally, largely due the tactics and methods deployed by some of this group to obtain narcotics, including deceit, manipulation and crime (Butler & Sheridan, 2010; Degenhardt & Hall, 2012). Respondents in this case study described not only seeing these behaviours in their peers but acknowledged that is how they would be perceived as well. Four respondents especially felt this to be a reason for ‘not sitting comfortably’ on opioid substitution therapy or even illicit use. Two respondents described not liking being ‘ beholden’ to something; or where living remotely required regular pharmacy pick-ups which caused a constant anxiety of being dependent ‘on anything’. Anxiety around being dependent was noted in the literature reviewed, but described by De Maeyer et al (2011) as ‘wishing to be independent.

The second theme, 'Motivations for using ibogaine' was clearly separated from the first ('Not sitting comfortably on opioids'), as the first theme presented for respondents before they had any knowledge of ibogaine treatment. Motivations for ibogaine use were significant for this study as they helped answer the second part of the main research question. The significant codes within this theme were the respondents' described sense of hope that a detoxification may work. Not only were there genuine reports of success on the internet but also from people, face-to-face, who had been successfully treated. Reported treatment success also brought hope of less withdrawal symptoms during treatment and afterwards. The whole process appeared to give hope of quick treatment and recovery. The collective case study highlighted a feeling of desperation the respondents felt on opioid substitution therapy because of low mood and physical side effects as already mentioned. The physical side effects associated with methadone and buprenorphine were well captured in an Australian sample of 500+ OST clients (Winstock, Lea, & Sheridan, 2008). Sheridan et al (2008) illustrated OST populations' main listed physical side effects by asking 'what they sought treatment for', related to physical effects of substitution treatment. These were dental concerns, constipation, sweating and 12% reported chronic headaches they sought treatment for. Sedation was also listed as a concern but more for the methadone sample than the smaller buprenorphine sample. Mood and anxiety were not listed or the focus of that study. It did mention this could be a possible cause for poor retention rates, and this was eventually directly measured (Winstock et al., 2008).

The method by which the case study cohort discovered ibogaine therapy, the internet, is largely uncensored and many addiction forums report treatment success with ibogaine. Nine respondents out of ten placed emphasis on the hope they felt and desperation that some treatment had to work for them. Seven respondents specifically stated the reported absence of withdrawal symptoms was a key part of their hope. Five respondents stated they hoped ibogaine could deliver a form of mental or psychological treatment, which they felt they needed to accomplish opioid abstinence. Motivations for ibogaine use, as stated in the literature review, had no direct

literature or data. When searching the literature for possible motivations for ibogaine treatment (Chapter 2) the quickness of treatment was found mentioned in international ibogaine cases but as an outcome or side effect, not as an initial motivator for people seeking this treatment (Lots of & Alexander, 2001). All respondents mentioned the ‘quickness’ of treatment when describing why they chose ibogaine treatment. Respondents stated it was also the faster recovery time after detoxification that was attractive. Two respondents stated it was relatively easy for them to detoxify off methadone, but the six month recovery period afterwards was often described as the ‘last hurdle’ that always tripped them up (referring to relapse). When examining the interplay with theme one, especially around opioid withdrawal and the ensuing long detox being intolerable to respondents, compared to ibogaine's brevity of treatment and alleviation of opioid withdrawal, it was clear this illustrated a significant connection for the case study respondents. Six of the respondents also participated in Noller et al (2017) study and motivations for choosing ibogaine treatment or previous barriers to OST were not measured and so cannot be compared with this study. Most of the research explored for possible motivations for ibogaine use found wider hallucinogenic treatment studies that mentioned the ‘spiritual type redemption’ people seek from their drug treatments (de Rios, Grob, & Baker, 2002). There emerged within this theme, for one respondent, a search for the spiritual effect. She stated she wished to do energy healing work and believed energy blocks, caused by her opiate use, had prevented her from doing so, but that ibogaine treatment could remove those blocks.

Another obvious motivator the study found for ibogaine use was an attraction to hallucinogenic drugs. This was found for all ten respondents who had used various forms of other hallucinogens in their drug use career, including the one pain-related client. This strong code was placed within this theme, as being attracted to the effects of hallucinogenic drugs affected a person's desire to use hallucinogenic alternative treatments. Although attraction to the type of drug and its effects was a possible motivator for ibogaine therapy, previous use of hallucinogens was also described as a



personality type of 'some' opioid users by one respondent. He described in his experience that some opioid users wanted 'psycho-active' drugs such as cannabis and hallucinogens, whilst other 'types' of opioid users don't wish for any extra thoughts but to 'numb' all thoughts and feelings. He believed this same group would not use cannabis for this reason. Previous hallucinogenic drug use was not noted in any literature related to ibogaine studies. Most respondents who took higher doses of ibogaine said it was a much stronger hallucinogenic agent than that of magic mushrooms or LSD. Two respondents stated they were glad of the experience of having mentally navigated through previous 'bad trips' to cope with the experience of ibogaine. This is of significance when considering what positively affected people's experience with ibogaine treatment. Especially in light of best possible future practise. The findings of this case study regarding characteristics also captured that all ten respondents had previously used cannabis, and most had a strong relationship with it.

The effects of the first theme, including low mood and sickness on methadone and not tolerating opioid withdrawals, appeared necessary for the motivations in the second theme to be significant. Information about ibogaine is widely available on the internet and, as reported by one respondent, was talked about among certain opioid-using peers and networks but not commonly in New Zealand OST services. An opioid detoxification that promoted absence of withdrawals and a 3-5 day treatment period appeared very seductive when length of treatment and opiate withdrawal were major barriers to getting off an undesired substitution therapy. Therefore theme two (motivations for ibogaine) appeared for the participants in this case study to need the strong presence of theme one.

Another relationship between these two themes was the multiple failed detoxification attempts the respondents in this case study endured. They often recounted opioid detoxifications as being fraught with low mood and feelings of hopelessness; a feeling of not being able to see 'the light at the end of the tunnel'. These previous detoxifications, discovered in theme one,

were mainly self-directed, even on substitution programmes, and for four out of ten respondents, were attempted faster than recommended. Another three stated they had long, protracted opioid withdrawals and still struggled severely with low mood. No specific mood treatments occurred with any of the previous detoxification attempts. If these physical and mood symptoms associated with opioid withdrawals were not a feature for the person, or if they were successfully treated/managed, perhaps this would lessen the effect of theme two, the motivations to seek and use ibogaine therapy. This was also the conclusion of Winstock et al (2008) in a study that suggested effective treatment of methadone's physical side effects could translate to better retention rates in OST.

## **Discussion Two**

The relationship between; 'safety conscious and support seeking' and 'best practise'.

Alongside ascertaining people's experiences of ibogaine treatment in New Zealand, this study sought information on what medical knowledge ibogaine users obtained about ibogaine and what, if any, pre-treatment health screening did they achieve or not achieve. There was little in the literature to answer this question especially when ibogaine was used independently, peer-to-peer initiated. It appeared most ibogaine treatment providers used a standardised treatment model, which included pre-treatment medical screening, ECG and blood tests (Alper, Lotsof, & Kaplan, 2008). However as the literature suggested, ibogaine therapy was first used as a peer-to-peer treatment in the 1970s, whereas clinics and more official ibogaine providers occurred later in countries that accepted this alternative addiction treatment, for example Netherlands, Mexico and New Zealand (Harrison & Mojeiko, 2010). Therefore, it was not expected that all respondents, including independent users, were fully aware of cardiac risks and links to cases of death with ibogaine use. Although the degree of accuracy with medical information varied between respondents, all ten had sought some form of medical testing through their GP or other known

medical provider, prior to their use of ibogaine. The tests conducted and knowledge of the drug ibogaine itself, was reported to vary widely between health professionals. Some tests conducted were not screening for possible risk factors such as co-current drug use. What was clear however was that all eight respondents who used ibogaine treatment providers, obtained the recommended pre-treatment tests (ECG and blood tests) through clinic guidance, even if their GP had no knowledge of the drug or treatment risks. Information about other drug use was also obtained. This correct health screening was achieved when ibogaine was legally prescribed (post-2013) and when it was not. However, it was described as being much easier, and open to further support, when it was legally prescribed. The two respondents who used ibogaine in New Zealand without the support of this clinic, obtained very limited pre-treatment screening such as a simple blood pressure check. The two respondents who used an Australian-based independent ibogaine provider were also advised of necessary pre-treatment screening and both obtained an ECG and blood tests, again in spite of their GP not knowing about ibogaine treatment. In these cases, the GP was prepared to follow patient/treatment provider recommendations.

Alongside this strong code of medical awareness and screening, was the strongly voiced need for support, before, during and after ibogaine treatment. This was an expected discovery as the need for support was discussed widely in the literature (Schenberg et al, 2014; Bastiaans, 2004; Kamlet & Alper, 2010). Of note was the respondent who obtained ibogaine from a friend and used it independently in his house and had arranged for a friend to visit him. Fortunately for this one case, the dose of ibogaine was sufficiently low that he did not experience the ataxia and immobilisation felt by other respondents using higher doses. Eight other respondents stated they needed assistance to walk to the toilet during the first phase of ibogaine treatment. Two respondents felt it would be gross neglect to leave someone unattended because of the need for reassurance and reminding patients to drink water. Also voiced strongly, including by the person who used ibogaine independently, was the need for pre-treatment guidance, questions to be answered and encouragement prior to treatment. Respondents also

talked about the need for reassurance from their provider; even though they had sought and asked for this, there was still considerable anxiety about the ibogaine treatment expressed by half the respondents. This anxiety regarding ibogaine treatment was managed in most cases by seeking and obtaining reassurance from previous ibogaine users and this was part of the largely unseen work of support providers. This was not observed widely in the literature, however Kamlet & Alper (2010) advised that there was often patient anxiety about going into opioid withdrawals and the treatment not working to alleviate these withdrawals. However, this was during the actual clinical treatment phase and did not mention the months' lead-up.

Family members, including parents in four cases, were utilised as main supports during ibogaine treatments, support which included payment and organising of accommodation. Other supports utilised were GPs, a community psychiatric nurse and ibogaine treatment volunteers. Respondents had a range of two weeks' to one year's lead-up, or pre-treatment period before using ibogaine, and it was during this time they sought medical screening and tests through their medical practitioners. Post-treatment support sought included four respondents utilising Narcotics and Alcoholic Anonymous (NA/AA) support groups. All respondents felt they needed some form of support for a period after treatment, ranging from answering questions, to requiring booster doses of ibogaine when experiencing pain or drug-use after the original ibogaine treatment. The use of booster doses and after-treatment support was not widely discussed in the literature. However there were cases of international ibogaine users having described changing cities and making new friends as part of the planning needed for afterwards (Bastiaans, 2004; Lotsof & Alexander, 2001). The seven respondents who remain opioid-abstinent appeared to have made significant changes after treatment, including their partners having ibogaine treatment, and moving cities. The three who relapsed described making no changes to their using peer networks and advised the need for people to plan for this period before treatment. More generally planning for after treatment, including moving away from drug-using peers, was a frequent

strategy employed by those seeking abstinence (Toumbourou, Hamilton, & Fallon, 1998).

The fourth theme, 'The best practise', was (and will continue to be) significant to an ibogaine user's experience. Less knowledgeable, poorer quality practises resulted in more negative experiences, and less effect on mood changes and subsequent drug abstinence. The literature clearly outlined safe medical practise, including ECG monitoring and nausea control (Alper, Stajić, & Gill, 2012; Kamlet & Alper, 2010; Lotsof & Wachtel, 2002). However the ten respondents had 'hit-and-miss' results regarding the safety of their treatments. The six participants who used the support of the Dunedin clinic had a journey of discovery about what made for safest and most effective treatment. Respondents who had used the clinic after ibogaine became a registered medicine in New Zealand in 2013 received therapeutic doses of ibogaine, antiemetic's prior to treatment for nausea control, and had switched (changed) from methadone to a short-acting opioid (codeine). They also had available (though not always required) booster doses of ibogaine, anywhere from 24 hours to three months after the initial dose. Respondents who did not have an experienced ibogaine treatment provider and when ibogaine was not legal had sub-therapeutic ibogaine amounts, poor nausea control and poor ibogaine dose control, and this was while they were still on long-acting (chemical half-life) opioids, (i.e. methadone).

'Controlling the sickness' during the active phase of ibogaine treatment was voiced by nine respondents, with one stating that due to vomiting she had not received an adequate dose of ibogaine and had a poor treatment experience (though overall positive treatment results). Nausea control in relation to dosing issues was well-covered in literature pertaining to international clinic practice (Kamlet & Alper, 2010). Not observed in the literature was the frequently described need for sleep management during and after ibogaine treatment. All respondents reported poor sleep after treatment, with three respondents saying it severely affected their level of functioning. Management strategies suggested by the respondents included

use of benzodiazepines for a reprieve, and natural sleep remedy such as 'tart cherry juice' for its reported melatonin release benefits (Howatson et al., 2012).

This theme of 'best practise' became significant for the research question because so much of the outcome, both in terms of managing treatment risks, reduced drug use and affected mood, appeared connected to the knowledge and experience of the ibogaine treatment provider and whether simple steps were followed or not followed during treatment. Whether a patient received best practise or not, appeared based on fortune and luck, despite best intentions by providers, who were still learning about the treatment. Of note though is that two respondents who had negative ibogaine experiences were among the seven who remained opioid abstinent. The respondent who used ibogaine independently in his house relapsed after six months, but had a positive experience with the treatment despite vomiting and having sleep disruption.

The use of booster doses of ibogaine after initial treatment was interesting from a prescriber's point of view. With this not discussed widely in the literature or even mentioned by some international clinics, it would be difficult for a prescriber of ibogaine to know if prescribing additional doses was a warranted practise. Schenberg et al (2014) report statistically significant differences in abstinent rates between ibogaine users who used single does compared to multiple doses of ibogaine, but this was for a study cohort which included poly-drug use, alcohol and cannabis users. For this study on people with opioid dependence, it appears reassurance was required from the ibogaine treatment provider, as reported by the respondents, for booster doses to be administered. It appeared from this case study, the use of booster doses two days after initial ibogaine treatment had the positive effect of further reduction of opioid withdrawals. Booster doses were specifically sought for management or return of pain symptoms for two respondents. It was prescribed and used at three months after the initial treatment, with pain alleviating effects. There were no reported cravings to

use opioids at this stage but a specific described return of pain which ibogaine was used for.

Attached and overlapping the theme of 'best practise' is theme seven, 'the spiritual effect'. This was an independent theme, in which all respondents described in their own ways, searching for something else, something with meaning, away from opioid use. It is represented in Diagram 1 as an overlapping circle with the theme of 'best practise'. The overlapping codes here represented the sense of epiphany during treatment noted by four respondents, which had positive effects on their subsequent mood and drug abstinence. It also overlaps best practise because with guided experienced practise, the hallucinogenic effect of the treatment appeared to be embraced and utilised for treatment effect. This occurred at well-measured (per kilogram of body weight) therapeutic doses between 1500 and 2000mg total (Alper, Lotsof, Frenken, Luciano, & Bastiaans, 1999; Kamlet & Alper, 2010). Most literature however avoided reference to the potentially enhanced anti-addictive effects or cognitive work that a hallucinogenic experience could offer. Wider literature suggested people seeking treatments specifically for depression were searching for hallucinogenic, enhanced, spiritual and cognitive therapies. (Oram, 2012; Strassman, 1995). Human ibogaine trials that attempted to gain legitimacy for potential treatment using randomised controlled trials (RCT), focused primarily on drug abstinence and pharmacological effects of treatment. RCT trials struggled by their numerical nature to capture the effects of the psychedelic experience and/or how this related to more measurable / observable abstinence periods (Yin, 2004). For one respondent her 'negative' experience with the ibogaine treatment was not having the intense hallucinogenic experience and hoped for 'spiritual awakening'. She related this to the ibogaine provider's inexperience, at this stage, and not having adequate 'flood dosing' (taking ibogaine in a single dose). Despite not having an 'epiphany' the same respondent believed the noises she heard 'collided' at a point in her body later to be diagnosed with a tumour. The meaning she attributed to this was 'being guided' to a medical discovery. She did also obtain desired opioid abstinence. Two further respondents

stated that the ‘epiphany’ and shaman visitation they experienced resolved long-standing anxiety issues, and they directly related this to having obtained opioid abstinence. The other respondents who experienced hallucinogenic effects up to three months after treatment believed this ‘mind state’ or noticeable difference in sensations helped with the acceptance of no longer using. Most respondents had significant psychedelic experiences during ibogaine treatment but did not necessarily connect the visions and experience with something that could assist them in post-opioid life. They connected them more to unrelated horror or science fiction visual effects. It appeared therefore that guidance and planning for altered states of consciousness should form part of ‘best practise’ to prepare and educate people that experiences are significant but not necessarily related to spiritual meaning. Best practise would also include providing therapeutic doses, and all the safety measures required for optimal and safest administration of the larger ibogaine doses. This would afford ibogaine patients the best opportunity to experience the desired mental/psychedelic effects. 'The spiritual effect' theme also overlapped with theme five, 'effects on depression and anxiety' as outlined in the next discussion.

The relationship between the themes, ‘safety conscious and support-seeking’ and ‘best practise’ and the overlapping third theme of ‘the spiritual effect’ was clearly demonstrated with this New Zealand case example. Prior to ibogaine being legally available in New Zealand medical experts were consulted about the treatment but had limited information on what medical screening and tests were required or important. Most testing achieved was irrelevant to ibogaine treatment. Respondents who used an ibogaine treatment provider once ibogaine was legal, were better able to openly discuss the medical screening involved with their GP, and even to offer a list of required tests. These respondents had access to and achieved recommended pre-treatment medical screening, such as ECGs and blood tests, and they also had full, recommended (Lotsof & Wachtel, 2002) mineral supplement regimes prior to treatment, Magnesium especially was important, considering the cardiac risks associated with ibogaine use were



potentiated by hypomagnesaemia or low magnesium levels (Maas & Strubelt, 2006). The group using legally prescribed ibogaine in this period had access to antiemetics and benzodiazepines for sleep management, which assisted in the overall experience. Respondents who used ibogaine before it was a registered medicine accessed less appropriate pre-treatment tests and felt they could not discuss additional medical support with their GP. The respondents who used ibogaine in Australia accessed correct pre-treatment tests but did not have access to after treatment medical support. The respondent who accessed ibogaine independently (when it was legal), went to his GP but obtained irrelevant pre-treatment screening perhaps due to lack of specialist clinic support and also no easily obtainable prescriber's guide to ibogaine in New Zealand (i.e.: a list of required tests). This highlighted the need for ibogaine treatment to be supported through knowledgeable support services. Correct pre-treatment testing appeared to produce the safest treatment outcomes. When ibogaine became legal it further made ibogaine a legitimate treatment and a medical person, vital to safer treatment and improved treatment outcomes, was shown to become involved throughout treatment, without fear of colluding in an illegal practise.

### **Discussion Three**

The relationship between; 'ibogaine treatment effects on depression and anxiety' and 'ibogaine treatment effects on dependence'.

Theme six, 'ibogaine effects on depression and anxiety', was strongly described by seven respondents, six of whom were part of the seven who remained abstinent. The theme was captured in seven different codes described in the results chapter. The significant codes in this theme were due to the detailed emphasised and distinct descriptions respondents gave regarding the differences they felt in relation to both their mood and their ability to manage anxiety post ibogaine treatment. These unexpected changes to mood and outlook on life were notable enough for respondents' friends to tell them they appeared happier. All respondents stated their

improved mood helped with feelings of needing to use drugs. Two respondents stated they experienced a complete absence of all anxiety after treatment. These same two respondents had described spiritual epiphanies, where they had been visited by an African shaman or spiritual guide in visions, during treatment. Interestingly both these respondents described coming to terms with their anxieties during the psychedelic phase of treatment, both through the guidance of the shaman and visual experiences. Other respondents described mental processing or just thinking about their personal fears and anxieties. This formed a code within the sixth theme, 'acceptance of fears, vulnerabilities and pain'. For this reason and because of the intertwined complexities of 'the spiritual effect', it was represented in Diagram 1 as overlapping the effects on depression and anxiety.

The ways in which mood and anxiety were affected were discussed in more detail through a recorded conversation with treating medical doctors discussing experiences at the West Indies ibogaine clinic. Here the effects of ibogaine after treatment were described as a 'sticky anti-depressant' with lasting effect for 6 to 12 weeks (Kamlet & Alper, 2010). This statement appears to be partially supported by Mash et al (1999) low dose ibogaine dosing trial where they recorded BDI scores pre and post treatment and concluded there were notable positive effects on mood with ibogaine. Also Noller et al (2017) study with a sample number of 14 participants with eight completing a 12 month follow up in which regular BDI scores were taken, concluded there is significance with mood changes even at the 12 month mark, but a significant change at one month post treatment. Few other studies were interested in mood changes, more focussed on abstinent periods. Reports of mood changes was consistent with interviews in this case study. Respondents described clear differences to their mood as 'light at the end of the tunnel at last'. The respondents believed their moods and anxiety were affected by the pharmacological properties of ibogaine, rather than the removal of opioids from their body. Due to multiple attempts at detoxification many participants could compare states of sobriety without the use of ibogaine to their experience with ibogaine. Glick et al (1998) on their studies on rats brains note that serotonin reuptake was 25 times

greater in the Nucleus Accumbens (NA) region with ibogaine ingestion. It is clear in pharmacological literature that ibogaine and noribogaine inhibit the action of the 5-hydroxytryptamine (5-HT or Serotonin) transporter (SERT) but in a different mechanism than that of selective serotonin reuptake inhibitors (SSRI) or that of cocaine (Jacobs, Zhang, Campbell & Rudnick 2007). The same authors conclude that the actions of ibogaine on the serotonin transporters are novel and not yet understood. Whatever the pharmacological effects are, the reported effects on mood would be an area worthy of further exploration among both ibogaine users and comparing with people withdrawing from opioids using other methods. Are respondents correct in reporting ibogaine enhances mood above that of no longer experiencing the effects of opioid use? Described improvements and benefits to mood and anxiety appeared to last the same length of time as other codes found in this theme, including lasting effects of the hallucinogen, and heightened senses (both described as lasting for three months).

The respondents' comments contributed to another interesting code labelled, 'mental cognitive-work after treatment'. Four respondents described continued mental processing and thinking about their life. It was grouped under the theme 'ibogaine treatment effects on depression and anxiety', because the effects of that processing and eventual acceptance of self and situations, affected moods and fears after ibogaine treatment. Some overseas case studies described positive effects on mood as more of a side effect of ibogaine treatment (Lotsof & Alexander, 2001). However, the focus of these studies has been on length and periods of abstinence, and not the relationship between mood changes and corresponding drug abstinence.

The final theme that emerged was 'ibogaine treatment effects on dependence'. This is a significant theme because it was the desired outcome of ibogaine participants' journey and experience. All ten respondents had substantial periods of abstinence from opioids including seven who still reported being opioid-abstinent at time of writing. The shortest reported period was three months and was in response to the respondent's frustration

and dissatisfaction with the return to her previous life situation. The two others who relapsed appeared to do so around the six-month point, one in response to their mother's death, and one because of using an old acquaintance's supply of codeine. These were still considerable periods of abstinence following a 3-14 day detoxification and consistent with literature which focused heavily on periods of achieved opioid abstinence as a quantifiable outcome of the therapy (Harrison & Mojeiko, 2010; Lotsof & Alexander, 2001; Mash et al., 2001). The reasons for drug abstinence ranged from spiritual epiphanies and acceptance of fears and physical pain, to control over anxieties and positive changes in mood and outlook on life.

A significant code in this theme was the absence or lessening of opioid withdrawals, physically and in relation to mental health for the recovery period afterwards. This was emphasised and clearly described as being experienced physically (less restlessness, cravings, hot and cold sweats and cramps), and mentally, in terms of absence of low mood associated with opioid withdrawals (hopelessness, frustration, low motivation and anhedonia). This was described as the turning point for all seven respondents who did not relapse: not having to battle and endure the long-lasting effects of opioid withdrawals. Even for those that reported the presence of some withdrawal symptoms they were said to be easily manageable compared to experiences of previous methadone reductions. This too is widely supported in literature and purported to be the main anti-addictive quality of ibogaine (Glick, Maisonneuve, & Szumlinski, 2000; Lotsof, 1992; Mash et al., 2001). Of interest in this theme and not expected or ascertained in literature were the described effects on pain management. Two respondents went so far as to describe direct benefits to physical health during the active psychedelic phase of ibogaine treatment, including the diagnosis of a cancer. Two further respondents stated it helped with pain management. One of these respondents believed the period of reduced pain achieved with ibogaine was around three months. Interestingly he received a booster dose of ibogaine at this point specifically for pain management with good further effect, without using any opioids. Current medical practise obviously manages pain using medicine and arguably the most

effective drugs used for treatment are opioids (Savage, Kirsh, & Passik, 2008; Sheridan & Butler, 2008). Thus the effects of ibogaine on pain management logically group into this theme of effects on dependence (or further opioid use). There was no discussion in the literature about pain management with ibogaine except the clinical trials where ibogaine enhanced pain management in 'heated rat tail' experiments (Bagal, Hough, Nalwalk, & Glick, 1996). One respondent stated ibogaine and the subsequent removal of methadone un-masked severe shoulder pain from an over-use syndrome and this pain required surgery. Ibogaine did not appear to manage this reported pain. All respondents described strong physical sensations and tactile hallucinations during ibogaine therapy.

Effects on other drug use were noteworthy, and were a surprise to half the respondents. Smoking cessation (cigarettes/tobacco) and changes to alcohol use were the most common. One respondent stated it helped with cravings and use of methylphenidate (Ritalin), a stimulant drug. Early human trials concluded ibogaine achieved marked abstinent periods with alcohol dependence disorders but appeared far less effective with stimulant dependence (Mash et al., 1998; Mash et al., 2000). The same studies concluded there was little significance or abstinent period with a cocaine (stimulant drug) group when using ibogaine for detoxification, and it had little effect on managing cocaine cravings after detoxification. Although this one respondent described no cravings to use methylphenidate, he had also significantly changed his social network and opioid and benzodiazepine use as well, perhaps assisting with triggers to use stimulant drugs. Smoking cessation was mentioned in the Mash et al., (2001) and Mash et al., 2000) studies and others, where ibogaine users described, to their surprise, they no longer wanted to smoke tobacco (Lotsof & Alexander, 2001). Likewise earlier pharmacological experiments concluded ibogaine had an effect on nicotine reward pathways within the Nucleus Accumbens (Carnicella, Kharazia, Jeanblanc, Janak, & Ron, 2008). Interestingly, respondents reported cigarette and alcohol use resumed around three months after treatment. Marijuana use appeared the least changed as described by the respondents. No studies or ibogaine treatment

providers appeared to have reported much on ibogaine treatment for cannabis dependence.

Exploring participants' experiences three months after ibogaine treatment highlighted the relationship between the two themes of 'ibogaine effects on mood and anxiety' and 'ibogaine effects on dependence'. Respondents reported significant changes to mood and anxiety for around an average of three months, consistent with the literature (Harrison & Mojeiko, 2010). This coincided with other reported experiences, which 'wore off' or changed at three months, such as pain management, heightened senses, lingering effects of the hallucinogen and a return to alcohol/nicotine use. Mood changes were described most emphatically by respondents, as the main driver or reported cause of their achieved opioid abstinence. The sense of hope felt by respondents, in relation to having reduced or no opioid withdrawals, was described as both a strong motivator for treatment, and a factor in remaining abstinent. It was illustrated not just by absence of physical withdrawals, but by absence of emotional and mental low mood usually associated with drug withdrawals. Positive mood changes and acceptance of fears during treatment were also described by one respondent as beneficial for pain management in terms of accepting the pain and not fearing its worsening. These themes became interconnected, especially when exploring comments of those who had relapsed and the pictures they painted of a return to hopelessness. This could be described as mood change affecting relapse. There was much literature on post-acute opioid withdrawal syndrome (PAWS), a syndrome which occurred after detoxification, described as protracted withdrawals which lasted for six months and featured depression symptoms (Kamlet & Alper, 2010). Effective management of PAWS, in that case study, was achieved through the use of ibogaine, which also had positive effects on periods of abstinence.

## **Limitations and strengths**

The first limitations to the study are related to the already addressed methodology and method of case study research. Although selected and argued that this is the most appropriate method to answer the question of a person's ibogaine experience in New Zealand, all research methods have their limitations. Case selection can be 'targeted' by the researcher for desired information and respondents can flavour the answers in a subconscious attempt to please the researcher or promote their own interests (Gillham, 2000; Yin, 2004). This study used information obtained from respondents' self-reports. The validity of self-reported data has been explored in a comprehensive review by Harrison (1997) in her critique of research methods using self-reported data. Her review concludes people who use drugs and are involved with the criminal justice system tend to under report their drug use. People involved with studies that do not have perceived implications to their treatment or legal proceedings, that is a study conducted by a researcher with no power influence, were found to be mostly accurate. For this study, the researcher declared he was no longer employed by an OST service and met participants at public or home addresses. These limitations were consciously addressed by the researcher through transparent supervision with research supervisors and by interviewing all potential respondents who met the very limited inclusion criteria. Further research rigor is discussed in the methodology chapter.

Perhaps the obvious strength with case study research is this method allows deeper understanding of a person's experience and what can assist in this journey than statistical numbers alone can provide. Numbers alone may lose the ability to explain the connection and significance between events and decisions (Yin, 2004).

The second limitation for this study was the number of participants who were located via one group/clinic based in Dunedin. Six out of ten in total were recruited via establishing contact with a key person at the clinic. A further two respondents, who used an Australian ibogaine treatment

provider, remain connected and even established the same group. Therefore only two respondents had no connections to the Dunedin clinic or network. Despite contacting five North Island (New Zealand) OST services, local drug support agencies and messages on open social media platforms, there were no respondents from other New Zealand ibogaine clinics. One respondent resides in the North Island but utilised the Dunedin clinic.

The third limitation of this study is potential for recall bias of respondents. This study did not exclude for ibogaine treatments that occurred many years ago and had an open time limit for when ibogaine treatment occurred. Recalling detailed medical information becomes somewhat more difficult especially around times and sequence of events. This is demonstrated by some respondents in the interviews mixing up terminology of medical tests achieved and more vague responses on specific medical questions.

The fourth limitation is the ethnic representation of participants. All respondents who comprised the case study identified as New Zealand Pakeha (European descent). Consultation was sought with the University of Otago, Christchurch Kaitakawaenga Rangahau Māori (Facilitator Research Māori) and with local mental health and addiction Maori health workers; however no Maori who had experienced ibogaine treatment were available to be contacted. No Asian or people with other Polynesian backgrounds responded, missing representing experiences and possible variations in experience of individuals of other ethnic populations.

The strengths of the study however, are also based on the sample size. The expected sample size was five and at periods in the study this target appeared unlikely to be achieved, as the first two sought for respondents were uncontactable. The sample size of 10 afforded the researcher the opportunity to gain a comprehensive range of experiences and outcomes, including an independent user and a pain-related opioid dependent respondent.



Perhaps, a final strength of the study would be the experience of the researcher and academic supervisors. Interviewing people about personal experiences requires empathy and sensitivity (Gillham, 2000). Experience in working in opioid substitution services and an understanding of what this experience can mean for people with opioid dependence were found to be crucial in gaining rapport and credibility with the respondents. Experience in building a relationship with mutuality and reciprocity was essential to gain such personal, often not shared, experiences of their treatment (Stein-Parbury, 2013). The researcher remains truly grateful for respondents' willingness to trust the researcher and share their experiences. Experienced academic supervisors afforded and ensured least burden and impact for respondents through careful consideration of interview process development and care of identifiers. The importance and rigour of confidentiality was acknowledged and carefully maintained

## **Summary of discussion**

The question of 'what were the experiences and motivations of an ibogaine user in New Zealand?' has been answered through three discussions on the relationships between six of the seven themes found in the case study. The relationships between the themes helped illuminate the journey of an opioid-dependent person using ibogaine for opioid detoxification. The case study described physical and mental side effects of long-term opioid use, related specifically to the pharmacological properties of opioids. This study group made multiple attempts at quitting and self-detoxification and cited prolonged withdrawal symptoms, which included low mood as key factors in those detoxification attempts being unsuccessful. This interplayed with the allure of ibogaine treatment, where individuals had hope promoted by reports of quick opioid detoxifications and less withdrawal symptoms. Most information about ibogaine was discovered on internet chat sites and forums, and then through known peers who had used ibogaine. New Zealand provides a unique landscape to test the effects of ibogaine, which, at time of writing, was an off-license registered medicine. Case study

respondents obtained safer, appropriate pre-treatment medical screening and correct tests when ibogaine was legal, and especially when they and their GP were supported and advised by an ibogaine treatment provider. Respondents also had better after-treatment medical support when it was a registered medicine. All respondents sought medical screening before treatment, even when ibogaine wasn't legal and/or without the support of a treatment provider. In the cases where it was not legal or there was no treatment provider supplying test requirements, correlated with incorrect pre-treatment medical screening and testing. So a lucky few were afforded what was described as 'the best practise' in terms of ibogaine treatment. For example, they had the associated nausea and vomiting managed with antiemetic's, and the after-treatment sleep disruption was managed with benzodiazepines, or even 'tart cherry juice' for natural melatonin release. The use of booster doses of ibogaine two to four days after initial treatment afforded people further reduced opioid withdrawals, and some used booster doses for pain management three months afterward to good effect. 'Best practise' was reflected in better outcomes in terms of effects on depression, anxiety and opioid abstinence. The majority of respondents reported positive changes in mood and anxiety management for three months after ibogaine treatment. This had not been anticipated by the respondents as an effect of treatment. These positive changes in mood and anxiety appeared to correlate to a positive effect on periods of abstinence. Reported absence of withdrawal features, including associated low mood, again for a period of three months and longer, was another major factor affecting periods of abstinence for this case study group. Seven out of ten respondents remained abstinent of opioids at time of writing. The remaining three still achieved significant periods of abstinence (3 – 6 months) regardless of negative experiences or poorer ibogaine treatment practises. The experience of an ibogaine user in New Zealand is summarised in Diagram 1.

**Diagram 1: Theme Diagram**



# **CHAPTER SIX:**

## **CONCLUSION**

### **Overview of chapter**

The final chapter reiterates the origin of the research question, what the question was and what the study's aims and objectives were. This chapter outlines the extent to which the research question has been answered, and the implications for practice and policy, as well as potential further research. It will end with a concluding statement highlighting the findings of the study, which were in support of the argument that the safest, most effective ibogaine treatment outcomes were achieved when it was a legitimate, medically-supported treatment option.

### **The research question**

This research was initiated following observations by the researcher working in an OST service. An opioid-dependent person on OST chose an alternative treatment for methadone detoxification. The treatment was ibogaine through a New Zealand organisation. The OST service declined the patient's request for support during treatment, and they later withdrew that person from their OST program for non-collection of methadone doses. As discussed in the introduction, this decision not to support was based on reports of death from ibogaine use (Dettmer, Cohn, & Schwarz, 2013). Further reports demonstrating other factors involved with reported deaths (Alper et al., 2012) was not explored perhaps because of 'stereotyping' alternative treatments. Clearly, a greater understanding of ibogaine treatment by addiction treatment services, especially its risks and safety measures, was required, along with a greater understanding of the

experiences and motivations of those who chose it for opioid detoxification. The research question therefore became:

‘What are the experiences and motivations of opioid-dependent people using ibogaine?’ With the secondary question: ‘what safety measures and medical screening were ibogaine users aware of and utilised?’

## **To what extent have the research questions been answered?**

The extent to which the research questions have been answered was addressed in the literature review and the findings. The participant interviews revealed ten different experiences ranging from those who sought the support of an ibogaine treatment provider, utilised their knowledge and obtained recommended pre-treatment medical screening, to the minority who obtained ibogaine independently, sought help from their GP, but lacking the input of an ibogaine treatment provider, obtained non-recommended screening tests. It appeared positive treatment experiences, and desired treatment results of opioid abstinence were greatly affected by the individual’s preparation and planning for the treatment, both before and after. This need for planning, especially for the recovery time, was voiced by all respondents, including the three who had relapsed into opioid use. Having an ibogaine treatment provider appeared to positively affect both access to appropriate medical support and appropriate post-treatment support. These ten varied experiences were captured in seven identified common themes. When analysed together they represented an overall experience of ibogaine treatment.

The seven themes are: ‘not sitting comfortably on opioids’, where respondents reported depression, anxiety and physical side-effects of long-term opioid use, and could not tolerate the mental depression effects of opioid withdrawal. Some reported being blocked or stunted either in terms of desired lifestyle and family, or a described spiritual, emotional block

from being on opioids. 'Motivations for using ibogaine' captured the hope of less opioid withdrawal symptoms during detoxification with ibogaine, and also the hope of a quick recovery time afterwards. 'Safety conscious and support-seeking' captured all respondents seeking medical support. All respondents stated they needed physical, emotional and expert support during and after treatment. 'The best practise' described respondents' varied ibogaine treatment experiences and what afforded best practise. This included the use of therapeutic ibogaine doses, the use of booster doses of ibogaine after treatment, and management of nausea and sleep deprivation. 'Ibogaine treatment effects of depression and anxiety' was the surprise strong theme which detailed the emphasised reports of improved mood and reduced anxiety attributed to ibogaine use. This in turn appeared to have the most effect on the next theme, 'ibogaine treatment effects on dependence' which captured seven respondents' successful opioid detoxification treatment, and three respondents who relapsed to opioid use between three and six months after ibogaine treatment. The spiritual effect', the last theme, forged itself through the interviews with two respondents who described spiritual-type epiphanies during ibogaine treatment, and four who described a search for some spiritual change which they believed was required to remain abstinent.

Therefore, the research question was answered through the findings and discussion that emerged from ten different ibogaine treatment experiences. The seven themes supported findings from the literature review and revealed experiences and motivations for use of ibogaine less reported in the literature. The findings lead to recommendations for practice, policy and procedure, and exposed potential areas for future research.

### **Implications for practice/policy**

From the findings of this research emerged five implications for ibogaine practise and support, relevant to current legislation and policy on legitimate ibogaine prescribing in New Zealand. A number of these findings were also consistent with other research.

1. More effective management of opioid withdrawal symptoms and treatment of associated low moods could potentiate an individual's success of opioid detoxification. Greater emphasis on opioid withdrawal management during gradual opioid reduction and current methods of exiting OST services, could help individuals achieve and maintain their abstinence goals. This case study described low tolerance for opioid withdrawal symptoms as a barrier to successful detoxification, and highlighted how better mood and less anxiety assisted individuals in remaining abstinent from opioids.
2. An experienced ibogaine clinic provided individuals with safe and superior ibogaine treatment outcomes. Respondents who obtained pre-treatment medical screening without the guidance of an experienced ibogaine provider, received inadequate physical/medical assessments. Respondents who obtained pre-treatment medical screening through their GP said their doctor did not know about the risks associated with ibogaine or what to 'test' for. Where available, all GPs in this study followed ibogaine treatment provider's recommendations. Respondents sought and stated they required support before, during and long after ibogaine treatment. This was obtained through ibogaine treatment providers, families and GPs, or in their absence, internet chat forums and ibogaine internet support sites. This education and support role will be an important one for any future ibogaine service providers in New Zealand, as this study clearly showed that greater support before, and long-term support after treatment, resulted in better and safer treatment outcomes.
3. Alongside the need for an ibogaine support service was a clear indication that safer ibogaine treatment practises were achieved when ibogaine was legal in New Zealand. Respondents said they had greater support and could be more open with their GP when ibogaine was a legal, prescribed medicine. This supported current

New Zealand legislation and policy, with ibogaine being an off-label registered (able to be prescribed) medicine for the treatment of opioid detoxification. When ibogaine was legal and able to be openly discussed, respondents received the correct medical screening, more supportive medical care, and screening for alcohol and other drug use. This last, as co-morbid use of stimulant drugs increases the risk of cardiac arrhythmia with ibogaine treatment (Alper et al., 2012). Respondents felt they could be more honest about ibogaine treatment with their AOD treatment services when it was a legal treatment, and some utilised these services for support after ibogaine treatment.

4. The hallucinogenic experience was embraced. Respondents sought and stated they felt it was beneficial for their desired treatment goals, to have psychedelic experiences during ibogaine treatment; to feel the drug's mental and cognitive effects. The hallucinogenic properties appeared to have positive effects on respondents' reported moods and management of anxiety, which is consistent with the literature on hallucinogenic treatments for other psychiatric disorders such as depression (Strassman, 1995). It is a significant consideration for future ibogaine treatment providers.
5. The benefits of multiple ibogaine doses. The use of ibogaine booster doses, 24 hours to three months after initial ibogaine treatment, had beneficial treatment effects on all respondents that utilised them. They further reduced opioid withdrawal symptoms and helped with pain management issues. The boosters were all described as 'sub-therapeutic' doses, amounts around 200-400mg, and did not produce further psychedelic effects. Prescribers currently have little guidance or literature to support the prescribing and use of booster doses, so this was a significant implication in terms of continued practise, and the prescribing of ibogaine as a medicine for opioid detoxification.



## Further research

Areas this study highlighted for potential further research included the relationship in discussion 3, chapter five: the effects of ibogaine use on depression and anxiety. Research with ibogaine has largely focused on the absence or reduction of withdrawal symptoms during opioid detoxification, and the related abstinence periods. Conducting studies specifically designed to capture ibogaines' effect on the mood and anxiety of users, before and after ibogaine treatment, could further illuminate its true effect on depression and anxiety.

The use of booster doses of ibogaine, following initial treatment, is less reported in the literature. Future ibogaine treatment groups could be randomly assigned one of two treatment plans - one in which patients are given booster doses, and another in which they are not. This could determine the effectiveness of ibogaine booster doses in relation to periods of abstinence, and alleviation of opioid withdrawal symptoms.

To measure the psychedelic effects of ibogaine on treatment outcomes, future ibogaine treatment groups could potentially receive non-psychedelic ibogaine metabolites such as noribogaine. The impact on mood, and effects of treatment, could be compared with those who experienced psychedelic effects using 'normal' ibogaine.

Ongoing medical monitoring of future ibogaine groups such as continual ECG recordings during ibogaine treatment, could provide further medical data on the effects of ibogaine treatment and how it affects cardiac function. Ideally, an ibogaine treatment cohort might undergo magnetic resonance imaging (MRI) or a positron emission tomography (PET) brain scan during ibogaine treatment, to record what areas of the brain, especially within the dopamine reward pathways and ventral tegmental area (VTA), were activated. This would provide further data to measure the neurobiological effects of ibogaine.

## Concluding comment

The contribution of this research is in identifying factors and influences that could benefit future ibogaine treatment experiences for opioid-dependent people. The influence of individual histories and socio-political effects contributed to motivations and reasons for ibogaine use. Crucial factors, such as managing anxiety of ibogaine treatment, are described by participants that can make it a possible successful treatment.

*008: Yeah I was cutting my mum's hair the day before I left [ibogaine treatment] and I said to her; 'you know if I don't come back, don't ever feel like you let me down', you know (laughter) because it was just... I thought I was going to die! But I didn't feel like I had an option, as I felt like I was going to die anyway... I was just so... so 'chemical-ised'... I was just so... depressed and traumatised.*

Respondents shared information difficult to obtain from the current ibogaine literature. Their described benefits of the psychedelic effect during treatment, included an 'epiphany' or deep-rooted 'understanding' that they no longer needed opioids. It was also described as beneficial for increased positive mood, and reduced or absence of anxiety after detoxification with ibogaine treatment. The benefits of having an ibogaine treatment provider were also invaluable as described by the respondents of this study. Recommended pre-treatment screening was achieved and much-needed support during, and long after treatment, was obtained by respondents who utilised an ibogaine treatment provider. Respondents described a desire for more GP/expert input throughout both treatment and recovery phases. The minority of respondents who did not use an ibogaine treatment provider obtained non-recommended, pre-treatment screening, and they also had perhaps poorer support and treatment outcomes. Seven out of the ten respondents in this study reported still remaining opioid-abstinent from their ibogaine treatment, in accordance with wider literature

reporting a 70% success rate for opioid abstinence after ibogaine treatment (Lots of & Alexander, 2001; Mash et al., 2001). The respondents – the ten people who participated in this study - described the effects of ibogaine treatment which helped most in their shared goal to become opioid-free. These effects were, the great reduction in opioid withdrawal symptoms during the detoxification phase, and improved mood and reduced levels of anxiety for three months after treatment. All ten respondents in this case study said they would use ibogaine whether it was legal or not, but preferred it to be legal for the advantages of better medical support.

Much gratitude and appreciation is expressed to the participants of this study and notably, Tanea Paterson who helped make the connections. Through interviewing these ten people, who generously, if tentatively shared some of their most vulnerable experiences, much valuable information regarding ibogaine treatment was revealed. Information that could help people obtain safer, more supportive, effective treatment experiences with ibogaine in the future.

Foremost this study was about people. People who had a shared drug dependence and a shared experience of choosing ibogaine treatment for their opioid detoxification.

*“There will be some open minded people that will go; yeah this (ibogaine treatment) suits my personality, my situation, my frame of mind, my ability to deal with it. I can rationalise hallucinations for what they are, I’m not going to flip out. Yes, it is a big spider web made out of mechano or origami, that’s dropping out of the ceiling looking at me,.. I can deal with that (respondent 002).*

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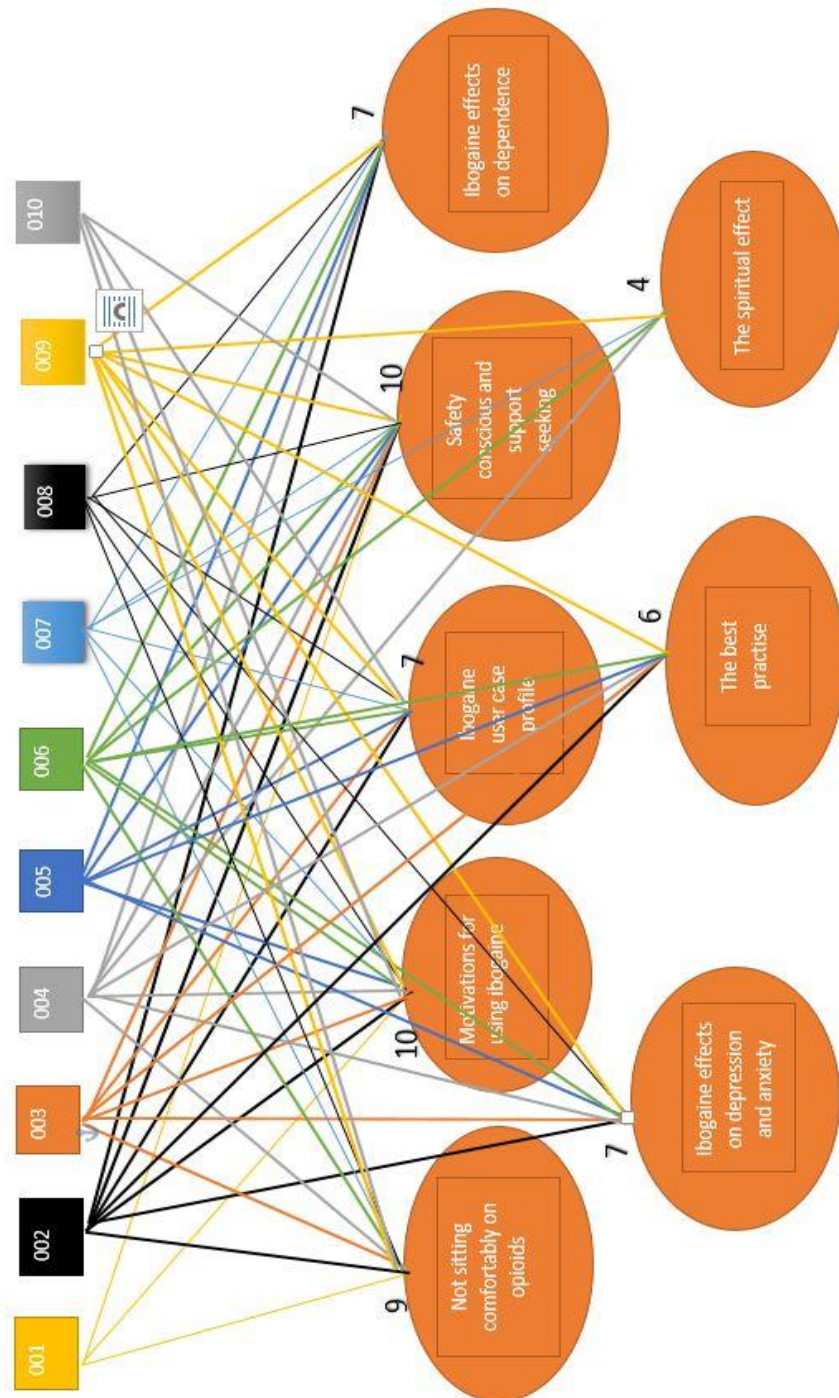
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# APPENDIX ONE: RAINBOW OF THEMES



*Diagram 2: Rainbow of Themes*



# APPENDIX TWO: ETHICS APPROVAL



H15/042

Academic Services

Manager, Academic Committees, Mr Gary Witte

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11 May 2015

Dr D Deering  
Department of Psychological  
Medicine (ChCh) Terrace House,  
4 Oxford Terrace  
University of Otago, Christchurch

Dear Dr Deering,

I am again writing to you concerning your proposal entitled “**Experiences of opioid detoxification using Ibogaine in various settings: Exploring Ibogaine users’ motivations, understanding of risks and effect of Ibogaine treatment.**”, Ethics Committee reference number **H15/042**.

Thank you for your letter of 6th May 2015 addressing the issues raised by the Committee.

The Committee thanks you for providing clarification in respect of the recruitment process and for the detailed comment relating to the interview settings.

On the basis of this response, I am pleased to confirm that the proposal now has full ethical approval to proceed.

The standard conditions of approval for all human research projects reviewed and approved by the Committee are the following:

Conduct the research project strictly in accordance with the research proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee.

Inform the Human Research Ethics Committee immediately of anything which may warrant review of ethics approval of the research project, including: serious or unexpected adverse effects on participants; unforeseen events that might affect continued ethical acceptability of the project; and a written report about these matters must be submitted to the Academic Committees Office by no later than the next working day after recognition of an adverse occurrence/event. Please note that in cases of adverse events an incident report should also be made to the Health and Safety Office:

<http://www.otago.ac.nz/healthandsafety/index.html>

Advise the Committee in writing as soon as practicable if the research project is discontinued. Make no change to the project as approved in its entirety by the Committee, including any wording in any document approved as part of the project, without prior written approval of the Committee for any change. If you are applying for an amendment to your approved research, please email your request to the Academic Committees Office:

[gary.witte@otago.ac.nz](mailto:gary.witte@otago.ac.nz) [jo.farronediaz@otago.ac.nz](mailto:jo.farronediaz@otago.ac.nz)

Approval is for up to three years from the date of this letter. If this project has not been completed within three years from the date of this letter, re-approval or an extension of approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

Yours sincerely,



Mr Gary Witte

**Manager, Academic Committees**

# APPENDIX THREE:

## MAORI CONSULTATION



8 May 2015

Dr Daryle Deering  
National Addiction Centre, Department of Psychological Medicine,  
University of Otago, Christchurch

Ma te rangahau Hauora e tautoko te whakapiki ake te Hauora Maori.  
All health research in Aotearoa New Zealand benefits the Hauora (health and wellbeing) of tangata whenua.

Tena koe Daryle,

Thank you for taking the time to meet with me at my office at the University of Otago, Christchurch on the 8<sup>th</sup> May 2015, to discuss your research study titled:

***Experiences of Opioid Detoxification Using /bogaine in Various Settings: Exploring Ibogaine Users' Motivations, Understanding of Risks, and Effects of /bogaine Treatment***

I note that you are the Principal Investigator for this research project and that Mr Jamie Walker, a Master's student within your department will be completing his research thesis from this study.

### **Commentary on Proposed Research Projects**

From my discussion with you I have ascertained that the main objective of this study is to explore the experiences of taking Ibogaine for the purpose of alleviating opioid withdrawal symptoms and cravings for opioid drugs and the settings in which this occurred. This study looks more specifically at: 1). Individual's motivations for using Ibogaine, 2). Their understanding of Ibogaine and risks associated with its use, 3). Health checks undertaken, 4). The Ibogaine experience and effects, the settings and services provided and, 5). Impact on subsequent opioid drug use.

This study aims to recruit between 5-10 participants by advertising at the Needle Exchange and more informally, through community based opioid peer support groups. It is intended that participants for this study will be recruited from three

regions including Dunedin, Christchurch and the West Coast.

### **Maori Health Gain**

While this research project does not specifically target Maori, you have indicated that it is possible Maori will have a presence within the recruitment population. Ideally, this presence should be reflective of the Maori population nationally around 15%. As you have noted, nationally 13% of clients receiving opioid substitution treatment have been reported to be Maori. Interestingly, people identifying as European or Other ethnicity are two to four times more likely to be prescribed the use of strong opioids compared to Maori, Pacific or Asian ethnicities. You also acknowledge that some Maori may not identify as Maori within treatment services for opioid dependence, due to the stigma associated with opioid dependence.

In terms of Maori health gain, your research application should highlight the direct benefits for Maori participants who participate in the studies documenting the direct health benefits/gains for those individual Maori who consent to be part of this research. I note that you will be advocating for study participant's to have a health assessment including blood and ECG tests. Where study participants may find health assessments costly, you will provide information to them so that health assessments are undertaken at minimal or no cost.

### **Partnership**

With regard to Maori involvement in your study, I have suggested that you consult with Viola Anderson, Maori Health Worker for the Methadone Clinic at the Specialist Mental Health Service, Canterbury District Health Board, Christchurch, to discuss her capacity to provide cultural oversight and support for this project. This would ensure that Tikanga Maori frameworks are considered and integrated where/when necessary, particularly during the engagement process with Maori. Alternatively if this is not possible it will be necessary to consider in part, funding for Hauora Maori involvement in this project.

I note that Maori study participants will be offered the opportunity to be interviewed by a Maori interviewer (Ms Irene Whittaker), should they so wish.

### **Ethnicity**

As your study may involve Maori participants, there is a need to acknowledge the issues pertaining to ethnicity and to consider how ethnicity data will be collected for this study. It is recommended that ethnicity data is collected from each participant in accordance with the Ministry of Health guidelines, which involves the use of the Census 2013 question.

### **Consent**

Issues regarding informed consent for Maori participants who are recruited into this study were discussed. With this in mind, you must ensure that Maori participants are explicitly aware that consent is for this research project only.

## Potential Further Support Resources

Further resources that you might want to access to strengthen your responsiveness to Maori within your research are: 1. HRC's Nga Pou Rangahau Hauora Kia Whakapiki Ake Te Hauora Maori 2004-2008, 2. The Health Research Strategy to Improve Maori Health and Well Being 2004-2008. The other reference that is available is 3. Hauora Maori Standards of Health IV: A Study of the Years 2000-2005 by Bridget Robson and Ricci Harris, Maori Health Research Unit, Wellington School of Medicine, University of Otago, Wellington. All provide Maori specific information on a range of health issues.

The recent publication Tatau Kahukura: Maori Health Chart Book 2010, Ministry of Health, 2010 (2nd edition), is an update relating to the socio economic determinants of health, health status and service utilisation of the Maori population. Further references are available from the HRC's Guidelines for Researchers on Health Research Involving Maori (page 22), [www.hrc.govt.nz](http://www.hrc.govt.nz).

## Dissemination of Results

The HRC's Guidelines for Researchers on Health Research Involving Maori, is important in terms of how your research results may contribute to Maori health gain. Therefore, it is important that appropriate Maori organisations and researchers are aware of your findings. This should occur not only in an academic forum, but also within the community from where data is drawn. The findings from this study should be further discussed with relevant Maori stakeholders. I would recommend that you utilise your relationships with Hauora Maori advisors involved in your study, to assist you in with the dissemination of your research back to local Maori forums such as Te Korowai Atawhai (Maori Mental Health Team, Specialist Mental Health Services, Canterbury District Health Board, Christchurch). You also advise that a whanau friendly newsletter will be sent to Maori participants in the study. As such these forums will allow an opportunity for the consideration of Maori community feedback into any discussion going forward.

Ka nui tonu nga mihi,



Karen Keelan  
Maori Research Advisor