

THESIS

THE EXPERIENCE OF DRUG LOSS AMONG COLLEGE STUDENTS IN
TREATMENT FOR CANNABIS ABUSE

Submitted by

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ABSTRACT

THE EXPERIENCE OF DRUG LOSS AMONG COLLEGE STUDENTS IN TREATMENT FOR CANNABIS ABUSE

Grief-related symptoms among people in recovery from drug abuse have been acknowledged in the substance abuse literature. However, there is no existing theory to explain the phenomenon of grief reactions to discontinued drug use. In an attempt to contribute to the developing Drug Loss Theory (Matheson, in press), this mixed methods study was designed to investigate grief-related symptoms among individuals who have discontinued the use of cannabis. Worden's Task Model of Grief and Attachment Theory were used as the theoretical frameworks to guide this in-depth study of six college students who have discontinued the use of cannabis. The conceptual focus of the study was to explore the nature of the relationship between participants and cannabis, and to understand participants' descriptions and definitions of drug loss. The Cannabis Use Disorder Identification Test (CUDIT) was administered, revealing a significant level of dependence among the six participants. Total scores on the Core Bereavement Items (CBI) scale ranged from 20-40 (out of a 51 points), with an average score of 31.7, indicating a medium level of bereavement. Qualitative data was collected through semi-structured interviews in order to explore the awareness and experience of five college students with a cannabis use disorder, and one college student with a polysubstance use disorder. I discuss the themes that emerged and integrate those with the literature including attachment theory and Worden's Tasks of Grief to compare and contrast the loss experience of these cannabis users to other loss experiences such as death of a loved one.

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CHAPTER 1: INTRODUCTION

It is not uncommon for individuals who have successfully completed treatment for a substance use disorder (SUD) to begin using alcohol and other drugs (AOD) again after a period of abstinence (Raylu & Kaur, 2012). Individuals who are in the early stages of recovery may experience a lapse (one-time, isolated use of AOD) or relapse (multiple instances of AOD use that becomes once again, problematic) (Moore & Budney, 2003). Relapse, treatment attainment, and recidivism rates among individuals with a SUD have always been high. Because of this, it is crucial that current approaches to treatment be reevaluated (Raylu & Kaur, 2012) and that current treatments include more effective elements in order to reduce the high rates of lapse and relapse.

Of particular interest for this current study are college students who have a cannabis use disorder. Historically, cannabis-related disorders have been treated using techniques from various treatment modalities and theoretical frameworks including cognitive behavioral therapies (CBT), motivation enhancement therapy (MET), contingency management (CM), motivational interviewing (MI) and 12-step programs such as Narcotics Anonymous (NA) (Budney, Roffman, Stephens, & Walker, 2007; Copeland, Swift, & Rees, 2001; Kadden, Litt, Kabela-Cormier, & Petry, 2007; Majer, Jason, Ferrari, & Miller, 2011). Difficulty both achieving and maintaining abstinence or sobriety has been documented among cannabis dependent or abusing individuals who have completed treatments that utilize evidence-based methods. Although abstinence goals predict better outcomes, only 40-65% of individuals maintain gains made during treatment (Budney et al., 2007). This suggests that cannabis-related disorders may be unusually resistant to treatment (Litt, Kadden, & Perty, 2013). Furthermore, emerging adults are particularly

vulnerable to the negative consequences of cannabis abuse. Young adults are not only more susceptible to the cognitive deficits that have been observed in cannabis using individuals (Lisdahl & Price, 2012), but they are also at greater risk for developing a mental health disorder (Bonn-Miller & Moos, 2009). Legal problems are a common consequence of cannabis abuse as well (Ellingstad, Sobell, Sobell, Eickleberry, & Golden, 2006), though with the recent changes to marijuana laws in some states, this consequence may lessen in the future. Knowing that this population is more susceptible to the negative effects of drug abuse, the alarmingly high prevalence rates of cannabis use among emerging adults (18.5% of illicit drug users) are of great concern (Substance Abuse and Mental Health Services Administration [SAMHSA], 2011).

Although growing concern for cannabis abuse as a health concern has led to improvements in treatment (Budney et al., 2007), the high rates for relapse suggest there is room for improvement. Furthermore, the experiences that individuals have while in treatment and recovery, as well as the unique treatment needs of individuals with a cannabis use disorder, are areas of research that are underdeveloped and nearly nonexistent (Ellingstad et al., 2006). Although SUD treatment seems to have progressed at much slower rates in comparison to treatments for other mental health disorders (Raylu & Kaur, 2012), there have been gradual shifts in the way that clinicians and researchers conceptualize treatment. One result is that the addiction treatment community has begun to acknowledge individuals' loss experiences during recovery as unique and pertinent to discontinuing drug use (Denney & Lee, 1984; Goldberg, 1985; Jennings, 1991).

Significance of Study

The emerging theory of drug loss has just begun to be explored in the context of treating alcohol use disorders, however, no studies have inquired about the subjective experience of

treatment, the awareness of drug loss, or the experience of drug loss specific to individuals with a cannabis use disorder. Although anecdotally, grief has been conceptualized as a response to the act of surrendering drug use, it has not been a focal point of addiction treatment (Jennings, 1991). To date, no published study has aimed to explore, identify, or interpret individuals' awareness or experiences of the loss experience associated with separating from one's drug of choice in treatment. According to Matheson (unpublished), however, failure to address the significance of the grief and loss experience that is associated with an individual's quest towards abstinence may be one factor contributing to the current state of poor treatment outcomes. Findings from a recent master's thesis (Haralson, unpublished) found evidence for loss experiences in residential treatment. Findings from the current study and future studies have identified ways in which people who are separating from their drug of choice experience thoughts, feelings and behaviors associated with bereavement may allow treatment providers to fill in a gap of service that could have significant impacts on their short and long term recovery from drugs or alcohol.

Research Questions

Five research questions were examined in this study.

1. Are there differences in the nature of the drug loss experience and what may be contributing to any differences or similarities of the experience?
2. How do young adults who are no longer using cannabis define drug loss?
3. How do young adults who are no longer using cannabis describe the experience of drug loss?

4. What are the effects on an individual's thoughts, behaviors, and feelings toward cannabis as he or she shifts away from identifying as 'someone who does use' to 'someone who does not use?'
5. What is the continuum of the drug loss experience or awareness?

CHAPTER 2: LITERATURE REVIEW

This study combines two distinct areas of research and clinical work: grief and loss and substance abuse treatment. To begin my review of the relevant literature I focus on discussing research pertaining to substance use disorders. I review the trends and prevalence of cannabis use disorders, including the continuum of misuse and the consequences of abuse. Next, I will review the literature on populations at high-risk for cannabis abuse, followed by a discussion about approaches to treating substance use disorders (SUD), and specific approaches and challenges to treating cannabis use disorders. I will conclude with a synthesis of the theoretical perspectives that have been used to guide SUD treatment modalities and that guided this research. Following the overview of research relevant to SUD, I will discuss the literature pertaining to grief and loss followed by William Worden's Tasks of Grief, Matheson's developing Drug Loss Theory, and Bowlby's attachment theory in the context of studying individuals' reactions to discontinued drug use and the concept of drug loss.

Cannabis Misuse Literature

Cannabis Misuse

According to the National Institute of Drug Abuse (2000), substance misuse is considered a financial and relational epidemic in the United States. Current models of drug treatment have not substantially helped in reducing relapse and drug-related recidivism rates in the United States (NIDA, 2000; DOJ, 2002). In 2011, approximately 8.7% of individuals age 12 or older met the Diagnostic and Statistical Manual of Mental Disorders, 4th edition-revised (DSM-IV-TR) criteria for a substance abuse or dependence disorder (SAMHSA, 2011). Of the 22.1 million people with a SUD, cannabis had the highest rates of abuse and dependence among all other illicit drugs (SAMHSA, 2011).

Trends and prevalence. The prevalence of cannabis use, misuse, and abuse has been particularly noticeable among adolescents and young adults. According to SAMHSA (2011), trends in young adults' past-year cannabis use increased between 2002 and 2010 from 29.8% to 31.7%. Although the increase may appear trivial at first glance, between 1998 and 2010, the average total population lifetime use of individuals age 12 and older increased considerably from 33% to 41.9% (SAMHSA, 1998; 2010). Population-based research has not been the only source of data to highlight the concerning rates of cannabis-related disorders; independent studies of cannabis treatment have also captured the scope of the problem. In one exploratory study, 72% of participants with reported cannabis-related problems had a lifetime cannabis dependence diagnosis (Ellingstad et al., 2006). Among the 22.5% of young adults who were using illicit drugs, 18.5% used cannabis (SAMHSA, 2011).

Concern for the trends and prevalence of cannabis abuse in the United States has raised questions about the best approach to treatment. Cannabis abuse on college universities has been a population of specific concern, and Caldeira and colleagues (2008) found that 24.6% of college students who used cannabis met the criteria for a cannabis use disorder. The use of cannabis can range from recreational, occasional use, to severe problem use, and research suggests that more severe cannabis-related problems are associated with more severe use (Hathaway, McDonald, & Erikson, 2008).

The continuum of misuse. Although the DSM-IV-TR regarded substance abuse and substance dependence as two separate diagnoses within the broader diagnostic category "Substance Use Disorders," the DSM-V now defines SUDs as spectrum disorders that can be mild, moderate or severe. Drug-specific indicators of SUDs are included in DSM-V to differentiate between the different types of SUD (i.e., cannabis, opiates, etc.) (American

Psychiatric Association [APA], 2012). The most recent changes to the DSM are intended to strengthen the diagnosis by requiring that individuals meet more criteria to receive a SUD diagnosis, and the severity of use is determined based on the number of criteria an individual meets as follows: a) two or more criteria will indicate a mild SUD; b) three or more criteria will indicate a moderate SUD; and c) four or more criteria will indicate a severe SUD (APA, 2012).

The behaviors and patterns of cannabis use fall on a continuum of misuse, all of which associate with a range of cannabis-related problem behaviors. Although the revisions to the DSM have changed how clinicians categorize and diagnose individuals with a SUD, the continuum of cannabis use creates a barrier that challenges professionals. For researchers and clinicians, this continuum of use makes it difficult to understand the trajectories of use, to identify profiles of individuals who are more at-risk for relapse, and to provide more effective treatment (Chan, Dennis, & Funk, 2008).

Consequences of Cannabis Misuse

The negative physical, psychological, and cognitive effects of cannabis misuse are documented across academic and professional disciplines; however there is diversity in the way that professionals have explained the association between individuals' severity of use and the consequences of misuse. Although researchers may disagree about which factors warrant extensive investigation, the general consensus is that multiple factors must be considered in order to understand the spectrum of cannabis misuse as it relates to long-term negative outcomes. Some research suggests that chronic, high-frequency cannabis use is associated with negative social, psychological, and physical health effects that are easily distinguishable from non-users (Brook, Brown, Finch, & Brook, 2011). Other research indicates that chronic cannabis users may be significantly different in comparison to individuals who have never used cannabis (Hathaway

1997, 2004b; Reilly et al. 1998, as cited by Hathaway et al., 2008). To further complicate matters, it has also been suggested that the developmental period during which individuals begin using cannabis, as well as the nature of their use, influences their drug-related consequences (Brook et al., 2011). Early-initiation chronic cannabis use has been associated with higher rates of criminal behavior, college disenrollment, and poorer psychosocial functioning, suggesting that individuals who begin using cannabis at an early age may begin associating with peers who abuse AOD, and therefore encourage continued use (Brook et al., 2011).

Psychological and social distress. Contrasting accounts of the relationship (or lack thereof) between frequency of cannabis use and negative outcomes have suggested that the frequency and duration of use among treatment-seeking and nontreatment-seeking individuals cannot be differentiated (Copeland, Swift, & Rees, 2001). Despite contradictory results, there is a large body of research literature that suggests increased levels of psychological distress and health problems are associated with increased cannabis use. In a study of 2,031 men and women age 16-24, Brodbeck, Matter, Page, and Moggi (2007) found that, compared to non-cannabis using individuals, participants who used cannabis experienced higher levels of psychopathology, psychological distress, and hedonism (e.g., impulsive behaviors driven by a need to experience pleasure), and lower levels of concern about their health.

In another study, Copeland, Swift, and Rees (2001) found that 69% of participants reported experiencing benefits of cannabis use, however upwards of 83% reported experiencing cannabis-related health problems including respiratory symptoms, psychological problems, demotivation, and memory problems. Copeland and colleagues used several measures in an attempt to profile cannabis-abusing and/or dependent individuals. Among others, measures that were used to assess the extent of individuals' cannabis use included the 12-month Composite

International Diagnostic Interview (CIDI), the Severity of Dependence Scale (SDS), and the Cannabis Problems Questionnaire (CPQ). Researchers found that for more than 50% of male and female participants, inappropriate use of cannabis, neglecting or losing interest in activities, and negative effects on physical, relational, psychological, and motivational aspects of life were consequences of cannabis use.

In an exploratory study, Ellingstad and colleagues (2006) found similar results to those above. The most commonly reported cannabis-related consequences among individuals in recovery were problems in thinking (76%), interpersonal relationships (68%), emotional well-being (64%) and lost interest in activities that were once regarded as appealing (76%). Among the adverse developmental outcomes that have been found by researchers, externalizing problems (in comparison to internalizing problems) have been more frequently associated with cannabis use regardless of the age that individuals begin using or the severity of use (Brook et al., 2011). Furthermore, decreased motivation is associated with other secondary consequences such as problematic work functioning (Brook et al., 2011).

Neurological changes. The effects of cannabis use on cognitive processes have also been documented. In a study of men and women ages 18-25 (n = 59), individuals who reported an increase in cannabis use during the 12 months prior to completing neurological assessments had lower levels of psychomotor speed, lower levels of sustained attention efficacy, and lowered cognitive inhibition (Lisdahl & Price, 2012). Although only moderately correlated, improved scores on verbal recall and sustained attention were associated with the length of time that participants reported not using cannabis. These findings suggest that it may be possible to repair deficits in cognition that result from cannabis use (Lisdahl & Price, 2012). Although the immediate and long-term consequences of cannabis use can be both unique and shared among

problem users, the direction of effects between psychosocial measures, cannabis use, and behavior are inconclusive (Brook et al., 2011).

High Risk Populations

Adolescents & emerging adults. Rates of SUDs in early adulthood are disproportionately higher in comparison to other populations. Approximately 22.5% of young adults age 18-25 used illicit drugs in 2010, a proportion that is significantly higher than the rate of use among youth age 12-17 (10.1%) and older adults 26 years of age or older (6.6%). In 2011, approximately 8.7% of individuals ages 12 and older met the DSM-IV-TR criteria for a substance abuse or dependence disorder (SAMHSA, 2011), and the literature on cannabis use disorders has identified several age-specific factors that are correlated with the alarmingly high rates of use among young adults (Brodbeck et al., 2007). Among others, encouragement from substance using peers, social conformity, approval-seeking, and psychological distress related to identity-instability and exploration have been the most commonly reported factors associated with the initiation and continuation of use (Brodbeck et al., 2007).

College students. In 2010, between 22% and 23.5% of college students (age 18-22) reported they were currently using illicit drugs (SAMHSA, 2011). The college culture is distinct in that it regards binge-drinking and AOD use as a ‘rite of passage.’ Research suggests that social, family, and university involvement that pressures students to seek help for SUDs positively influences treatment-seeking behaviors (Caldeira et al., 2009). The role of private, public, and social institutions in disregarding cannabis use as concerning behavior has also been acknowledged and is worth noting. Duff et al., (2012) report that cannabis use is influenced on the micro and macro level. Research suggests that the deterioration of social attitudes that permit use and minimize the consequences has contributed to increasing rates of abuse (Duff et al.,

2012). Socialized attitudes towards cannabis use have influenced individuals' reluctance to seek treatment (Hathaway et al., 2008), creating unique challenges for clinicians.

Given what is known about the cognitive deficits associated with cannabis misuse, the neurological development that is characteristic of young adulthood makes the college population particularly susceptible to the negative consequences of cannabis misuse (Lisdahl & Price, 2012). Internalized thought processes that disregard cannabis as a problem that is worthy of treatment have been identified as barriers to effective treatment (Ellingstad et al., 2006), and youth within college communities may be even more vulnerable to AOD misuse and abuse (Caldeira et al., 2009).

In a three-year longitudinal study of college students with a SUD, Caldeira and colleagues (2009) found evidence to suggest there is discontinuity between the number of college students who need treatment for a cannabis disorder and the number of students who actually seek treatment. These researchers used data from college students ($n = 946$) to do several things: a) understand the help-seeking behaviors of students with a SUD; b) measure the SUD prevalence among college students; and c) understand to what extent individuals with a SUD recognized their use as problematic. Help-seeking behaviors were assessed through interview questions that asked about times when the student or another person perceived that he or she needed help controlling AOD use. In addition, self-change was assessed by students' reported attempts to cut down or limit AOD consumption. Among the students who had a SUD, only 3.6% self-identified as someone who needed help in order to change, and only 16.4% reported that they were encouraged by others to seek help. Interestingly, the researchers found that when alcohol and cannabis-related disorders were co-occurring, students exhibited higher

levels of help-seeking behavior in comparison to students with only a cannabis-related diagnosis who did not exhibit any help-seeking behaviors at all.

Treating Substance Use Disorders

According to NIDA (2010), there are several predominate approaches to treating SUDs including motivational interviewing (MI), contingency management (CM), cognitive behavioral therapy (CBT), and motivation enhancement therapy (MET). MI is an evidence-based intervention technique that takes a non-confrontation approach to treatment and that emphasizes change is an ongoing process, regarding individuals' ambivalence about any behavior change is normative (Miller & Rollnick, 2002). CM techniques have been used to treat addiction by way of reinforcing abstinent behaviors, and therefore prolonging abstinence (Litt, Kadden, & Perty, 2013). CBT has been used in SUD treatment for decades (Copeland, Swift, & Rees, 2001) and has been associated with high initial rates of abstinence (Kadden, et al., 2007). CBT focuses on developing skills to support abstinence and to cope with the inevitable stressors that threaten sustained abstinence (Marlatt & George, 1984), while the goal of MET is to motivate individuals to change. MET focuses on shifting individuals' orientations towards drug use and strengthening the commitment to abstinence. Although high rates of treatment completion and initial abstinence have been associated with MET, CM and CBT, less is known about treatment approaches associated with long-term sustained abstinence (Litt, Kadden, & Perty, 2013).

Factors that improve treatment outcomes. Three individual factors in particular have been associated with sustained abstinence: 1) self-efficacy; 2) treatment adherence; and 3) coping skills (Litt, Kadden, & Perty, 2013). Experts believe that as individuals develop and employ new and effective coping skills, their self-efficacy for abstinence increases, therefore reinforcing the continued use of acquired skills that support individual's decisions to live

abstinently (Larimer, Palmer, & Marlatt, 1999). Among individuals who are abusing AODs, the be related to successful completion of treatment and treatment gain maintenance (Ellingstad et al., 2006).

Involvement with 12-step mutual help programs such as AA and NA has been associated with favorable post-treatment outcomes (Majer et al., 2011). Although individuals in 12-step programs have demonstrated sustained periods of abstinence following the cessation of drug use, research suggests that the frequency of AA/NA meeting attendance may not be the only factor attributable to individuals' sustained abstinence. Other intentional behaviors such as more involvement in sober-activities and developing 'sober social networks' appear to be components of the 12-Step philosophy that facilitate the establishment of support groups and a culture that encourages sobriety (Majer et al., 2011).

Treating cannabis-related disorders. Various techniques, treatment modalities and philosophies have been used to treat cannabis-related disorders, including CBT, MET, MI and AA/NA (Kadden et al., 2007; Majer et al., 2011; Copeland, Swift, & Rees, 2001; Budney et al., 2007). Given the high rates of relapse among this specific subgroup of individuals abusing AODs, researchers have attempted to understand why treatments that have otherwise been regarded as effective do not appear to producing similar effects.

In a study of men and women (n = 240) with a cannabis dependence disorder, participants received nine weeks of one of four SUD treatments: MET + CBT, CM-only, MET + CBT + CM, or a case-management control treatment (Kadden et al., 2007). The researchers found that participants who received either the CBT + MET + CM treatment or the CBT + MET treatment reported higher rates of sustained abstinence. CBT in particular showed strong evidence of high initial rates of abstinence, and higher rates of abstinence were associated with higher rates of

self-efficacy, suggesting again that pre and post-treatment self-efficacy may be the key to successful treatment (Kadden et al., 2007).

In a similar but separate study of cannabis dependence, the focus was on the processes that may be contributing to the observable effects of the combined treatments (Litt, Kadden, & Perty, 2013). It was hypothesized that by combining CBT + MET + CM, self-efficacy, treatment adherence, and coping skills would increase independently of each other, which would therefore improve the likelihood of sustained abstinence. Surprisingly however, the effects of each individual treatment as they have been observed in isolation were lost. The cumulative effect of the combined treatment appeared to make all three therapies/techniques less effective. Although CM incorporated therapeutic activities in an attempt to reinforce participants' engagement in therapy, increases in the use of coping skills and in self-efficacy were not observed, and no improvements in long-term treatment outcomes were founded (Litt, Kadden, & Perty, 2013). Results highlight what appears to be a fundamental challenge to treating SUDs. That sustained abstinence for individuals with a SUD is uncommon regardless of the currently available intervention, and cannabis-related disorders are no exception (McRae, Budney, & Brady, 2003).

Challenges to Existing Models of Substance Use Treatment

Motives for cannabis use. Despite the obvious need to treat the majority of individuals who are dependent on cannabis, research suggests that individuals who are using cannabis to cope (coping motives) as opposed to using as a way to join with select cultural groups (social motives) have different treatment needs (Brodbeck et al., 2007). Higher frequencies of use have been observed among participants using cannabis to cope in comparison to participants using cannabis for social reasons. Furthermore, cannabis use for social reasons has been associated with better baseline mental health scores, lower psychopathology scores, lower levels of

psychological distress and fewer major stressful life events (Brodbeck et al., 2007). It seems logical to question whether or not an individual's motive for use indirectly or directly effects how he or she experiences feelings of grief and loss once their use is discontinued. Although research suggests that individuals with coping motives experience more psychological distress (whether or not cannabis use was causing or maintaining the distressed state), a young adult with social motives for use may have a more challenging time remaining abstinent (Brodbeck et al., 2007).

The culture of cannabis use. Historically, young adults and adolescents in the U.S. have experienced a culture that has somewhat normalized the illicit use of cannabis (Soller & Lee, 2010), which has interfered with individuals' treatment-seeking behaviors and made assessing the severity of use difficult for professionals (Caldeira et al., 2009). Cannabis-using individuals have been associated with relaxed, open-minded and easy-going personality traits. Socially constructed meanings of drug use of this kind are the product of both individual characteristics and the social groups that which individuals associate (Soller & Lee, 2012). The way that cannabis use becomes part of an individual's identity is related to how proximal social groups define and relate to drug use, how drug users perceive drug use, and the methods of use that social groups employ (Soller & Lee, 2012). Furthermore, research suggests that the establishment of smaller subcultures follows the initiation of drug use (Soller & Lee, 2010). Arguably moreso than with other AOD users, a cannabis user's identity and behaviors are shaped by the sense of membership that is instilled during that initial phase of use.

Perceived consequences of cannabis. Self-initiated efforts to decrease drug use (i.e., "self-change behaviors") are regarded as actions that lead to an abstinent life without participating in formal treatment (Ellingstad et al., 2006). In order to further investigate the

phenomenon of users' self-initiated attempts to stop using, Ellingstad and colleagues (2006) conducted an exploratory study of cannabis using individuals (n = 25). The majority (88%) of participants' written narratives revealed an anti-cannabis cognition theme, and 80% of participants' narratives included statements indicating intrinsic motivation to stop using cannabis (Ellingstad et al., 2006). The appraisal of the positive and negative consequences of using, including physical health concerns, has been a commonly reported motivation for "self-change behaviors" among individuals in treatment for AOD misuse. This research suggests that internal factors may have more motivating potential for an individual's sobriety than do external factors (Ellingstad et al., 2006). Despite growing awareness of the unique treatment needs of this AOD using population, researchers continue to study new aspects of treatment and recovery in search for an answer for why relapse rates remain among the highest among all illicit drug use (SAMHSA, 2011). In a recent study of grief and loss experiences in residential treatment (Haralson, unpublished), results found significant indications of individuals' grief responses after discontinuing AOD use, however it cannot be said whether or not the loss of drugs is the exact cause of grief.

Grief and Loss Literature

Theoretical Models of Treatment

The way that individuals grieve significant losses varies greatly. Grief counseling has been effective at working with individuals who are coping with death as well as with individuals who are grieving the loss of identities, statuses, or relationships for which individuals were strongly attached (Goldberg, 1985). A number of the most effective models of grief counseling are reviewed below.

Worden's task model of grief. Worden (2009) identified four tasks of grief in an attempt to help guide clinicians' in their efforts to support individuals who were grieving after experiencing a loss. Worden's task model of grief posits that to prevent prolonging the pain that is caused when a significant loss is suffered, individuals must work through the four tasks of grief. According to Worden (2009), it is critical for the individual who has suffered the loss to accept the reality and finality of the loss and to process the pain and suffering it has caused. Of equal importance is readjusting to the world in which the deceased once existed. As individuals come to terms with the reality of the loss, come to terms and cope with the pain, and readjust to the world, the individual must also find a way to remain connected to deceased while still continuing to move on with life (Worden, 2009). Initially, Worden's tasks of grief were primarily applied towards death-related losses, however grief is now regarded as a universal experience (Murry, 2001), and grief reactions have been documented in response to many different types of losses. For this reason, Worden's task model of grief is applicable to diverse loss experiences, including the loss of a status, a relationship, or identity (Worden, 2009; Goldberg, 1985). This study suggests that drug loss is one more of the types of loss that may be guided by Worden's Tasks of Grief.

Drug loss theory. Grieving the discontinuation of drug use has been minimally explored and primarily in the context of alcohol use disorders (i.e., Matheson's Drug Loss Theory). A recent study (Haralson, unpublished) was specifically designed to explore grief reactions in alcohol and other drug (AOD) treatment. The results suggest that a significant number of adults in residential treatment who were abstaining from drugs and alcohol reported grief-like symptoms, and experiences that are similar to Worden's (2009) tasks of grief. Separately, results from a pilot clinical study that assessed recovering alcoholics' experiences of depression, loss

identification, and grief awareness suggest that as substance use disorder (SUD) treatment progressed, patients' levels of depression declined as their loss-identification awareness increased (McGovern & Paterson, 1986). Discontinuing a pattern of behavior (i.e., AOD use) that others view as destructive or maladaptive is infrequently recognized as an event to be mourned (Streifel & Servanty-Seib, 2006). For this reason, societal views about drug use may be one factor that has interfered with individuals' access to support during the transition from 'addict' to 'recovering addict.'

Attachment theory. Attachment theory has been helpful at understanding the concept of drug loss. Attachment systems work to organize and coordinate the behaviors, goals, and emotions of individuals (Ainsworth & Bowlby, 1991). The consequences of a disrupted attachment in any context can be experienced in many ways, including negative effects on individuals' relationships, psychological well-being, world views and meaning-making processes (Ainsworth & Bowlby, 1991).

In the context of AOD use, attachment theory supports the assumption that the bond between an individual and his or her drug is strong, and that when severed, the distress that is experienced may be attributable to the individual's deregulated attachment system (Streifel & Servanty-Seib, 2006). The loss experienced by the cessation of drug use is not an isolated loss; individuals may also experience the loss of social status, community, identity (Jennings, 1991), and the feeling of being high. Not surprisingly, maintaining treatment gains and preventing relapse after SUD treatment are challenged by the loss of routine and the self-proclaimed 'norms' of living that are often intertwined with individuals' social worlds (Goldberg, 1985). Furthermore, the high prevalence rates of cannabis misuse within college communities suggests that college students may face unique social, environmental, and cultural attributes that challenge

treatment adherence and abstinent living (Caldeira et al., 2009). Specifically, cannabis abusing individuals in treatment may experience a unique loss of culture that further complicates treatment outcomes beyond normal complications, and they may therefore be more disadvantaged than mainstream AOD users.

Summary

Although evidence-based treatments may be considered effective at treating other SUDs, cannabis-related disorders do not appear to be as responsive to treatment. However, research has suggested that people who give up drug use experience a host of losses including loss of identity, loss of friends, and loss of the substance itself (Streifel & Sevaty-Seib, 2006). Despite the research that has studied the cycle of addiction, grief, and alcohol loss, studies measuring grief as it relates to AOD loss are almost nonexistent. To date, only two studies have demonstrated the use of a grief and loss curriculum on those recovering from AOD misuse (McGovern, 1986; McGovern & Peterson, 1986). These studies did, however, show us that people do experience substantial amounts of grief when going through drug recovery and that there is a great need for more research on this topic. Streifel and Servaty (2009) reported that grief counseling plays an important role in the recovery process among individuals overcoming alcohol addiction. The purpose of this study is to shed more light on this important topic and to continue to provide evidence to support Matheson's developing Drug Loss Theory.

CHAPTER 3: METHODS

The current study was designed to explore the drug loss experiences of college students, who were being treated for a cannabis use disorder, in order to identify the specific loss related thoughts, feelings, and experiences associated with no longer using cannabis. This predominantly qualitative study also utilizes quantitative measures to better define the participants.

Researcher Biases

Although warranted by research findings that indicate significant grief-like experiences occur during recovery (Denny & Lee, 1984; Haralson, unpublished; McGoven & Peterson, 1986, Streifel & Servaty-Seib, 2006; 2009), this study was designed in consideration of Matheson's developing Drug Loss Theory (Matheson, in press). My specific interest in studying the drug loss experience of cannabis abusing individuals emerged from existing research that suggests unique barriers to effective treatment among this cannabis abusing population exist. Therefore, in consideration of the lifestyle associated with cannabis use, I sought to further explore the role of drug loss in the recovery experience among those who identify cannabis as their drug of choice.

The current study is the second of two completed studies overseen by Dr. Jenn Matheson, a licensed Marriage and Family Therapist (MFT) and affiliate faculty member at a research university. Dr. Matheson guided and supervised the current study, providing clinical and research expertise throughout the duration of the project. She assisted with the development of the interview protocol, questionnaires and recruitment strategy, and co-created the coding scheme used for data analysis. In addition, Dr. Matheson oversaw the semi-structured interviews, providing guidance and instruction pertaining to ethical and effective interviewing techniques. In addition to Dr. Matheson and me, one research assistant helped with interview transcripts.

Participants

Participants were recruited from the Back On TRAC (Treatment, Responsibility, & Accountability on Campus) program at CSU. The Back On TRAC (BOT) program, offered through the Drugs, Alcohol & You services at CSU, is a mandatory treatment program for students facing serious disciplinary action after repeated or severe actions that have violated either the code of conduct at CSU or the law (either on campus or in the community) with an AOD-related offense. BOT is a three-phase, abstinence-based treatment program that utilizes the foundations of student development theory within a “drug court” model. BOT combines the existing CSU judicial system with case management, counseling, drug testing, group therapy, and other resources offered on campus.

In order to participate, individuals were required to meet five criteria: 1) active involvement with BOT at the time of data collection; 2) 18 years of age or older; 3) abstinent from cannabis; 4) a cannabis or polysubstance use disorder diagnosis at BOT intake; and 5) identify cannabis as his or her ‘drug of choice.’ Because the focus of the current study is on the experience of drug loss among individuals with a cannabis use disorder, only BOT participants receiving treatment for either a cannabis use disorder or polysubstance use disorder (both according to the DSM-V diagnostic categories) were eligible to participate. BOT participants often have co-occurring SUDs and therefore BOT treats individuals with a range of AOD use disorders. It is not unusual for participants to become involved with BOT as a result of the misuse or abuse of a specific substance that is not necessarily his or her drug of choice. For example, an individual could receive an alcohol-related charge for driving under the influence (DUI) and therefore be referred to the BOT program. Despite receiving a DUI, the individual will identify cannabis as his or her drug of choice in order to be eligible for this study.

Instruments and Measures

Demographics

In order to describe the sample of this study, I administered a demographics questionnaire (see Appendix A) at the beginning of each interview. The questionnaire includes questions about ethnicity, gender, drugs used/abused in the past, the identified drug of choice, how long since the last time using cannabis, the age of first time use, the longest period of time spent abstinent from cannabis, the drug that of which he or she was under the influence at the time of the event leading to involvement with BOT, and the number of days he or she has been involved in BOT. This information not only allowed me to have some details about who was the participant but provided a rich description of the sample as well.

Cannabis Use Disorder

A cannabis dependence or abuse diagnosis was determined for each participant in two ways: 1) documentation of the participant's diagnosis from his or her BOT clinician; and 2) completion of the Cannabis Use Disorder Identification Test (CUDIT) (Adamson & Sellman, 2003) prior to the interview (see Appendix B). The CUDIT is a 10-item questionnaire that is designed to identify individuals who have used cannabis in the last six months in ways that are either harmful or problematic. A Cronbach's alpha of 0.84 suggests the measure has good reliability (Adamson et al., 2010). The CUDIT uses a 5-point likert scale, with responses to items ranging from 0 (Never for items 1, 3, 4-8; 1 or 2 for item 2; No for items 9 and 10) to 4 (4 or more times per week for item 1; 10 or more for item 2; daily or almost daily for items 3-8; Yes for items 9 and 10). An example of a question on the CUDIT is "How often did you have a feeling of guilt or remorse after using cannabis?"

Drug Loss

Drug loss was conceptualized in accordance with Matheson's developing Drug Loss Theory (Matheson, unpublished) which is supported by the existing literature (Streifel & Servanty-Seib, 2006; Denny & Lee, 1984; Goldberg, 1986; Jennings, 1991). Drug loss is simply the experience of grief or loss during the time when a person is in remission from using their drug of choice. This may occur in the early, middle, or late stages of recovery, though Matheson anticipates that most will experience it in the earlier stages of recovery. Drug loss is also thought to be experienced on a continuum of non-death related losses and can be experienced either when one decides on their own to abstain from the drug or when coerced or forced to by an outside entity or person. Although it is expected that there will be individual differences in the way that individuals report experiencing drug loss, it is expected that changes in individuals' behavioral patterns, ambivalence about AOD use, and fears about what it means to live abstinently (Streifel & Servanty-Seib, 2006) will be some characteristics of the early stages of recovery.

There are several reliable and valid measures to assess normative and complicated grief and bereavement, but for this study, a measurement for normative bereavement was used. Prior to the interview, each participant completed a modified version of the Core Bereavement Items (CBI) scale (Burnett, Middleton, Raphael, & Martinek, 1997). The CBI is a 17-item questionnaire that measures an individuals' overall bereavement response to loss. The CBI uses a 4-point likert scale, with response options ranging from 0 (Never) to 3 (Always). Response items fit within three sub-scales: Acute separation; grief; and images and thoughts. Reliability of the CBI has been demonstrated with a Chronbach's alpha of 0.91 (Burnett et al., 1997). The CBI is designed to detect universal symptoms of bereavement and is therefore appropriate to use cross-

culturally. The CBI is intended to measure the intensity of individuals' bereavement after experiencing the significant loss of another person. Examples of questions on the CBI are "Do you find yourself preoccupied with images or memories of [the deceased]?" and "Do you feel yourself missing [the deceased]?" Because the purpose of the study was to explore individuals' drug loss experiences in response to discontinued cannabis use, I modified the CBI by replacing the name of the deceased person with the words "marijuana," "using," or "weed" (see Appendix C). Example questions on the modified CBI are "Do you find yourself preoccupied with images or memories of using marijuana?" and "Do you feel yourself missing smoking weed?"

I tested the modified CBI prior to beginning data collection in order to ensure the content and meaning of the questions was clearly conveyed. To do this, I administered the modified CBI to a young adult known to be in recovery. No identifying information was recorded and the actual practice-test questionnaire was not saved with the other data, nor was the data used in analysis. The modified version was shown to be appropriate for this study's purpose based on the discussion with the young adult tester.

Although the modified CBI was used to measure and explore participants' personal accounts of drug loss, in-person, digitally-recorded, semi-structured interviews were used as the primary source of data collection. My advisor and I constructed an interview protocol containing 25 interview questions, most of which contained sub-questions. Examples of questions asked in the interview are "What thoughts and feelings come up for you when you think about the possibility of never using marijuana again?" and "What do you miss most about marijuana?" The interview protocol can be found in Appendix D.

Procedures

The Institutional Review Board at the University approved the research protocol and procedures in Fall, 2013. Below are the research procedures they approved.

Recruitment

Convenience sampling was used because the study design required that participants share several specific characteristics. Between 10 and 15 participants were determined to be an appropriate sample size because of the exploratory nature of this qualitative study. Recruitment strategies were constantly being reassessed due to the difficulty attaining the desired 10-15 participants. Nine months after beginning recruitment efforts, I received approval from my committee to cease recruitment at six participants having gotten an acceptable amount of depth from the interviews.

My advisor and I developed a recruitment flyer (see Appendix E) and interview protocol (see Appendix D) and packaged it with the three questionnaires and informed consent form (see Appendix F) to hand out to potential participants to complete prior to each interview. Emails were sent to BOT clinicians during the months leading up to the start of data collection to ensure that BOT staff was aware of the research project. I provided recruitment flyers and recruitment packets to BOT front office staff, and the front office staff was asked to identify those who were new to BOT and might be eligible to provide them with the flyer to gauge their interest.

I also attended monthly case management meetings. Clinicians, case management leaders, and BOT clients attend monthly case management meetings to discuss progress, challenges, and updates to treatment. Despite efforts to schedule my attendance at least one men's and women's meeting, I was only able to attend one women's meeting. The purpose of attending the case management meeting was to remind staff of the study, answer any questions

about recruitment, and to encourage them to help recruit every new BOT client. Our attendance also allowed us to personally invite participants to be involved in the research, establish good rapport with BOT staff and clients, generate excitement about the research, and ensure the purpose of the study was thoroughly communicated to all.

Initially, it was thought that BOT clinicians would be utilized to connect me to eligible BOT participants however it soon became clear that it would be most effective and timely to utilize the BOT medical assistant in the recruitment process instead. As a result, the primary recruitment strategy involved collaborating with the medical assistant so that she could function as the liaison between me and potential research participants. The medical assistant was able to aid with recruitment by: 1) identifying who was and was not eligible to participate; 2) speaking with them directly about the study; 3) following-up when participants were uncertain about participating; 4) distributing recruitment packets; 5) collecting contact information; and 6) accessing their medical records to confirm a cannabis use disorder. Because participants were actively involved with BOT at the time of data collection, they already had regular and frequent interactions with the medical assistant, which aided in protecting participants' confidentiality.

An incentive in the form of a free urinary analysis (UA) test was offered to each participant to help recruit an adequate number of BOT participants. BOT participants are referred to a local treatment center for regular UA testing. I contacted the local treatment center, to purchase pre-paid UAs, and created coupons to give to participants. The agency was not told that this was for a study to protect the confidentiality of the participants.

When an eligible participant was identified by the medical assistant, he or she was given a brief overview of the study and invited to participate. If the individual was interested in participating, he or she was given a recruitment packet (to complete on their own time) and

asked if it was alright that I contact him or her on the telephone. If yes, the medical assistant recorded the participant's telephone number and email address, and told him or her to expect a call from me to schedule the 1-hour interview. If a participant was uncertain about participating, the medical assistant followed-up with him or her at their next scheduled meeting.

After the medical assistant collected a participant's contact information and confirmed their interest in the study, I was called and the participants' information was relayed. As I received calls from the medical assistant, I would record the interested participant's information, first name, and last initial on a running list of contact information. This list was kept in a locked filing cabinet with the other confidential data (i.e., signed informed consent forms, the digital recorder and completed questionnaires), and was destroyed after recruitment ended.

When I received a participant's contact information, I would call him or her, let the individual know who I received their contact information from and ask if I could discuss what their involvement with the study would look like in more detail. If the participant still expressed interest in the study, we scheduled a time to meet for the interview. At times, it was difficult to contact participants over the telephone. Issues communicating over the telephone included participants' poor cell phone reception, busy schedules, disconnected telephone numbers, and full voice-mailboxes. When I encountered communication difficulties were encountered, email, and on one occasion, text messaging, were used to correspond with participants and schedule a convenient time for us to speak over the telephone. Email was also used to send participants an electronic version of the recruitment packet if it was more convenient than picking one up at the BOT office.

Data Collection

Data collection and analysis spanned over an eight month period, beginning in November 2013 and concluding in June 2014. It included both qualitative and quantitative data collection.

Quantitative data. After scheduling each interview, I reminded each participant to complete the recruitment packet prior to the interview and to bring it with them to the interview. The packet was designed to take no more than 15 minutes to complete. Participants' completed research packets were collected and assigned a unique research number (e.g., 001), which I wrote on each of the four documents after the interview. By assigning a research number, I ensured that participants' confidentiality would be maintained and allowed each individual's quantitative data to be linked with their qualitative interview data.

The medical assistant confirmed that each participant did indeed have a SUD diagnosis at BOT intake. The medical assistant was the only individual involved in this study who accessed medical records for participation verification purposes. After recruitment ended, the first and last initials and gender of participants' were shared with the medical assistant to confirm their diagnoses. I called the medical assistant and relayed the information of a participant so that she could verbally communicate his or her SUD diagnoses. This process was repeated until each diagnosis had been retrieved. No link-list was kept and participants' confidentiality was maintained.

Qualitative data. Qualitative data was collected during individual interviews in a private, quiet room on campus. I began each interview by reviewing then collecting the recruitment packet and asking if he or she had any questions about the informed consent form. The interviewee then initialed each page and signed and dated the last page. I asked permission to turn on the digital recorder and began the interview. Although the interview protocol was used

to guide the interview, each interview included additional questions and at times, omitted questions, from the initial list of 25 questions. After the interview, each participant was told that they may find themselves thinking about what was discussed during the interview and were encouraged to speak with their BOT clinician if they felt distressed after the interview.

Data Preparation and Analysis

Preparation

I entered the quantitative data from participants' questionnaires into a Microsoft Excel spreadsheet. My advisor and I organized the data using each participant's unique research identification number. After completing each interview, I downloaded the digital file and save it in two password-secured places: 1) my personal computer; and 2) my own secured folder on the University's hard drive. After the interview, I notified the undergraduate research assistant who began transcribing the interview verbatim into a Word document. She saved each interview transcript in the same two places as the digital file from the interview. After an interview transcription had been saved both places, the digital file was deleted. Prior to beginning transcription, my advisor and I developed a transcription protocol for us and the transcriptionist to follow. Although my advisor, the undergraduate research assistant, and I exchanged emails to each other to clarify issues or answer questions, the three of us primary worked independently when transcribing. After transcripts were complete, I re-read through each to ensure accuracy before saving final versions for analysis.

Analysis

Before beginning data analysis, my advisor and I met several times to discuss the coding strategy as we were the coding team for this research. In our initial meeting, we developed a list of categories and codes that we anticipated would be needed, based on the interview protocol and

the five research questions listed at the beginning of this paper. My advisor and I included a brief description of each code that included the type of interview content that would correspond with that particular code as an example to the other. Once we began coding the interviews, we added additional codes based on the interview content. We used an online folder to save the coding list as well as two copies of each coded interview transcript.

My advisor and I co-coded three of the six interview transcripts using the list of codes we created. When co-coding, we first each coded the first interview transcript independently using the “comments” feature in Microsoft Word. Each comment matched one of the codes on our code list. We then met to compare our individually coded transcripts and reached consensus on each and every final code made on the transcript to ensure the highest level of inter-rater reliability. In doing this, we created one final Word document with our collective, final codes. Only occasionally did one of us not have a code that the other had. When this occurred we were able to agree quickly and easily about what the code should be. Other times when we had mismatching codes, we came to a consensus about what code to use or what segment of the interview to code. We then repeated this process for the remaining two interview transcripts (participants 1, 3, and 5), first coding independently and then meeting to finalize the codes, coming to a consensus on each.

Because my advisor and I had such a high level of inter-rater reliability during the coding of the first three transcripts, we decided that I would code the remaining three interviews (participants 2, 4, and 6) independently, then recode them all again to ensure no codes were missed or incorrect. This method helped screen for researcher-error because the second time I coded each interview I found a few additional codes that were originally missed. In addition, I

occasionally emailed my advisor asking for confirmation or discussion about a segment or code that I was unsure of, and again we would come to consensus.

My advisor and I came up with a number of “rules” to ensure the most accurate coding possible. We decided that interview segments matching more than one code could be coded more than once (e.g., a segment could be coded as both "experience while high" and "difficulty quitting"). We also decided that it was important that participants' reports be coded in addition to our analysis or interpretation of participants' reports. Therefore, my advisor and I decided to code content that was either an explicit description of a code as well as themes that we interpreted from the data. Finally, we agreed on a number of important, illustrative quotes that would later be used in the write up of the study to best illustrate a particular theme.

CHAPTER 4: RESULTS

Few researchers have studied and written about feelings of grief and loss among individuals in drug recovery, and no studies have looked in-depth at the experiences of young adults in recovery for cannabis abuse. The five broad research questions that I used to guide my study addressed; 1) the nature of drug loss; 2) factors that contribute to variations in drug loss; 3) participants' definitions and descriptions of drug loss; 4) physical, emotional, and cognitive changes during recovery; and 5) participants' awareness of drug loss during. My initial research questions were not mutually exclusive because they were written to invite an abundance of data to emerge through both quantitative and qualitative methods. The actual questions that I asked of participants during their interviews, however, were designed to elicit responses that addressed more specific aspects of the drug loss experience. Using a predominantly qualitative approach, the following sections illustrate the findings of the research interviews with six college men and women who shared with me their personal journeys through recovery from cannabis misuse.

In this study, my advisor and I triangulated qualitative and quantitative data in order to provide a wealth of information and insight into individuals' personal experiences of loss after discontinuing cannabis use, including perspectives on having an emotional bond with cannabis, and having experienced grief-related symptoms in response to no longer using cannabis. Because this study focused primarily on the qualitative interviews as a means to collect personal experiences with drug loss, the total amount of data collected was enormous. Although the results of this study focus primarily on the personal stories shared during each of the six semi-structured interviews, quantitative results will also be reported in order to provide a fuller

description of the study's participants. Each participant was assigned a pseudo-name that will be used instead of their real names when reporting the results.

Quantitative Results

Participant Data

I interviewed a total of four men and two women between October, 2013 and June, 2014. All six participants were enrolled in BOT at the time of data collection and five had been diagnosed by BOT with a cannabis use disorder while one was diagnosed with a polysubstance use disorder including cannabis. During the recruitment phase of the study, only individuals who were diagnosed with either a cannabis use disorder or polysubstance use disorder, and who identified cannabis as their drug of choice were invited to participate.

Demographics. Descriptive information about participant characteristics and AOD use was collected using a demographics questionnaire. The results from the demographic questionnaire are discussed below and displayed in Table 1. Results show that all six participants were between 19 and 24 years old, with an average age of 21 years old. Thirty-three percent (n=2) identified as female while 66% (n=4) identified as male. Seventeen percent (n=1) of participants identified as Hispanic or Latino and 83% (n=5) identified as White. Interestingly, this sample is generally representative of the larger population of BOT participants.

Drug of choice. Participants' drug of choice before treatment was reported on several occasions. When recruiting participants, the medical assistant confirmed with each potential participant that cannabis was his or her drug of choice. Participants were again asked to identify their drug of choice when completing the demographics questionnaire. While all six were eligible for this study based on the diagnosis given to them by a clinician at BOT intake, one participant's (Adam) demographic questionnaire indicated that his drug of choice was "shrooms"

(i.e., hallucinogenic mushrooms), and another's (Janelle) indicated her drugs of choice are both alcohol and cannabis. In the first case the participant clearly had cannabis as a primary drug of choice based on his responses to our research questions.

History of use. During the interview participants were asked what age they were when first using their drug of choice, a question also included in the demographic questionnaire. The age of first time use among the six participants interviewed ranged from 13 to 18 years old.

Stage of recovery. At the time of data collection, participants had been in BOT between 35 and 120 days, and abstinent from cannabis between one and 11 months. Participants Johnny and Sam reported the longest length of current abstinence from cannabis, which was "16 or more weeks" (4 months or longer). Janelle reported having ceased use 6-7 weeks ago, Tyler reported stopping use 10-11 weeks ago, Adam reported stopping 12-13 weeks ago, and Sarah reported no use for 14-15 weeks. All indicated they had not used cannabis since the day they entered BOT. Only one admitted to drinking once during this stint in treatment.

Drug misuse resulting in BOT. Each participant was asked to report the drug that he or she was under the influence of during the event leading to their involvement with BOT.

Although a list of drugs were reported, the majority of participants reported that cannabis was their drug of choice before entering BOT. Johnny reported being under the influence of hash oil, Janelle reported being under the influence of both alcohol and cannabis, and Sam wrote "n/a" which suggests he was not "under the influence" during the incident that lead to his involvement with BOT.

Substance Use Disorder

A diagnosis of either a cannabis use disorder or polysubstance use disorder was the primary condition for eligibility to participate in the study because the purpose of this study was

to explore drug loss experiences among young adults whose cannabis use was excessive and problematic.

BOT diagnosis. Although the staff at BOT only referred participants with known cannabis use or polysubstance use disorder that included cannabis, each participant's diagnosis was also confirmed after his or her interview. Data collected from the BOT medical assistant indicated that five participants were diagnosed (by the head BOT clinician) with a cannabis use disorder and one participant (Sarah) was diagnosed with a polysubstance use disorder, making all six eligible for this study.

CUDIT results. In addition to confirming participants had been formally diagnosed with a cannabis use or polysubstance use disorder, the CUDIT was administered to assess the severity each individual's cannabis misuse prior to their entry into BOT. This questionnaire was included in order to provide more information about the extent of each participant's use in the six months leading up to their involvement in BOT as well as the severity of his or her dependence on cannabis at the time of BOT entry. Each person's CUDIT score was determined by adding together the ten item scores. Three cut-off scores indicate the level of dependence: 0-15 indicates a mild dependence; 16-23 indicates a moderate dependence; and 24-40 indicates a severe dependence. The results of the CUDIT scores range from 7-26 for this sample and indicate that three participants (Sam, Janelle, and Tyler) had a severe dependence on cannabis, one participant (Johnny) had a moderate dependence on cannabis, and two (Sarah and Adam) had a mild dependence on cannabis. The average CUDIT score was 19.3, indicating that the average level of dependence among the six participants was moderate.

Given the purpose of this study, it was important each participant's dependence be assessed because the severity of use could be an influential factor over his or her emotional bond

or attachment to cannabis, and the reaction to discontinued use. The CUDIT was also useful to compare to participants' interview. For example, Janelle scored the highest (26/40) and was using cannabis multiple times per day each day of the week before entering BOT.

In some cases, participants' scores on the CUDIT were indicative of the length of time the individual has either been in BOT or abstaining from cannabis. For example, participant Sarah scored a 7 on the CUDIT and had been involved in BOT the longest of the six participants (120 days). Although she had not been abstinent from cannabis the longest of the other participants, she was the only one who had not been diagnosed with a cannabis use disorder, and had instead been diagnosed with a polysubstance use disorder. The fact that Adam's use depended more heavily upon his friends' decisions to use is reflected in his CUDIT score (10 out of 40 points). Sarah had not enjoyed using in a while and Adam did not use alone outside of a social context. In contrast to Sarah and Adam, the other four participants' use and involvement with cannabis prior to treatment appeared more severe based on their CUDIT scores and interview data. Participants' CUDIT scores and corresponding severity of cannabis dependence are displayed in Table 2 while the average responses to each of the 10 CUDIT items are displayed in Table 3.

Grief and Bereavement

Modified CBI results. The CBI scale was selected to measure aspects of grief that are commonly experienced among those who have experienced a loss. The CBI scale contains several bereavement subscales that correlate with the cultural, external, and internal factors that the substance abuse literature suggests influence individuals' cannabis use patterns and recovery processes. The data collected were intended to be used to compare and contrast to the personal stories that each participant shared during the qualitative interviews. The results from all six

participants' modified CBI data are displayed in Table 3 and Table 4. Table 3 illustrates each participant's three subscale scores and combined his or her total CBI score. Table 4 illustrates the average response to each of the 17 items and is displayed in both numeric and qualitative format.

The total CBI score can range from 0-51 and is determined by summing together the three subscale scores. To determine whether participants' experienced high, medium, or low levels of grief after discontinuing cannabis use, three cut-off scores were created. Scores of 17 or less indicate a low level of grief after discontinuing cannabis use. Scores between 18 and 34 indicate a medium level of grief after ceased cannabis use, and a scores 35 or greater indicate a high level of grief. The CBI scale has three subscales: 1) thoughts/images (CBI items 1-7); 2) acute separation (CBI items 8-12); and 3) grief (CBI items 13-17). The thoughts/images subscale score can range from 0-21, however the acute separation and the grief subscale scores can range from 0-15. Although the 17 items were rearranged when I created the modified CBI, each question was scored to ensure that the intended constructs were measured. For each participant, the items that corresponded to each of the subscales were identified and summed together to determine three subscale scores. Items 6, 4, 8, 1, 7, 5, 15 measured thoughts/images; items 2, 3, 16, 13, 9 measured acute separation; and items 12, 11, 17, 14, 10 measured grief.

Participants' total CBI scores ranged from 20-40, indicating that treatment after discontinuing cannabis included low to high levels of grief. Furthermore, this indicates that all six participants had experiences that are associated with grief and bereavement, and that none of the participants had no experiences with grief. Sarah received the lowest score (20/51) and Janelle received the highest score (40/51). Participants' scores on the thoughts/images subscale ranged from 8-16. Janelle and Sam both scored the highest (16 out of 21) on the thoughts/images subscale, indicating they experience frequent thoughts or images about using cannabis. Sarah

scored 8 out of 21, which was the lowest score of all participants and indicates she thinks about using cannabis the most infrequently. Participants' scores on the acute separation subscale range from 7-13 (out of 15). Sarah scored the lowest (7/15) within the acute separation subscale, indicating a low level of grief and acute distress while abstaining from cannabis. Tyler, Johnny, and Sam each scored 13/15, which indicates a high level of grief while abstaining from cannabis. Participants' scores on the grief subscale range from 5-12 (out of 15). Janelle scored the highest within the grief subscale (12/15), indicating a high level of grief while abstaining, and Sarah scored the lowest (5/15), indicating a low level of grief while abstaining from cannabis.

Qualitative Results

Capturing each participant's unique description of their journey through recovery was a critical piece to exploring the existence and continuum of drug loss as an experience felt after discontinuing cannabis use. The data are summarized below and discussed with interview quotes in order to illustrate the content of participants' responses.

Experience with Cannabis

Three predominant themes about participants' past experiences with cannabis use emerged throughout the interviews: 1) history of use; 2) positive experiences using; and 3) negative experiences using.

History of use. All six participants reported daily use of marijuana before entering BOT. Sarah reported using cannabis multiple times per day each day of the week between the ages of 13 and 18 however it was not until college that she reported experiencing any negative consequence as a result of using. Janelle started using at age 15 and continued using until she was 18 years old. During Janelle's freshman year of college she was smoking in the morning, in the afternoon, and in the evening, between five and six times on an average week day, and all

day on the weekends. Sam also started using cannabis at age 15, and reported that although he remembers having a really good time when he first started getting high it was not something that he wanted to do “all the time.” Sam then reported that he began using every day and continuously throughout the day during his freshman year of college. Tyler first tried cannabis when he was 14 but his use was sporadic before gradually increasing to daily use during the summer before college. Johnny first used when he was a freshman in high school and gradually increased to the point where he “really dove into it” during his senior year of high school. At the time of his interview, Johnny spoke about the way his tolerance had increased so much that, prior to BOT, he had started feeling high from not smoking because it was “something so different.” Adam’s use has fluctuated back and forth between daily and sporadic use since first starting at age 16. Adam was the only participant who did not report using cannabis alone on his own.

Enjoyable experiences using. All six participants were asked to reflect on and describe their experiences while high on cannabis in addition to their experiences before and after using. The collective report from participants’ descriptions indicates the existence of a spectrum of experiences that include both positive and negative aspects of use. On one end of the spectrum are low-key experiences that are relaxing and calming. On the other end of the spectrum some reported racing thoughts, anxiety, and being able to be distracted from worries, big problems, and the responsibilities of life. Janelle described her experience when she said:

I would just get really invested in something that I mean obviously wasn’t school but it would be like, I don’t know, like watching a movie or like hanging out with my friends. That just was probably why I just liked to smoke so much ‘cause I just didn’t really care to deal with the real world when I was smoking.

In general, participants reported that cannabis made them feel better, and Janelle stated “... it just made me feel better, just like a friend.” Sam reported “... I don’t know there’s just a lot of like adventure and uncertainty involved that was appealing.” Also reported were experiences where

participants described that being high made them feel more creative, like everything is funnier, and as if their own emotions are easier to control. Tyler described his experience when he said:

... I'm not sure exactly how to explain this but, there's kind of a sense of, kind of the ability to control your emotions a little bit easier when you're using, and not being able to do that is kind of, that's kind of what hits home, is that ability to kind of just slip into a daze rather than actually think about things. I think that's the biggest thing.

One participant reported using cannabis to “draw back from certain situations,” but the types of situations he was referring to were not specified. Johnny also made vague references to using cannabis as an escape when he spoke about cannabis as “a way to get away from everything” but later referenced how the stress of his parents’ divorce undoubtedly influenced his cannabis use.

Activities tended to feel more pleasurable, according to the interviewees, and they reported being able to engage in tasks they would typically not find so enjoyable when high on cannabis. The experience of making mundane activities fun while high was reported by all six participants. Sam described how he would use cannabis at work: “...being high, I kind of just go into like the unconscious state of mind, where I don't really think about what's going on I'm just working,” and he later said “...I was just kind of like a machine. I didn't really think about it. It was just kind of like unconsciously working.” Adam described one positive aspect of his using experience as, “getting excited about simple things, like listening to music.”

Each participant also reported feeling that being high on cannabis would not interfere with his or her ability to follow through with daily routines and “function.” Janelle described how she perceived the effects of cannabis on her behavior when she said:

...I mean I still felt like I could handle myself unless I was unbelievably high which wasn't very often, that I would be at that point. It's just more of like a calming type of thing, but that's why I guess I was using it every single day cause I was still aware of myself but...not like how excessively drinking is.

Johnny described the unique relational aspects of cannabis use when he said this:

I mean a little bit. And I think there's kind of more of an ability to explore with marijuana because, I mean, when you take a hit of acid, you're out of the world for twelve hours, and you're not able to do anything, but you can smoke weed and go on with your daily life pretty easily. So there's ... I guess the relationship piece is kind of that it's kind of a companion when you get to the stoner level that I was at, because it does slow you down but it doesn't necessarily stop you up like other drugs do.

Notice the way in which Johnny metaphorically described cannabis as "kind of a companion," indicating a human-like relationship between participant and his drug of choice. It is not surprising, then, that the separation from his drug of choice may be experienced as a loss, not dissimilar to the loss of a human companion. Johnny continued to contrast the positive, relational aspects of cannabis use to other drug use when he said:

...any other drug, maybe cocaine's a little bit different, but most other drugs that you do, you can't do your normal life while you're on them. And [with] pot you can. And to some extent cocaine as well...

Negative experiences using. Participants also reported negative consequences of cannabis use that related to both performance at school or work, and physical and mental health. Negative experiences included being judged or labeled a "stoner," having to lie and deceive others who would not be accepting of their cannabis use, and feeling guilty about using. Unhealthy changes to eating patterns (i.e., getting the "munchies"), forgetfulness, selective attention, and the time consuming nature of cannabis use were themes related to negative experiences using across all interviews, along with feeling embarrassment for actions or speech while high. Sarah also reported the time-consuming nature of heavy cannabis use as a negative consequence of use. Sarah acknowledged the negative connotations with the lifestyle when speaking about her desire to "not be a quintessential (lazy) stoner." She also spoke about having "brain farts" as a negative consequence.

It was not uncommon for participants to describe negative consequences that contradict their positive experiences using. For example, Adam described the effect of his use on his energy level when he said:

I would still go out biking; I loved long-boarding. I mean it made me tired when I'd smoke and snowboard so I wouldn't smoke and snowboard. But I think I have the same level of energy.

Adam clearly has mixed feelings about the consequences of his use based on this quote. Sarah spoke about how her use was negatively affecting her decisions when she said:

...when I'm high or the few times that I like am drunk, I am more susceptible to like being swayed in the direction of someone else's opinion, and I like being confident that someone didn't trick me into sharing their views, or that I'm not just too high to argue with not wanting to drive here or there or like, whatever. Like now I can be like, nah, and be like, oh yeah I remember being like, nah.

The final sentence in the above quote is highly indicative of the ways in which heavy cannabis use affected her level of self-efficacy, leading her to see some aspects of her use as negative.

While Sarah began the following quote with a positive reflection on her cannabis use, the negative consequences related to her self-esteem are also illustrated when she said:

I always felt like inspired but I also hated myself all the time cause I'd get the munchies and I didn't want to gain weight, and I was just kind of sleepy, and I don't know ... but I always played sports so I wasn't sleepy enough not to do anything but ... I don't know I'm trying to think.

Janelle also described her feelings about herself during the time she was using when she stated:

...I was just constantly laying on the couch eating pizza at like 1:00 am and not caring. And then the next day I would just feel so gross and lethargic and like ugh, and I would like never...I would always just constantly feel like... I don't know I can't explain it. Just gross.

Janelle's excessive cannabis use was also negatively affecting her relationship with her parents, and she spoke about the concern they had about the severity of her use. Janelle described how she and her parents would fight about the negative effects of cannabis on Janelle's mood. Johnny also identified several negative consequences of his use, including having "weed hangovers" and

not being “as sharp.” He also reported that before he came to BOT, he had a realization and made a decision to “not be so impaired all the time.” Sam spoke about being more introverted when he was sober, and later described what he enjoyed about using when he said:

But I mean it made everything just a lot easier to enjoy ... slowed down time. It seems like time goes by so fast now, which is another thing that I realized I missed about it cause I rather enjoy being alive [LAUGHTER], and it made things even more enjoyable in a lot of aspects and it seemed to slow time down and make things last longer.

Aspects of Cannabis Use

Participants were prompted to share what stressful life events, stages of life, or other factors influenced their cannabis use. The three predominant themes about the function or drive behind participants’ cannabis use emerged as: 1) a coping mechanism; 2) an agent of socialization; and 3) an aspect of identity.

A coping mechanism. All six participants reported using cannabis to relax, and some participants reported external factors like stress from “real world problems” and boredom when discussing influences over their use. Participants reported using as a way of coping with mental health disorders and external factors such as the social environment, peer groups, and interpersonal relationships, volatile environments, divorce, addiction in the family, and adult responsibilities. Although at times participants were explicit when discussing personal life experiences and their cannabis use, other participants were less explicit.

Sam, Tyler, and Johnny spoke about using cannabis to cope with anxiety, some of which had been life-long. Other participants described using to cope with situational anxiety while other participants spoke about years of chronic anxiety. Tyler’s anxiety was so severe that he spent time in an inpatient treatment facility. Tyler reported that although the “addictiveness” of

his cannabis use was increasing his anxiety, he also regarded being high as something made him “more at rest.” He described his struggle with anxiety this way:

It [cannabis] also helped me with my anxiety. When I was in seventh grade, I was diagnosed with anxiety, and I was in an in-patient [hospital] for like six or seven days, and I was put on Klonopin and Lexapro. And so after about, I’d say, within a month and a half, I stopped taking it [medication] on my own. I didn’t tell anybody, but everybody, well most people, like my mom and doctors and my dad, they noticed a difference and they asked me what it was, and then I let them know I actually stopped taking my meds. And so they were positively ... they backed me when I stopped taking [the medication].

Sarah stated “when I was sad or something huge happened to me, like that would be when I was the most sober,” and that when she first started using, “nothing was particularly going on” with her. However, she later stated:

I had a stressful home life so it was kind of nice to just have another reason to want to be gone, like out of my house. Like instead of being upset at my family ... it [cannabis] was like the soundproof walls in my head. There was a lot of stuff I didn’t really want to think about.

Although some participants used cannabis to cope with stress and expressed that not having access to cannabis to relieve stress during treatment was difficult, this was not the case for all participants. In contrast, Adam stated they would not want to be high if under stress or pressure and said, “personally, if I was stressed, I wouldn’t smoke.”

An agent of socialization. The social function of cannabis use and its ability to bring people together was repeatedly mentioned by participants. Adam was the only participant who did not suggest having underlying coping motives for use. His use was also primarily for social reasons, which he revealed when he said, “the main reason that I like it [cannabis] is the social part of it. That’s ... cause I can drop it pretty easy, I like the social part of it, and I just do it after school, like after homework and stuff I guess to relax.” Although Adam spoke about the freedom that came with moving into a house with other young men his age, it was also a factor that he

reported may have perpetuated his use. Sarah also referenced how she enjoyed the social aspect of using, however she also indirectly referenced the influence of her eating disorder on her use when she said, “I actually had an appetite [when using cannabis] ‘cause I’ve had issues with that in my life.” Sam described the social aspect of using cannabis as a being like a “little culture,” and stated that the majority of his friends and activities revolved around using. Sam reported surrounding himself with friends who used, “more so than the normal individual.” Other participants also described how their use was influenced by their peers’ use, explaining how being surrounded by people using cannabis encouraged their own use.

An aspect of identity. All six participants spoke about being involved and connected with cannabis, however four participants (Janelle, Sam, Tyler, and Adam), regarded cannabis as being part of who they are as a person. For those four participants, their cannabis use and the role that cannabis played in their lives was regarded as an aspect of their identity. Sarah (although not at the time of the interview), Sam, and Adam identified with the “stoner” culture or as a stoner. As illustrated in an earlier quote from Johnny, his fascination with cannabis was tied to his other interest, politics. When Sarah reflected on her past cannabis use, she spoke about missing the fact that she was a knowledgeable authority figure within the cannabis using community. Sarah explained, however, that during periods of heavier use, she would describe herself in an online profile as “funny, independent, 4/20 friendly...” but acknowledged that she began to realize that those characteristics was not truly part of her real identity but a fictitious persona she adopted online.

Throughout Tyler's interview, he explained that he thinks about cannabis constantly, and continues to find ways to stay involved in the cannabis community, an indicator of the continued relationship he maintained with cannabis and the community in spite of being in treatment and

not actively using. Although like Sarah, Tyler also reported recently realizing that being a cannabis user is not who he is, but instead using cannabis is “something he does.” When asked how he would feel if he were not able to use again, he reported that he would feel as if he had lost a part of himself, and said cannabis is “the biggest thing in life I am passionate about.” Tyler referred to his constant thoughts about cannabis as “an addictiveness,” while Sam and Janelle shared their views about themselves, referring to their own “addictive personalities.” Janelle shared the personal challenge she has had using in moderation, stating that she “couldn’t handle not smoking sometimes.” Adam described how he had identified with cannabis when he said the following:

I’d always have weed to sell them and they called me the stoner of the floor ‘cause I always had weed and stuff for them. So I did feel like I lost part of my identity ‘cause they had known me like that for however long, like six months, and yeah that was my thing or whatever so there’s that.

Adam’s comments align with Tyler’s comments in that both Adam and Tyler acknowledged that their daily use contributed to this idea that using cannabis is part of their identity. Sam said this when discussing his cannabis use:

I definitely have an addictive personality... I mean that’s what I did for so long, it’s part of my life, my friends, that’s how I associate with a log of people, it was kind of part of my identity in a lot of aspects it’s made me... it kind of gave me more of a feeling that I had a meaning in life...

Distinguishing Cannabis from Other AOD Use

Cannabis lifestyle. Throughout the interviews, all six participants described being aware of and influenced by a ‘cannabis lifestyle.’ After compiling the views participants held about aspects of the cannabis culture, a few indicators of this lifestyle emerged including listening to a certain type of music, wearing certain items of clothing, and the use of labels and symbols. All

six participants described a cannabis lifestyle that is nonjudgmental, accepting, and inclusive.

Sam described the lifestyle when he said:

I think a lot of it is the welcoming, less judgment, open to different thoughts and ways of thinking... I don't know, I found that interesting that a lot of people ... I mean I'm sure there's people out there that don't smoke, but it seems like the people who don't smoke who are more down to earth and openness to new thoughts and ideas.

Sarah also shared her experience with the lifestyle of cannabis when she said:

I feel like smoking weed is more of a relaxed social setting and people have a tendency to ... they want to talk about things that are important or seem like transcendent in a way, like they want to talk about the global economy or metaphysics, you know or just anything you would associate with like, yeah man, peace.

The routine use of cannabis was a distinct aspect of the cannabis lifestyle. Tyler spoke about the significance of his cannabis use when he said "my day would revolve around it."

Janelle made a similar comment when she said, "it was like our whole day was like, kind of revolved around smoking or buying weed or...I mean my friends still now, that's their top priority and I can totally see that, how it was totally a top priority in my life..." Sarah expressed her frustration with the time-consuming nature of using, although she described herself as someone who was once a "classic stoner" and "would listen to heady music and wore a bunch of hemp." Adam described a 'stoner' as someone who has cannabis on them all the time and spoke about the lifestyle in this way:

... I've heard this before I think being a stoner's a lot lifestyle, so I think you just get in the habit and eventually it doesn't create like a different reality, but like an escape I guess, an escape. I think that might be why it's tough for them. It just ... like I kind of ... once I stopped smoking weed it was just a habit. I liked just smoking in general so I kind of smoked cigarettes for a while and then I was like, there's no point in this. So I think just a habit, they like to actually just smoke too. And I decided it wasn't really the place for me and I was smoking everyday there, I was heavily ... like starting to smoke more and I was becoming more into the whole like, wanting to be part of the culture, and that's when I had started learning about medicinal ... the states that were medicinal. And I'd always loved Colorado and then started looking at schools in Colorado when I went back home

my sophomore year to go to community college. So I raised my grades and I ended up getting accepted to CSU, and I think part of wanting to come here also had to do with the culture of marijuana and how I wouldn't be at risk every time I was smoking, I'd know I could do it safely because I knew I could get a medical card. That's the first thing I did when I got here.

Ironically, of course, Adam failed to take into account the ramifications of his cannabis use while on a college campus and has had consequences to pay for his decision to use against his university's code of conduct. Johnny referred to the legalization of medical cannabis in Colorado and discussed the increase in his use when he said,

When I first got my medical card, and I was kind of able to see the different strains and kind of like the different processes that go with making good weed basically, and I think being able to have that kind of split apart from just having pot kind of peaked my interest in kind of the whole process.

Johnny later elaborated on how his fascination with the cannabis plant has evolved overtime:

I mean I made the stoner pilgrimage to Amsterdam this summer and that was kind of ... that was kind of ... that took my interest from here to here, and it really is something that ... I mean all of weed is so, so fascinating to me. I mean from the history, to the production, to the different types of usage, to the possible medical positives that can come out of it, to the tax revenue that can come out of it. I mean, every piece of the plant is extremely, extremely interesting to me.

It is important to note the ways in which some participants became so invested in not just the consumption of the drug but the culture surrounding it, the process of producing it, and the possible medical benefits they touted. All of these links to their drug of choice may make the bond between them and the drug that much stronger, leading to potentially more or deeper experiences of loss as they cease cannabis use, even for a short period of time.

Excessive cannabis versus excessive alcohol use. In an attempt to identify why, if at all, cannabis may encourage users to engage in a unique lifestyle, participants were asked to share their thoughts, feelings, and experiences about the difference between excessive alcohol use and excessive cannabis use. Janelle spoke about the lifestyle aspect of cannabis when comparing excessive use of cannabis to alcohol use when she said the following:

...Like alcohol...sure everyone drinks. Almost everyone drinks. But it's not like a full lifestyle, where smoking weed is literally a lifestyle. The music, the type of music you listen to, the things you wear, the things you eat, the things...like everything. Like your whole house is dedicated to marijuana. I don't know, I didn't really see...you don't really see that until you stop using.

All six participants indicated feeling as if there was a significant difference between excessive cannabis use and excessive alcohol use, and several terms and phrases were used to describe the cannabis-using environment. Some of these included feeling relaxed, content, chill, inhibited, slowed-down, lethargic, euphoric, and conversational. Very different terms and phrases were used to describe excessive alcohol-using environments. Some of those included being rowdy, having a loss of control, action-associated, accident-prone, loud, getting people into trouble, speeding-up time, and impeding their ability to think about the consequences of their behaviors. It was clear participants' experiences with heavy, social cannabis differed in comparison to alcohol.

Participants also described how their experiences using cannabis tended to be more present-focused and clear-headed, and that it was radically different than their experiences using alcohol. Sam expressed how there is "less stupidity" associated with cannabis use (compared to excessive alcohol use), fewer accidents, and that he himself was able to be more present and conversational and less introverted and anxious when using cannabis. Adam, like other participants, had negative experiences with alcohol, but overall maintained a positive attitude towards using cannabis. Adam shared the following perspective when he said "well I got a DUI so that was ... that's my thought about alcohol, too, is getting out and getting in trouble."

Tyler and Johnny both spoke about the minimal risk of getting tetrahydrocannabinol (THC) poisoning and not having ever been "too high" when describing their opinion of the comparative harmlessness of cannabis. Tyler reported that he believed that smoking cannabis is

not as hazardous to one's health compared to drinking alcohol when he said, "I just feel like there's less harm that's done with the smoking then there is the drinking." Although he later described how his perception of alcohol being more physically harmful (in comparison to cannabis) made him uncertain about the safety of using alcohol. He also spoke about the different effects of alcohol and cannabis when he said:

I more enjoyed beer for the flavor than I did the effect that it was giving me. Also because I felt alcohol was more ... it is a suppressor, it's a downer I guess. And umm ... whereas I guess weed probably would ... is weed also considered a downer? Yeah. I've just always felt that [marijuana] is an upper. And it actually makes me ... like a lot of times in the morning when I'd smoke, it makes me feel more energized.

This quote illustrates the misinformation some users have about their drug of choice and the rationalizations that are used by them to justify their use. Cannabis is considered a hypnotic in terms of the class of drug, making it unlikely to produce an "energized" feeling in most users. Still, Tyler reported this effect as a way to justify smoking cannabis in the mornings.

All six participants regarded cannabis as a drug that individuals use, but not to the point where a state of "non-functioning" would be reached. All six participants also regarded cannabis as a drug with less severe consequences in comparison to alcohol. Sarah reported her behavior is more inhibited when she is high when she described the difference in this way:

Like people just wanted to have fun and talk about what they knew. And when you drink I feel like people just kind of want to like dance around and like, I don't know. They don't really want to talk as much. Its more action-associated cause you're not as lethargic. Like with weed sometimes you can be more inhibited cause you're slowed down in your thinking and you can get embarrassed so much more easily. But with being drunk, the more you drink, the less embarrassed you're going to be about anything, and the higher you get, the more likely you're going to be like, oh my God am I going to say something stupid?

Johnny made similar comments about the difference when he said,

Yeah, I mean I think there's, at least to me, it feels like there is ... while pot is bad, pot, I mean in general, it slows you down, it numbs you down a little bit, but

comparatively to literally any other drug I've tried, it's nothing. It's absolutely nothing. It has zero potential for catastrophic negatives, I guess.

Here again you can see the justification of use of cannabis with the minimization of negative consequences. While some participants attempt to provide facts during the interview to prove their point, they are often over stated or erroneous, leading us to conclude that they may be looking for positive reasons for their use that are exaggerated. Johnny later described the difference between using cannabis versus using alcohol in another way when he said "I mean that's one of the things my whole experience has kind of taught me. Alcohol's kind of an animal, whereas weed's kind of a pet." This quote is highly illustrative of the attitude some users have that cannabis is harmless, therefore their use is not only justified but their future reengagement in cannabis use is inevitable. This is critical to understanding the grief process that may or may not be involved in the cessation of cannabis. For some, the harmless nature of the drug and their use, and even the possible medicinal traits it may contain, can have an impact on the perception of not using as a loss event.

Challenges to discontinuing use. In consideration of the lifestyle and social aspects of cannabis use that is supported in the literature (Duff et al., 2012; Soller & Lee, 2012), each participant was asked "what is it about cannabis that makes it so difficult to stop using?" In response, the individual personal challenges to abstinence that are unique to cannabis were described in detail along with what participants' identified as 'universal struggles' to discontinuing cannabis use. Some of the struggles to quitting cannabis that participants reported included having unsupportive friends who do not respect their decision or requirement to be abstinent, allowing oneself to believe he or she is dependent on cannabis, and beliefs about the risks associated with cannabis use. Janelle also attributed part of her struggle to her "addictive personality" and recalled the time that she made a personal choice to stop but then found herself

using more and more after smoking again just one time. Janelle again highlighted the unique challenge of weekends when she said:

I don't know I try to make it as positive as possible during the week because it's so much easier to be sober during the week. But when the weekend comes, that's when it really, really hits you that, damn you're sober.

The ways in which each participant described the role that their friendships and peer groups played in their use could be considered a distinct, universal challenge to discontinuing cannabis use. During her interview, Janelle wondered out-loud how she would be able to handle being around her friends who will expect her to smoke after she is done with BOT. The most difficult times for Adam to remain abstinent are when he is in his house or when he is bored. Adam also referenced the lifestyle of cannabis use and attributed the difficult and uncomfortable experience of discontinuing cannabis use to the fact that his daily routines were engulfed by using. Sarah also spoke about the period of abstinence she sustained before the two separate events that led to her involvement with BOT, both of which included being around drug-using peers. Sarah spoke about how her affiliation with users of other drugs was involved in her return to using when she said,

I had stopped doing any and all drugs other than smoking weed and I didn't ever really drink. I've always had a stomach ulcer from having an eating disorder, so if I would drink I would throw up blood before I was even like actually drunk. So I was like not a huge drinker. But then this summer, when I started dating that boy, like all of them drank all day, every day even during school [LAUGHTER]. And umm, I don't know, I had stopped drinking when school started last semester, and it was like the weekend of the floods and everyone else had been day drinking at a party at my friends all day. But even though we were out of school, I had work that day. So, that was the first time I drank in like three weeks. I drank three shots and half a forty and then three hours later I was driving to a party. And I parked in a government parking lot instead of the parking lot for the apartment complex, and I was trying to call my friend for like ten minutes. And I was sitting in my car, eating a bunch of candy and like [LAUGHTER] smoking a cigarette, and five minutes later a police officer came to ask me what I was doing and he saw that my ex-boyfriend, who was 22, had beer in my backseat and then he ran his name and like, my ex-boyfriend has a rap sheet like as long as your arm, like has been

in and out of jail and everything else like that. And they were like, oh wow Miss [CLIENT NAME], interesting company you're keeping there and like, then everything went downhill and I got a DUI, and I had done a bump of cocaine for the first time in like literally almost two years, like coming up on two years...

There are many challenges embedded in her description of beginning using again in the above quote, demonstrating the layered, complicated, and arduous process of becoming abstinent from a drug of choice.

Four participants spoke about political aspects of cannabis use and how access to medical marijuana in Colorado perpetuated their increasing interest in the drug. While two participants possessed medical marijuana cards, one participant was closely involved in growing and trimming marijuana for medical purposes, and the fourth participant referenced the “politically correct” nature of the drug, referring to the legal medicinal uses in some states. Several participants had strong opinions about the perceived risks and benefits of using cannabis, which appeared to influence their views on the struggle to abstain. For example, each participant could articulate the ways in which cannabis benefited their life, whether by decreasing anxiety, being an agent of socialization, providing instant stress relief, or “filling a void.” Tyler reported that part of why it is so difficult for him to abstain is that nothing has relieved him of his anxiety in the same way. At the same time, with the help of the therapy component of BOT, Tyler had reached a point in his treatment where he had realized his use was actually increasing his anxiety. As Tyler worked through his recovery, he reported testing his ability to remain abstinent in several ways:

Yeah but I know ... I think about it constantly. I mean I'm like getting into pipe-making as my career hopefully, and I've been thinking often, even more like, since I can't smoke right now, another way to stay in the community, maybe start growing even. And so, I think about it daily, on my Facebook and Instagram I watch pictures and videos of people smoking and dabbing their grows, like constantly. But it's also more to me, being able to do that is kind of like testing myself. Like you can watch it? It's kind of like your enjoyment of it still, you

know, rather than being able to use it yourself, and just like being able to watch it and not having like crazy urges like, okay I'm going to go smoke because I still have hash sitting at home and like ...

It could be argued that part of his connection to the drug is an indicator of the loss experience of being abstinent, and clearly he is incorporating it into his life in old and new ways to remain connected to the drug he so loved to use.

Reactions to Discontinuing Cannabis

All six participants were asked to reflect on positive and negative behavioral, physical, and emotional changes experienced after discontinuing cannabis. Four themes emerged that pertain to participants' experiences quitting or temporarily discontinuing cannabis use: 1) negative changes; 2) positive changes; and 3) attitude changes.

Negative changes. The negative physical changes that participants reported experiencing during their initial separation from cannabis included feeling drained, tired, physically annoyed, and sleepy. Sam and Adam reported having less of an appetite, however Tyler expressed his frustration with his weight gain despite efforts to eat healthier food and increase his physical activity. While Johnny noticed he was able to sleep better after ceasing use, several participants reported difficulty sleeping after quitting. Sarah described having insomnia and intense nightmares for approximately a month after using. Sam and Adam also described having great difficulty sleeping at first. Sarah, Sam, and Johnny mentioned changes to their dreams after quitting. Sarah experienced more nightmares at first, while Johnny and Sam simply noticed that they were dreaming again. For four months, Sam reported frequent dreams about cannabis that left him feeling panicked when he said, "I mean I've had moments where, I have dreams where I wake up and I'm just like, oh my God I smoked what am I going to do now..." Many of these

reactions are reminiscent of grief responses in daily life such as dreaming of the loss and struggling with appetite and sleep patterns.

Positive changes. Despite the distress felt, participants regarded themselves as more productive, motivated to work out, more energetic, and active after stopping cannabis use. Participants also reported sleeping better, dreaming more, eating less or fewer snacks, having more money saved up, and having better memory. Janelle was animated, detailed, and eager to share both the positive and negative experiences she has had while in recovery. Janelle spoke about how much better she feels (physically) now that she is abstinent, and about feeling more clear-headed. She reported eating healthy and exercising almost daily. Tyler also reported learning how cannabis actually interferes with REM sleep, despite his earlier beliefs that it helped him sleep. Janelle reported losing weight as a result of not snacking as often due to having an increased appetite from cannabis use. Two participants also mentioned improvements in their memory and productivity. Johnny described the benefits to being sober by saying, “I’ve been a lot quicker on my toes. So I’ve enjoyed it actually, after kind of getting out of the haze I guess, is what I would call it. I kind of have come to enjoy the clarity.”

Attitude changes. Although the negative consequences of cannabis use were acknowledged by most participants, in general, participants held what could be perceived as favorable attitudes towards using, and minimized the hazardous potential of using. Janelle and Sarah also both spoke about maturing and getting closer to graduation as natural changes that contribute to their decreased desire to use now and in the future. Participants also reported focusing on occupational goals, and realizing that their daily use would not be feasible if they were to be successful in their future career of choice. Tyler spoke about how continuing to use at the rate he was using will not help him reach his own personal goals, however the aspect he

misses most about using is being able to drawback from “certain situations.” Interestingly, Tyler also reported having self-motivation to decrease his use, and had increased his exercise and healthy eating habits, however he felt frustrated by the weight he has recently gained. Tyler reported that discontinuing his use has also negatively affected his immune system. Tyler reported that through the treatment at BOT he has realized that his day would revolve around using hash oil, which actually increased his anxiety because it was constantly what he was thinking about it. He reported it "almost [felt] like an addictiveness."

Sarah’s attitude towards cannabis and the value she placed on maintaining the “lifestyle” of use she once had appears to have shifted during her time in BOT. After a period of abstinence, she reported being more aware of how time consuming, inconvenient, and trivial her use was, and the use of others’ still is. She focused on other ways to connect and develop emotional ties with people. Sarah reported that “sobriety is the best way for me to be emotionally honest with myself,” which made the struggle of treatment and recovery “worthwhile.” Sarah also explained how her efforts and desire to connect with people on a "real level," and her realization that her cannabis abuse was a consequence of a "problematic relationship with her self-concept" helped her to overcome her resistance to discontinuing. Sarah reports feeling more confident knowing that when sober, she is not risking the chance of being influenced or swayed by peers as a consequence of being under the influence.

Approximately six or seven weeks into treatment, Janelle’s awareness of the consequences of cannabis use, and the nature of using itself, appeared to have shifted quite significantly when she said, “and it’s like you bond with other people that smoke weed, but when it comes down to it you’re just bonding over the bond that you have with the weed.” Her words indicate a strong association with cannabis, not unlike that with a person. Janelle had started to

question the legitimacy of claims that cannabis is not addictive, and Sarah also challenged recent changes to Colorado legislation. Sam spoke about how upset he was when first realizing he would not be able to smoke for a really long time while in BOT, however now he does not feel it is “bothersome” because he has other places to focus his energy. Both Tyler and Sam, however, have had to make changes to their social circles, and reported not hanging out with the usual company.

Adam felt he was thinking clearer, reported feeling alleviated of the guilt he would feel about using, and also reported being more productive. Adam also reported feeling “relieved he doesn’t have to do it all the time now.” He also reported feeling as if in general, his anxiety decreased. There were periods of heavy use, however, when he reports his anxiety actually increased because of how constant his thoughts were about cannabis. After discontinuing his use, Johnny reported having difficulty sleeping for about one week, but overall experiencing positive results to his lifestyle change.

Long-term Discontinuation of Cannabis Use

Participants reported a range of positive and negative experiences that relate to their thoughts, feelings, and attitudes towards no longer using cannabis. One participant simply reported that he “struggled” during the initial transition to abstinence, however responses from all participants were diverse and included having little or no appetite, feeling mentally drained and tired, and fluctuations in mood after discontinuing use.

Thoughts about long-term discontinuation. Several participants did not think it was necessary that they discontinue using cannabis even though they were forced to through their involvement with BOT. Sarah expressed her struggle to understand why her cannabis use was problematic when she said "I adamantly defended that I needed to smoke to sleep well and eat

well and all this stuff.” Participants' ambivalence towards discontinuing use was evident through their awareness of both the positive and negative consequences of their use. Interestingly, about half of the participants had made commitments to themselves about decreasing their cannabis use prior to being required to abstain. Sarah was not extremely distraught by the idea because she no longer liked the idea of using cannabis and recalled not enjoying the last time she was high. Johnny credits therapy and treatment for his shift in being “able to not want that anymore,” but also spoke about the difficulty he had imagining a scenario where he would never use cannabis again.

Feelings about long-term discontinuation. Participants reported having both positive and negative feelings toward the initial discontinuation of their cannabis use. Some of the negative feelings toward quitting included feeling worried, sad, annoyed, anxious, and jealous of others who were not being forced to quit using. Some participants also reported feeling frustrated and confused in part because they were having difficulty connecting their cannabis use to the problematic behaviors that resulted in involvement in BOT. At times, the frustration and/or confusion that participants felt were accompanied by feeling upset and ambivalent about no longer being able to use cannabis. One participant described feeling relieved when she said, “It’s just like feeling relieved that I don’t have to do it all the time now. I never like hated that I had to... I mean I don’t have to do it, but I didn’t mind saying okay, yeah let’s go smoke.”

Several participants felt it was sad that they had to stop using cannabis. Janelle reported feeling excited and sad; excited to get out of the cannabis scene, but also feeling as if a part of her was not ready to part ways quite yet. These are clear indications of a loss response. Interestingly, Janelle also described her initial experience not getting high as feeling “more single.” She spoke about her general feelings of sadness when thinking about the possibility of

never using again, and about possibly missing out by not being involved in the cannabis lifestyle. Tyler explained that he was initially upset and considered opting out of BOT and leaving CSU instead of ceasing his cannabis use. This type of avoidance of the pain and discomfort of quitting is an indicator that cessation of cannabis use is a loss event for him.

Sam also described how he felt after learning he would not be able to use cannabis in BOT when he said, “it was upsetting realizing that I wasn’t going to be able to smoke for a really, really long time.” For participants like Sam, knowing they would not have access to the perceived benefits of his use was distressing when he said:

Well I was worried that I would ... I don’t really know what I was worried about. I was just worried in general that I wasn’t going to be able to smoke, and I wasn’t going to be able to get high. I knew eventually I’d be able to get high but it seemed like it was so far away. That it would be hard to handle.

This response is an indicator of the avoidance many people experience when approach an event that may be difficult, sad, or grief-filled.

Emotional Aspects of Cannabis Use

The emotional experiences that participants described can be considered similar to the type of emotional bond experienced in human relationships, and is a necessary piece to understanding how or why an individual would respond to a life without drugs, or in this case, cannabis, with sadness, longing, pain, or other symptoms of grief. In response to being asked to share their thoughts on having an emotional bond to cannabis, participants’ provided descriptions of relational aspects of cannabis.

Emotional bonds to cannabis. In each interview, participants were asked to think about and share his or her view on having an emotional bond to cannabis, similar or different to a bond they have had to a friend or loved one. Throughout the interviews, participants spoke about their use of, and lifestyle around, cannabis. All six participants used words that would commonly be

used when describing a relationship between two individuals. In response to one interview question, Tyler and Janelle both referred to cannabis as a companion or something that keeps them company while they are alone. Interestingly, Tyler spoke about cannabis almost as if it were a person by saying:

Almost like a best friend... It's just something that's never let me down... It's never given me a reason to not be so behind it. And it's just benefited me in such ways that like, you know, the money side of it but doesn't really matter to me, it's just something I'm so behind. And it kind of like, gives to me a lot.

Tyler later stated that, although he would not prioritize cannabis over his relationship with his girlfriend, "...it's kind of something you can rely on just like a person, or certain people." Other participants like Sam also readily identified with the idea of having an emotional bond to cannabis, and used descriptive words to explain the relationship by saying:

...it was just something that kind of connected me with a lot of individuals, something that became a part of my life. It was like a relationship, and I got to the point where it was like, I wasn't involved in other aspects of life until I had that relationship.

Sarah also immediately identified with the idea of having a relationship or attachment to cannabis, referencing how cannabis is personified as a person – “Mary Jane”. For Sarah, abstaining felt like somebody [e.g., cannabis] she had spent a significant amount of time with was noticeably gone from her life. Sarah spoke about how her experience with cannabis compared to her interactions with people:

...when I would get high by myself, I was excited to do stuff like listen to music like I would with my friends or like, I don't know, like watch movie and enjoy it ten times more cause everything was funnier, and everything is always funnier when you have an audience I feel like too. So it was like the same as being around other people but when you're stoned you can laugh at yourself and it doesn't click psychologically that you feel kind of weird about it.

She reported that using cannabis was something she looked forward to and that gave her an excuse to leave home. Sarah compared her relationship with cannabis to one she had to a "special

friend." Although Sarah did not describe her relationship with cannabis to the extent that Janelle did, she did speak about feeling "stoked" and said how she "looked forward to smoking," similar to the way she looked forward to hanging out with a friend. Johnny and Janelle described the role that cannabis played in their lives before even being asked the interview question. Johnny stated, "I think that there's kind of a certain relationship with marijuana that people have..." Janelle described a similar 'relationship' and shared, "We used to joke and say that marijuana was our boyfriend...it would literally be our life. Who needs a boyfriend when you can smoke weed type of thing?" Janelle also described what could be considered a way that cannabis may mimic a human emotional bond, or function similar to a human relationship when she said,

I was definitely smoking by myself at night and I don't know, it just kind of felt like it was keeping me company in a way...that just feels like you're not alone... When it comes down to it, you're just bonding over the bond you have with weed...

Sam and Janelle both reported feeling lonely since the removal of cannabis from their lives. However, the actual act of getting high was only one aspect of cannabis use that participants identified when asked about an emotional bond or relationship. Johnny describes his emotional bond to the cannabis plant in this way:

I think for me, that bond is a little bit different because, I mean, I pretty much exclusively smoke the weed that I've grown. So it's kind of, I've seen that plant go from seed to flower, and it's kind of, I mean like I was saying, it's kind of therapeutic. There's kind of just something to the fact that I did all of that work, and I mean it was like my baby for that time basically. And I kind of...I have this bond with my plants that...it's just kind of a little bit more intense than I think there is the relationship with most people.

Unquestionably these elaborate descriptions of the relationship and subsequent bond each participant had with cannabis are lead to the conclusion that separating from their drug of choice would elicit some negative emotions due to it being experienced as a loss event.

Conceptualizing Abstinence as a Loss Experience

Three major themes emerged throughout the interviews that relate to the specific theory of drug loss. Those include: 1) thoughts and feelings about future use; 2) thoughts about having experienced a loss; and 3) similarities and differences to human losses.

Thoughts and feelings about future use. Participants were asked to share their thoughts about using cannabis in the future. Interestingly, participants expressed varying degrees of commitment to maintaining their abstinence from cannabis. Some participants had strong opinions about not wanting to go back to their old patterns of use after seeing the ways in which it negatively affected their lives and experiencing the recent positive impacts of quitting. Janelle was the only participant who made a definitive statement about her intentions to not use in the future. Her statement, however, was surrounded by ambivalence about no longer using, and acknowledged the challenge she has and will face trying to use in moderation. This slippery-slope back to problematic use was described by Janelle in this way:

Yeah, I definitely could see that if I was using again then I would just...even if I just smoked a little bit then I would probably enjoy the feeling of just being a little bit relaxed, where then I'll be like, oh maybe we can go do this later, and then I would like, maybe smoke more, type of thing.

For Sarah, although she does not want to jeopardize the personal growth she has experienced in BOT, she was not committed to not using again in the future. Sarah reported not wanting to let cannabis distract her, but she also recognized cannabis had been a large part of her life. Sarah described her thoughts and feelings when coming to terms with her upcoming separation from cannabis when she said,

It seems pretty natural to me, 'cause I'll be on probation for the state for another two years as far as I know. And at that point I'll be 22 and hopefully graduating from college and stuff. In my mind, those are things that I had always been planning on giving up anyway. Like, as I got into my adult life I didn't want to be the type of person that still did drugs, or still drank a whole bunch. I was like,

those are things to be left behind, for when I was young [LAUGHTER]. So I was just like, yep, that's about the time that I would have been quitting anyway. There's not like . . . if I do get off probation earlier than anticipated, there's not really a point to me picking it back up again, 'cause I have always planned to be done with it by the time I was done with college. So I don't know, it just seems like that's where it's going. So, that's fine.

Sam described both wanting and not wanting to remove cannabis from his life completely, and spoke about resolving his ambivalence toward using sometime in the future. Other participants had given more thought to how their cannabis use will be different in the future compared to their use prior to BOT. For Tyler, his positive experiences using cannabis have influenced his attitude towards future use. He described his perspective in this way:

If anything it's done better for me than if I were not using it, cause who knows if I'd be back in an inpatient program, or if I'd end up being on some sort of meds again which I'm like one hundred percent against.

Tyler was looking at his discontinued use as an opportunity to decrease his tolerance so that when he does use again, he has an even "better" experience, therefore reinforcing his abstinence. He reported,

So, I just feel like the next time I do smoke, it's kind of going to be like starting all over again. So I'm not going to have to smoke nearly as much and I'll still have like such a greater feeling.

When Adam was asked about a reunion with cannabis, he immediately described his plans to use as soon as he completes BOT. In reference to using after BOT however, Adam stated "...I'll smoke a bowl or maybe a couple and then I might go a couple weeks without it. I think maybe my use will drop down but I'll be happy when I can use cannabis again." Adam did however speak about his long-term intentions when he stated, "I don't want to smoke when I am 50 or whatever."

Thoughts about having experienced a loss. Each participant was asked about their thoughts and feelings on having experienced a loss after being required to discontinue their

cannabis use while in BOT. Overall, participants described several losses associated with their discontinued use of cannabis: the loss of a social crutch, the loss of identity, the loss of companionship, the loss of experiences they never had, and the loss of control. It was not uncommon for participants to discuss having experienced more than one loss due to cessation of cannabis. Most notable was how participants described the impact of discontinuing cannabis use on their views of themselves and their identity. Sarah was the only participant who did not report feeling part of her life entirely had been lost, and could not imagine experiencing a significant loss if she were never reunited with cannabis.

Janelle and Sam both spoke about the thoughts and feelings related to cannabis being in their life in one second and out of their life the next. Sam described the upsetting nature of the initial separation from cannabis in this way:

...to have it [cannabis] automatically ripped out was distressing because it was like, what do I do now? I mean that's what I did for so long. It's part of my life, my friends, that's how I associate with a lot of people. It was kind of part of my identity in a lot of aspects...

Sam described experiencing both the loss of part of his identity and the loss of experiences he will not be able to have when he said:

I just tend not to go to parties and tend not to do that type of socialization and there's been a lot of opportunities where I know I could have gone to parties, probably stayed sober, and met people and had a good time and all this stuff but, I just don't want to put myself in those types of situations.

Sam was one of the three participants who referenced a loss of identity. Adam described his experience living in the dorms and then discontinuing when he said:

I'd always have weed to sell them and they called me the stoner of the floor cause I always had the weed and stuff for them. So I did feel like I lost part of my identity cause they had known me like that for however long, like six months, and yeah that was my thing or whatever so, there's that.

Adam could understand how some people may view cannabis as a friend who it would be “hard to say bye” to, but he also compared his drug loss to the death of a part of him (comparing the identity loss to one he might feel if he could never snowboard again), rather than being like a friend dying.

Johnny compared his loss experience after discontinuing cannabis use to the loss he experienced after no longer running track, referencing his level of investment and the degree to which his life revolved around something that was “taken away.” Sarah described a different type of loss, and credited her mindset, ‘stage of recovery’, and time in treatment for being able to cope with her new abstinent life:

...it definitely wasn't like that extreme for me. It didn't feel like my parent's got divorced, or like my friend died or anything like that. It definitely felt like maybe I was in an argument with a person and we were not on speaking terms or something. I would maybe equivocate it to that level of loss in my life. But, in my mind I was just so set on the fact that I needed it to sleep well and I needed it to have a good appetite. Those were really the only things that I had to complain about other than missing the social crutch of being like, oh you smoke weed, I smoke weed, we can hang out and have the world in common.

Sarah's description of her experience highlights that another important factor of studying drug loss may be individuals' unique place within their 'recovery,' and how motivations or attitudes toward discontinued use may influence their drug loss experiences.

Themes about Grief and Loss

Two major themes emerged that relate to the concept of grief and loss experiences while in recovery. Those include: 1) symptoms of grief in response to discontinued cannabis use; and 2) similarities and differences to experiencing human losses.

Symptoms of grief in response to discontinued cannabis use. When discussing their discontinued cannabis use or the discontinuation of their involvement with an aspect of cannabis, participants reported numerous feelings that could be considered indicators or symptoms of grief.

The words that participants used when describing their reactions to abstinence included upset, confused, at a loss, lonely, angry, disappointed, depressed, and tired. Some participants also reported feeling remorse, distressed, anxious, and a loss of control. Several participants described feeling as if something was missing from their life and feeling as if they may miss out on something because they are now abstinent from cannabis use.

Janelle recalled the difficulty of her initial adjustment to abstinence when she reported feeling really sad, physically annoyed, and like she “was losing so many aspects of her life and friends.” Janelle described her sadness around both not being able to use and not being able to spend time with the same group of friends in this statement:

Well I definitely was really sad at first. I couldn't even be around my friends when they'd smoke. Cause I would like physically get annoyed that I couldn't smoke... I felt like my brain was working so hard to revert itself to not thinking about marijuana and trying to do other things to keep me occupied. I was just so tired. I was sleeping all the time, which is really weird cause I feel like I should've been way more energized.

Although Janelle described her initial response as feeling physically annoyed, lonely, and at times, jealous, scared, and nervous, grief symptoms varied across participants. Sam described his initial struggle to cope with abstinence and 'fill the void' cannabis once fulfilled when he said:

...I was kind of ambivalent about what I was ... like what to do with myself. I try to keep myself as busy as possible, so I didn't really have to think about things at first. And then I kind of had a breakdown. I was drinking ... that's before I was in Back on TRAC, I was drinking and taking a prescribed Xanax, just kind of trying to fill a void where I was like, trying to fill the void of not smoking...

Janelle also explained the ambiguous nature of the loss, her grief, and feelings towards the loss in this way:

Yeah it's hard to really narrow down what I was really grieving about. It's just everything... that my whole life was about to change and I just...in the blink of an eye. I don't know, and I knew also in the back of my mind, I knew that going on Back on TRAC wasn't going to be just a temporary thing.

Comparing her drug loss to grieving the loss of a break-up, Janelle spoke about mourning for a period of time, then as she became less and less sad, there came a point when it "was time to move on." Janelle later described the pain of her grief by saying, "I had the same like, sadness that you would feel during a breakup. It was that gut feeling. You just like...it hurt!" In an attempt to identify his emotional response to other aspects of his using, I inquired as to how he thinks he may feel if one of his cannabis plants were to die. Without hesitation Johnny replied by saying,

I'd be disappointed in myself, just because I'm able to control the environment so much that that would be very frustrating but, that's a good question. That would be a big bummer for me actually. Just because it's kind of, I don't know, it's kind of this nurturing process and, it sounds weird, but if I wasn't able to nurture my plant to full health, that would ... I don't know, I'd be really bummed in myself.

Similarities and differences between drug loss and human losses. Each of the six participants was asked to think about how their experience discontinuing cannabis compares to experiencing the loss of human relationships, whether death-related or not. Janelle's comparison to a death-related loss was explicit:

It was definitely like, probably the same sadness of losing a person, like a death, too...where, it's hard to say if it's just marijuana, but...yeah I would say it was like a death. I mean you grieve a loss of a death, but then you grieve the loss of a breakup too.

Sam compared his drug loss to the loss he felt after his dog died when he said, "I mean ... not really. I had an old dog that I loved to death and it was hard for me when that dog had to be put down. But I certainly have gotten over that faster than not being able to smoke." Johnny's description of his loss experience revealed that although he could compare his loss to the loss of a close friend or family member, he did not feel it was equally as devastating. Johnny created a hypothetical circumstance (e.g., life in prison) in which he would permanently discontinue his cannabis use. Whether or not participants felt their separation from cannabis was permanent or

not, an aspect of their loss can be seen as related to permanency and appeared to influence their ability to conceptualize their experience as a loss. As a result, the reaction of participants varied depending on their feelings towards the seriousness or finality of their discontinued use. This is illustrated by Johnny's statement when he said,

...if I was going to jail for the rest of my life, I mean I think it might be different. But I think there'd be some things that were a little bit more important in that situation. But I mean I think that that does play a huge factor in the fact that it's kind of just temporary, like everything that's going on right now is just temporary. So, I think, I guess I can see it more as like an ambiguous loss, kind of like you were saying, rather than a death loss. Because there are definitely some negatives associated with it and I think that those are kind of harder to work through, especially if I had not had the therapy that I had gone through. I think it would have been a little bit tougher for me to kind of get through that and really see the positive side of what was happening. So, yeah, yeah, I can see a more ambiguous loss, and I think that my non-relation of it to more severe loss does have a lot to do with the fact that it is temporary.

Death-related losses could be considered the most 'permanent' of losses. A loss experience with lower levels of permanency such as drug loss are less permanent because the option of using drugs remains available, and the separation from the loss object (cannabis) is in individuals' control. As shown above, after Johnny created a scenario in which he could imagine a permanent separation from cannabis, his anticipated grief response was noticeably heightened, highlighting the importance of permanency when conceptualizing drug loss. Tyler also acknowledged that he does not view his discontinued cannabis use as a "full loss" because he will be able to smoke soon enough. When prompted to consider a scenario in which his discontinued use would be permanent, however, he explained how it would feel like losing a part of himself because cannabis use was an aspect of his life about which he is very passionate.

Tyler spoke about the loss of getting high when he said,

But ... yeah the biggest thing that I've felt the loss of, is like, I enjoy the act of it, so much and...I've been collecting glass for years and have a glass shelf at home with my pieces in it and I look at them mostly as art that I do like as, like I look at

them as art first, and then smoking second... And so that's been something that's kind of like been a little bit difficult to ... it's ... I'm just looking at it now, you know, rather than being able to also use it which made it so much cooler, to be able to have something that you appreciated so much for the work, and then also being able to smoke it.

Tyler reported coping with the discomfort of not being able to use by “remaining optimistic” and remembering that it is just a matter of time before he is able to smoke again.

Participants' descriptions of contextual and environmental factors highlighted a third way in which permanency appears to impact individuals' drug loss experiences. For example, Tyler explained how he thinks his loss experience would feel different if he were not as confident in his ability to stay involved in the cannabis community, or if he were not living in a community that is accepting of cannabis use. Tyler also shared how living in a state that has legalized cannabis could influence his ability to separate from the cannabis community when he said,

I think it would be a lot easier for me to not ... or like stopped, or [have that loss. Just because since I've been here [in Colorado], I've felt more part of a community. There's more like a community here than there was in [OTHER STATE] as far as like smoking.

Worden's Tasks of Grief

Throughout the interviews, four participants described experiences that could be viewed as similar to the experiences individuals have while working through Worden's Tasks of Grief which are: 1) accept the reality of the loss; 2) process the pain of grief; 3) adjust to a world without the deceased; and 4) find enduring connections with the loss in the midst of embarking on a new life. Participants responses related to each of these four tasks are outlined below.

Accepting the loss. Participants' experiences accepting the reality of the loss of cannabis was influenced by the ways in which participants were thinking about their cannabis use. In particular, participants' plans to continue using or staying involved in the cannabis culture appeared to be particularly influential. For example, participants like Adam, Johnny, and Tyler

did not express having a life-long commitment to discontinuing their cannabis use, and they reported few experiences that could be considered one of the four tasks of grief. Sarah's interview was another in which the tasks of grief did not readily emerge.

Several participants, however, reported spending a significant amount of time thinking about using and coming to terms with the loss of not using, which parallels experiences working through the first task of grief. Sam was upset after realizing it would be a long time before he could use cannabis again. Other participants also reported initially feeling upset, frustrated, or angry, or being in denial that they would not be able to use cannabis while in BOT. For some participants, it took time for them to accept the reality of a life without cannabis. Janelle stated, "...I would think about it a lot and I would just be so...I was like, almost to the point of like, depressed, for like a good week, two weeks, three weeks."

Processing the pain. Worden's second task of grief is processing the pain of the grief. Five of the six participants described the unique ways that they have processed the pain of their grief. Participants spoke about feeling sad, mopey, depressed, and lonely. Several participants reported they missed being able to relax with friends and frequently participating in using cannabis. Johnny had less to say about processing pain, and instead spoke about how "it's all been up from there" after getting past his initial state of denial. Johnny also regarded his period of abstinence as "generally positive," though it is important to note that Johnny reported his intentions to use cannabis again after BOT.

Janelle recalled talking with friends and her clinician about her feelings of grief after quitting cannabis, and Adam recalled wishing he could use again, focusing specifically on the social aspects of using that he missed. Participants also spoke about gradually coming to terms with the loss, feeling less and less sad, or as if it were less difficult to cope after a short period of

mourning. Several participants such as Janelle described how they would think about cannabis "a lot" and make conscious efforts to distract themselves and avoid reminders of cannabis.

Adjusting and finding connection. Participants also described the unique adjustments and changes that have resulted from their discontinued cannabis use, which corresponds to the third task of grief. These descriptions were often intertwined with descriptions of the fourth task of grief, which is reengaging in the world while maintaining an enduring connection to the deceased (i.e., cannabis). Indications of the fourth task of grief emerged when participants reported putting effort and energy into work and themselves, not missing the act but missing the social aspects of cannabis use, trying to make new friends, reaching a point where it felt like it was 'time to move on,' focusing on the positive aspects of no longer using, and participants' own unique character strengths.

Johnny reported feeling "frustrated" and "confused" for his first 20 days of abstinence. But beyond that, he reported enjoying the clarity he felt after abstaining from cannabis. Several participants spoke about adjusting to abstinence in terms of managing peer interactions and having more free-time after quitting cannabis. Sam spoke about "cocooning" himself into his own world because of how difficult it would be and how many memories it would trigger if he were to spend time with his cannabis-using friends. For Janelle, her adjustment included making new friends. She reported, "...I mean I miss my friends definitely but...I've been trying to meet some more sober friends, but it's definitely hard." Sam's adjustment to life without cannabis and his attempts to re-engage with the world were captured through the following response to a question about his struggles quitting cannabis use:

Well, I guess almost with like any substance, it feels like a void, you know 'cause I'm not really necessarily religious, I'm not the most social individual in general. I kind of feel like a lot of involvement in life, a lot of tasks you have to go through, I mean, they're not the best, especially being an adult, and having all the

responsibilities. It's nice to be able to just kind of forget about those responsibilities and that's a lot easier ... easily done when I'm high. Sometimes I question the point of being so responsible and having a job that, I mean, in the big scheme of things, is being a part of society that just contributes to human beings functioning, and it's like I kind of want to be selfish in a lot of aspects and be like, well I want to enjoy myself, but I also want to be a contributing member and, I just want to take away the uncertainty of life on this planet...Marijuana helps with a lot with that, but also reading biographies and philosophical kinds of texts also help with that, which is something that I've been doing a lot more lately. It's something that I never really wanted to do before cause it made me anxious, but now that I have nothing else to really kind of manage my thoughts and feelings about life. It's like why not read philosophical information and biographies on other people's feelings about life? And it's been helping. And I always used to worry about death and dying, and it was a big stress on me just in general. But I mean, smoking helped with that, and philosophy and stuff like that helps now. I just kind of ... I feel like a lot of people have ... they fill their life with relationships and they find existential-type meaning. A lot of it has to do with societal involvements and it stuff like that. It kind of seems ... I kind of thought that a lot of societal involvement, like kind of like having your own place in a community, like involved with religious aspects or just, having like, your work being your involvement in society, which is a good thing, and I feel like you should have a certain involvement in society, but it shouldn't be what defines you. And I feel like marijuana helps me just kind of not have to worry about a lot of those aspects I guess. And it kind of gives me a place where I fit in and, have a belonging.

While Sam and Janelle spoke about recovery as an opportunity to put energy into other places and things, Tyler's attempts to adjust and create an enduring connection to his life during heavy use were much different. He said:

...I guess that's not who I am. And I think I've realized that more now that I haven't been smoking. That smoking hash oil all the time isn't who I am. It's just something that I did, or do. And like I can still be connected to the community in the fact that, you know, whether it be through blowing glass or, you know, growing, or something else...

Sam also reported how intertwined cannabis was with his life:

It was like something that I used to help with my anxiety, but it was also something I used to be an agent of socialization. So a lot of those just were kind of outlets that I had and a lot of aspects of my life were taken from me. I wasn't able to ... there was a period of adjustment that it was where I really became anxious.

Johnny, Sarah, and Adam reported spending more time on homework, and for Johnny, it was important that he use that time productively so that he could occasionally travel an hour home to visit his parents. Participants also shared smaller-scale adjustments through their descriptions of strategies to managing free-time (i.e., time that would typically be spent using). Johnny described the adjustment by saying, "...it's just kind of like, every day I'm sober, it's just like, more acknowledgment that, you know, it's not that hard."

CHAPTER 5: DISCUSSION

The purpose of this study was to explore the treatment and recovery experiences related to loss of six college students abstaining from cannabis, their drug of choice. The specific focus of the exploration was on identifying and describing the existence of grief-like symptoms while abstaining from cannabis during drug treatment, and understanding how, if at all, participants feel one or more losses while in recovery. In an attempt to contribute to Matheson's (in press) developing Drug Loss Theory, I used a predominantly qualitative design to collect an abundance of data, most of which were gathered during six in-depth interviews.

The individual semi-structured interview format facilitated lengthy conversations that were saturated with insight into this evolving drug loss phenomenon. Having 25 pre-written questions and corresponding follow-up questions enabled me to ask participants about their personal histories using cannabis and with treatment. To ensure the unique experience of abstaining from cannabis was captured, the I asked participants to share their thoughts and feelings about having a special bond to cannabis, their initial reactions to abstaining from cannabis, and how the losses experienced during their recovery compare to other types of losses.

In this chapter, I will demonstrate the relevance of the results from these six interviews by integrating existing research on grief and loss, attachment theory, and substance abuse with the results discussed in the previous chapter. To conclude, I will discuss the strengths and limitations, as well as the significance and clinical implications of the study.

Grief in Substance Abuse Recovery

I used my training as a therapist and knowledge of substance abuse and grief and loss research to develop 25 interview questions. Participants shared their personal stories and the data revealed a number of major themes that are summarized below.

Grief Work in Treatment

Grief reactions are the emotional responses to a situation in which individuals' have lost something of value (Murray, 2001). Historically, grief work in the context of substance abuse has been used to help individuals resolve earlier (often traumatic) life losses. From this perspective, an individual's 'loss event' was considered to be the cause or catalyst of the (future) AOD misuse (Jennings, 1991). Earlier views of grief-work were challenged by studies that have documented the presence of grief reactions and reductions in grief-like symptoms after grief work (Denny & Lee, 1984; Haralson, in press; McGoven & Peterson, 1986, Streifel & Servaty-Seib, 2006; 2009). In more recent years, researchers (Matheson, in press; Streifel & Servaty-Seib, 2009) have attempted to bridge the gap between the anecdotal accounts of grief reactions in recovery, and the current approaches to treatment.

Disenfranchised loss. Loss events that are associated with long-term adversaries or life adjustments, including addiction, can cause prolonged feelings of loss and sorrow (Teel, 1991). The losses associated with discontinued drug use are profound and, if not properly grieved, could negatively affect treatment outcomes and relapse rates. Jennings (1991) suggests that before an individual can work towards a 'future event' (in this case, sobriety), he or she must first cope with and grieve the loss of the 'before' event (AOD abuse, both physically and emotionally). In this study, participants' awareness of their own grief-like reactions to abstinence was variable

however so were physical and emotional experiences while in recovery and with drug loss. For example despite Janelle's awareness, she was unclear what and why she was grieving.

Drug Loss Theory

Matheson's emerging Drug Loss Theory (Matheson, unpublished) will function as a framework for AOD treatment that incorporates the grief experiences that prior studies (Denny & Lee, 1984; Haralson, in press; McGoven & Peterson, 1986, Streifel & Servaty-Seib, 2006; 2009) and the current study have uncovered as a unique phenomenon. The findings of this study further support what Jennings (1991) identified as a unique loss event that can cause grief-like reactions. In this study, although some participants focused on painful and difficult aspects of recovery, other participants focused on the benefits of sobriety. Janelle was the only participant who explicitly referred to discontinuing cannabis use as "emotionally and physically grieving a loss." This is not surprising, however, considering grief is still somewhat stigmatized in the US and many people will not perceive non-death related losses as being associated with the experience of grieving.

Attachment Theory

According to attachment theory (Bowlby, 1969), individuals form bonds to people, ideas, and objects that are so profoundly significant they often guide the individuals' behaviors, thoughts, and meaning-making systems (Ainsworth & Bowlby, 1991). Accordingly, the broken bond causes the individual significant distress. Participants in this study referred to cannabis using words and phrases that are commonly used to describe functions and qualities of human relationships, providing a strong indication that participants perceived having a relationship with cannabis that is metaphorically similar to human relationships. Over the decades, the basic assumption of attachment theory (Bowlby, 1969), that humans are inclined to form secure

attachments with others, expanded to include non-human relationships. In more recent years, experts have also begun to acknowledge the disenfranchised losses that some individuals experience during recovery and from relinquished drug use (Jennings, 1991; Streifel & Servaty-Seib, 2009; Streifel & Servaty-Seib, 2006).

Attachment bonds to cannabis. As Jennings (1991) explained, drugs are "cathexis objects" to the individual using AOD because of the psychic energy that is invested and the significant meaning it holds. According to attachment theory (Ainsworth & Bowlby, 1991), the extent and function of an attachment is critical to understanding the emotional reaction to its absence. In this study, participants with coping and social motives for using cannabis tended to compare their relationship to the drug to a boyfriend, or spoke about being attracted and fascinated to the drug. Some participants spoke about how their bond is unique and more intense because they nurture and grow their own plants for use. This participant in particular further explained the therapeutic nature of watching the plant evolve from seed to flower, and the disappointment in himself he would feel if it were to die.

From an attachment theory perspective (Ainsworth & Bowlby, 1991), it makes sense why a variable like prior discontinued cannabis use or no foreseeable long-term abstinence would impact participants' emotional responses and grief during recovery. If a person has made no prior attempts to abstain (mandated or not), the broken bond to cannabis will be a novel experience for which it is impossible to fully emotionally prepare. The nature and history of the relationship, bond, or "friendship" an individual has with cannabis will likely impact the positive and negative experiences of recovery as well. According to attachment theory (Ainsworth & Bowlby, 1991; Bowlby, 1969), the stronger an individual's attachment bond is, the greater the sense of loss will be after the relationship is no longer there (Judith, 2009). Participants in this

study tended to report that cannabis quickly became more important to them than other things or relationships. Interestingly but not at all surprisingly, participants who described high levels of involvement and enjoyment using cannabis tended to describe more intense emotional responses in drug loss.

Attachment theory posits that attachment bonds exist for a reason, and the significance and function of the bond are pivotal to understanding diverse loss experiences (Ainsworth & Bowlby, 1991). Participants disclosed that cannabis kept them company, was like a best or special friend, and had never let them down “just like certain people.” Interestingly, the participant who did not specifically reference using cannabis to cope was the most reluctant to describe cannabis as having friend-like qualities, and instead identified with the idea that cannabis was part of who he is. The grief response one would expect from a person who is that emotionally connected to a substance cannot be understated.

Worden’s Task Model of Grief

This study found that all six participants had experiences that closely reassembled the tasks of grief (Worden, 1991). The data revealed that the majority of participants reported experiences during recovery that mimic symptoms of grief common among the bereaved, and Worden’s four tasks of grief can help explain this process.

Task 1: To accept the reality of the loss. The first task of grief is for the individual to accept the finality and reality of the loss (Worden, 1991). A loss must be recognized on an emotional and intellectual level so that the individual develops an understanding that a reunion is not possible. Traditional rituals give special recognition to the loss and help the grieving individual further accept the painful reality of the loss. During this first task, the individual may feel numb, sad, empty, confused or forgetful. They may also do things like look for the loss

object in familiar places, dream about the loss object, or attempt to prevent feeling pain by denying a loss was truly suffered. The words and phrases participants in this study used to describe very similar behaviors include numb, sad, depressed, anxious, wishing they could use, a vague sense “something was missing,” “taken away,” or that “various outlets were lost.”

As mentioned, coping with grief after ambiguous loss can be extremely difficult because closure is difficult to achieve. It was especially challenging for participants to acknowledge and accept the devious role of their cannabis use on their problem behaviors proceeding BOT. It is not uncommon for substance abusers to deny or minimize their problematic relationship with drugs. As this study also illustrated, denial can also emerge when individuals reject the notion of loss by not committing to permanently discontinue drug use or by reminders of the reality that, unlike the deceased, AOD use is still accessible (Jennings, 1991). This was true in the current study as the thoughts and feelings that each participant shared about how long-term or ‘permanent’ their discontinued cannabis would be emerged as a distinct theme important to explaining the experience of drug loss. When participants were describing their relationship with cannabis or comparing the lost ability to use (foreseeable or hypothetical) to other types of losses, some participants rejected the idea that cannabis was like a friend or companion, and instead spoke about feeling that “part of [them] would die.”

One could argue that the disenfranchised nature of the losses caused by surrendered cannabis use make it difficult for those in recovery to make meaning out of the experience (Murray, 2001). Several participants seemed to invest a significant amount of energy into accepting the secondary losses of their relinquished cannabis use. Secondary losses were described as equally if not more distressing than abstaining, and included losing the “social crutch,” of cannabis use, “social aspects of life,” a primary coping skill, hobby, passion,

identification with cannabis use or the cannabis-using community. The majority of participants felt as if they had lost an ‘effective’ way to cope as a consequence of their discontinued use.

It is important to note that few participants did what Worden would call accepting the finality of the loss and that a reunion is not possible. In fact most participants reported that they intend to have a reunion with cannabis one day. This shows that completing this task of grief may be different in the drug treatment realm. Access to drugs and alcohol remains available even after surrendering use, ultimately leaving the decision to abstain up to the recovering individual. On the other hand, if it is crucial for a person to accept the finality of a loss in order to move through Worden’s stages of grief, it may be an indicator of how difficult grieving the loss of a drug of choice is for some people in recovery.

Task 2: To process the pain of grief. The second task of a grieving individual is to process the pain of grief (Worden, 2009). In this task, the individual is encouraged to feel and work through the emotional, intellectual, and physical pain of their grief. A wide range of behaviors are commonly associated with this task and include feeling angry, annoyed, fluctuating moods, irritable, achy, apathetic, restless, tired, drained, trying to distract from reminders, jealous of others who still used, hurt, under or overactive, withdrawn, fearful, anxious, disappointed, sad, remorse when reflecting on the loss, on the unfocused, or may lead the individual to doubt his or her belief system. Changes to appetite and weight, sleeping patterns, and relationships are also normal indicators of the second task of grief (Worden, 2009).

A prior study of drug loss (Haralson, 2013) found that individuals in recovery described grief-like symptoms that included low energy, shame, guilt, anxiety, and sadness. In this study, the words and phrases that participants used to describe their recovery and drug loss experiences were extremely similar and included angry, lonely, cocooned, removed, confused, frustrated,

depressed, in mourning, and emotionally and physically grieving a loss. Several participants reported changes that related to sleep, including dreaming again, having nightmares, and frequent dreams about using cannabis. One participant recalled glorifying cannabis and “defending the one thing I thought was politically correct, and that was marijuana” when first entering BOT. Working through the physical and emotional pain that the removal of AOD caused is important because eventually the pain will resurface (Worden, 1991), putting the recovering individual’s coping skills to the ultimate test.

Task 3: To adjust to the world without the deceased. The third task requires the individual to make both internal and external adjustments in light of the loss (Worden, 2009). In the field of substance abuse, discontinuing AOD use often requires making significant lifestyle changes that encourage a drug-free life (Jennings, 1991). Individuals in AOD recovery also seem to take proactive steps to continue on with life, take on new roles and responsibilities, or develop new coping skills (Haralson, unpublished). In this study, participants described focusing their energy towards something purposeful in the absence of cannabis. Participants spoke about saving money, doing more homework, visiting family more often, and viewing recovery as an opportunity to have new (drug-free) experiences.

Research suggests that individuals’ self-efficacy before and after treatment, knowledge of coping skills, and the development of “sober social networks” have increased the likelihood of positive treatment outcomes among individuals in treatment for cannabis abuse (Kadden et al., 2007; Majer et al., 2011). In this study, only a few participants reported avoiding certain friends at night or on the weekends when cannabis use was more likely. Changes in social groups, support from significant others, strategies to avoid triggers, and the incorporation of nondrug-related interests have a strong influence over sustained sobriety (Ellingstad et al., 2006). For the

majority of participants, however, disconnecting from the cannabis lifestyle was a significant challenge. One could argue that the disenfranchised nature of the losses caused by surrendered cannabis use make it difficult for those in recovery to make meaning out of the experience (Murray, 2001). As a result, in this study, the majority of participants expressed little concern for making social adjustments or maintaining the abrupt, unwanted change of drug loss.

Task 4: To find an enduring connection with the deceased in the midst of embarking on a new life. The fourth task of grief encourages the individual to find a way to continue moving forward and on with his or her life while maintaining a connection to the loss. This task entails finding enjoyment in life and still accessing all of the memories, feelings, and thoughts associated to the loss (Worden, 2009). Five of the six participants in the current study reported a number of ways they maintain a connection with cannabis. Growing or trimming cannabis plants, selling cannabis, working in a dispensary, being an advocate for the legalization of cannabis, and maintain strong ties with the cannabis-using community (regardless of intentions to use) were reported. Although maintaining a connection to AOD could be viewed as a risk factor for relapse, according to Worden (2009), the healthiest resolution to a severed attachment bond is to find a new, more appropriate way to honor the relationship under new terms. The notion that an individual recovering from alcohol abuse may be referred to a “recovering alcoholic,” for example, is familiar within the field of substance abuse (Streifel & Servaty-Seib, 2009). Perhaps what participants in this study are doing to remain connected to the loss and move on is continue to participate in aspects of the cannabis culture that do not include actual use of the drug. Still, it is inconceivable that this will not lead to eventual resuming of the using behaviors and negative consequences they once experienced.

Special Considerations for Drug Loss: Cannabis Use Disorders

The Continuum of Misuse

Individuals with a SUD often exhibit a range of problem-behaviors including hedonism, psychopathology, mood disorders, inattention, demotivation, and other deviant behavior (Brodbeck et al., 2007; Norberg, Battisti, Copeland, Hermens, & Hickie, 2012). Data collected in the current study compares favorably to what is regarded as a continuum of cannabis misuse that ranges from mild to severe (APA, 2012). In this study, participants' cannabis use behaviors were variable. In comparison to Adam and Sarah, the other four participants in the present study were significantly more involved with cannabis using and the community prior to BOT. Also worth noting is that the demographic questionnaire indicated only four participants identified cannabis as their drug of choice at the time of data collection, even though all were diagnosed with a cannabis use or polysubstance disorder including cannabis.

Distinctions from Other Drugs

Recreational cannabis use is strongly influenced by socialized acceptance of use (Duff et al., 2012). In this study, all six participants conveyed the extent of their involvement with cannabis by describing their excessive, routine use, and the activities, behaviors, and relationships that were associated. These findings indicate participants' behaviors misusing cannabis were diverse, which is supported by prior research suggesting problem-use is difficult to detect because the problem behaviors associated with cannabis abuse are not always indicative of the severity of their misuse (Hathaway et al., 2008).

Furthermore, it has been suggested that the environments in which cannabis abuse and alcohol abuse occur may be qualitatively different (Caldeira et al., 2009). In this study, the distinct features of the cannabis lifestyle and distinct differences in how participants felt towards

cannabis in comparison to alcohol were clear. All six participants' preferences for cannabis became apparent through the mostly positive words they used to describe their experiences and feelings associated with using. Prior researchers (Streifel & Servaty-Seib, 2009) have recognized the significance of the losses associated with AOD recovery as a whole, and the current study further suggests that individuals may bond to cannabis in a way that is unique from other AOD bonds. Whether or not emotional bonds to cannabis are unique from bonds to other AODs will require further research, but the impact of the cannabis lifestyle makes it a worthwhile consideration.

Different Motives for Using

Researchers have attempted to further understand the association between mental health and substance abuse by studying individuals' motives or reasons for using AOD in the first place (Brodbeck et al., 2007; Norberg et al., 2012). It is interesting to note that participants who explicitly described multiple reasons for using cannabis, for example to cope with anxiety and be an agent of socialization, tended to describe more severe distress in response to discontinuing use. By asking participants what life experiences or personal characteristics had influenced their cannabis use, the current study found that both stressful life events (i.e., divorce, drug abuse/addiction in the family, or the transition to early adulthood, for example) and internalizing disorders (e.g., ADHD, anxiety, or an eating disorder, for example) played a role in the initiation and/or continuation of their cannabis use.

Consequences Associated with Mental Health

The susceptibility to developing a mental health disorder (Lisdahl & Price, 2012) is particularly high among young cannabis misusing individuals. Findings from this study indicate it would be worthwhile to examine whether individuals' mental health diagnoses tend to precede

their cannabis use, or vice versa. Sarah, Janelle, Sam, and Tyler all described having grief-like symptoms after discontinuing cannabis and reported having at least one internalizing disorder. Interestingly, Sam and Tyler described cannabis as both the cause and cure for their anxiety.

Prior research has found what this study also suggests; chronic cannabis users are more likely to experience anxiety and depression (Brook et al., 2011; Norberg et al., 2012). In this study, though it was never explicitly asked, over half of the participants reportedly used cannabis to manage symptoms of anxiety. Jennings (1991) referenced the self-medication hypothesis of addiction (Khantzian, 1985) to explain the significance of the energy individuals invest in drugs. In lieu of this, it makes sense that the participants in the current study who reported using to self-medicate described more emotionally intense reactions to abruptly quitting. Adam and Johnny were candid when discussing their plans to continue using cannabis after BOT, supporting prior research that suggests individuals with social motives for using have a more difficult time maintaining treatment gains (Brodbeck et al., 2007).

Recovering

Although the behavioral, relational, psychological and physical problems associated with cannabis abuse are documented (Brodbeck et al., 2007; Ellingstad et al., 2006; Lisdahl & Price, 2012; Norberg et al., 2012), the interaction of the variables that influences recovery and treatment outcomes are still not well understood. Similar to prior research findings (see Caldeira et al., 2009; Hathaway et al., 2008), this study found that the uniqueness of each participant's journey through treatment and recovery made it difficult to conclude the significance of the different variables. Research has however identified factors, including experiences in treatment that are correlated with outcomes (Brodbeck et al., 2007; Caldeira et al., 2009; Ellingstad et al.,

2006). Similarly, this study found there were variables such as severity of use that emerged and appear to impact the experience in recovery and with drug loss.

Research suggests recovery is influenced by whether or not the recovering individual made a "rational decision" to stop using or had a "rock bottom experience" that triggered the discontinued AOD use (McIntosh & McKeganey, 2001). Others indicate that the particular stage of change one is in has a strong impact on long term outcomes (Miller & Rollnick, 2002). Interestingly, only one participant was actually under the influence of cannabis during the specific events that triggered their mandated treatment and subsequent abstinence. In this study, participants who had successfully abstained from cannabis in the past, or reported self-imposed, intrinsic motivation to reduce their use prior to BOT, tended to speak minimally about the distressing nature of their end of use. Instead, these participants focused on positive aspects of recovery that included learning new coping skills, meeting with a therapist, learning about co-occurring disorders, and underlying reasons for AOD use. Although some research has focused on the importance of a sober community and on developing sober activities (Majer et al., 2011), participants in the current study conveyed mixed messages about the importance of social support. Social support appears to have been a factor that possibly mitigated the distress associated with drug loss reactions.

Ellingstad and colleagues (2006) suggested that the individual's appraisal of the positive and negative consequences of using is important to the facilitation of intrinsic motivation to change AOD using behaviors. In this study, half of the participants reported self-initiated efforts to decrease their cannabis use prior to BOT. Although research suggests individuals are more likely to maintain behavior change when motivation is elicited from within, interestingly, these three participants did not express a commitment to abstaining long-term. Many frequently

referenced their past experiences abusing "less harmful drugs" (e.g., acid and cocaine), discussed positive experiences they had in recovery, and struggled to view the loss of their drug of choice as final.

Moore and Budney (2003) explored the influence of other influential factors including the nature of substance use, length of abstinence, the context of sustained abstinence achieved, and individual characteristics on treatment outcomes among individuals recovering from cannabis abuse. In the current study, participants tended to describe drug loss as a distressing experience but, depending on a number of factors, recovery appears to have both positive and negative facets. The data in this study suggest that the severity of use before BOT, motives for using, SUD diagnosis, and the length of time abstinent and/or in treatment had an influence over participants' drug loss experiences.

The Experience of Drug Loss: Important Themes

An undeniable truth among individuals in recovery is that the potential for relapse is endless. When a bereaved individual is longing to reunite after a death-related loss, the possibility of a reunion happening is quickly interrupted by reality, and the reality of the finality of the loss continues to sink in.

Permanency

According to attachment theory (Ainsworth & Bowlby, 1991), it makes sense why participants who did not conceptualize their discontinued cannabis use as permanent expressed lower levels of distress in response to the separation from their drug of choice. The semi-structured interview format and use of analogies enabled the interviewer to elicit thoughtful answers from participants about their emotional responses. Using analogies to provide examples of ambiguous losses was particularly useful among this sample and made it possible to compare

the emotional impact of “permanent” (i.e., long-term abstinence) drug loss and “temporary” (i.e., planning to continue using after BOT) drug loss. Several participants struggled to grasp the idea of never using cannabis again, however participants were eventually able to challenge their existing beliefs about death-related losses being the only loss experiences to cause grief-like reactions. As the idea began to resonate, most participants conveyed their discomfort with the idea when their tone and affect suddenly became flat or negative.

It is not uncommon for bereaved individuals’ to be hesitant to talk about their loss experiences, so the way in which individuals are approached and invited to share their personal stories of grief is of great importance (Murray, 2001). Some participants in this study were eager to compare the “hurt” they were feeling due to ending use of cannabis to breaking-up with a significant other. Interestingly, participants who were uncommitted to abstaining long-term and uncomfortable with the idea of separating from cannabis permanently coped by reminding themselves that their abstinence was only temporary and that “it’s just a matter of time” before a reunion would be possible.

In some sense, participants’ reactions to the loss of cannabis seem to illustrate what Boss and Couden (2002) describe as one of the most difficult aspects of coping with any ambiguous loss: uncertainty about the ‘status’ of the loss. Participants tended to express ambivalence about either their plans to use cannabis in the future or the significance of their relationships with cannabis. Uncertainty and ambivalence was expressed through weak commitments to abstaining or confusion about their grief-like symptoms.

Secondary Losses

Although few researchers have studied recovery from AOD through a grief and loss lens, Jennings (1991) firmly argues in favor of conceptualizing discontinued AOD use as a loss event

that encompasses multiple types of losses. In this current study, participants reported experiencing a number of different types of losses. Interestingly, several participants revealed that their initial frustration and anger stemmed from feeling a loss of control, which is also a common experience for individuals coping with the loss of a loved one. Illicit cannabis use has gradually become de-stigmatized and, as a result, is no longer associated with AOD use that is regarded as “deviant” (Duff et al., 2012). In this study, recent changes to state laws legalizing medicinal and recreational use of cannabis was also a challenge to quitting that was reported to be unique to cannabis. It was not unusual for participants to voice their anger about mandated abstinence, even though it is still illegal for nearly all participants to use because they are under the age of 21. The increasing use of cannabis for “leisure” has led some researchers to view cannabis use as a “lifestyle choice” (Duff et al., 2012). Interestingly, although all six participants reported that they had been able to integrate their cannabis use into their daily routines before BOT, Sam, Janelle, and Tyler spoke the least about the ways in which cannabis altered their behavior, and expressed the more symptoms of grief in comparison to the other participants. It appears that individuals’ awareness of positive and negative consequences associated with using cannabis could significantly influence their drug loss experiences.

Changes to Identity

Recognizing both the recovering individuals’ loss of connection to the AOD-using community (Jennings, 1991; Soller & Lee, 2010) and individuals’ loss of identity are equally important when examining drug loss experiences. Interestingly, a number of participants spoke about using cannabis because they enjoyed the high, however all six men and women explained that another significant appeal was engaging in the cannabis-using community. This is

significant to the purpose of this study because the emotional impact of the loss of identity can profoundly influence the drug loss experience.

Loss of membership. Individuals who use AOD extensively tend to also be heavily involved in AOD-using communities (Soller & Lee, 2010). All six participants in the current study described the way that their lives had revolved around cannabis. As a result, the majority felt that by abstaining from cannabis they had lost their familiar ways to relate and engage in the social world. Participants referred to wishing they could use and fit in with their familiar peer groups, or feeling that with the removal of their primary way to engage with others, they had suffered a loss of experiences when cannabis was “ripped away.”

The disrupted bond between an individual and his or her drug of choice and between the individual and the AOD-using community can cause profound symptoms of grief (Jennings, 1991). In this study, participants who felt a significant loss of community or avenue for socializing and building intimate relationships tended to describe drug loss experiences that were filled with grief-like symptoms. It makes sense that chronic users would be more entrenched in the cannabis lifestyle before treatment and therefore experienced more primary and secondary losses as a consequence of their sobriety. Many participants described how abstaining from cannabis felt like losing a tool or avenue to encourage and maintain social interactions, however it is also important to examine how an individual’s sense of self and identity effect his or her view of their AOD use (McIntosh & McKeganey, 2001). Most important to the current study, however, is examining how the loss of identity being an "AOD-user" or "addict" plays a role in recovering individuals’ drug loss experiences.

Identity loss. In acknowledgment of the uncertain understanding of recovery among clinicians, academics, and researchers, McIntosh and McKeganey (2001) studied the role of

identity and the recovering individuals' sense of self in overcoming AOD addiction.

Interestingly, participants in this study reported a significant identification with cannabis use or the cannabis culture. Although each participant's data were unique, in some respect, it appears irrelevant whether or not participants reported using cannabis to cope or socialize. Participants' sense of self and identity emerged as a pivotal aspect of drug loss. Two participants self-identified as having an "addictive personality," and several others spoke about feeling they had lost a part of their identity after discontinuing their cannabis use. Furthermore, social motives for using emerged when participants spoke about the loss of their identity as "the stoner" or "an authority figure" in the cannabis community, or referred to cannabis as part of their personality.

Researchers have looked at the role of the recovering individual's sense of self or identity in overcoming AOD abuse (McIntosh & McKeganey, 2001), however this was not a predominant theme in the current study. Participants' efforts to abstain were not credited to a realization that their cannabis use had turned them into someone they did not desire to be, or a realization that their cannabis use had created a troubling tie to an AOD-using community to which they no longer desired to belong. This is not surprising because in this study, each participant was mandated to treatment. Recognizing both the recovering individuals' loss of connection to the AOD-using community (Jennings, 1991; Soller & Lee, 2010) and individuals' loss of identity are equally important when examining drug loss experiences.

Limitations and Strengths of the Study

Using a qualitative research design made it possible to collect a wealth of data about participants' recovery experiences including emotional reactions to abstaining and drug loss. With this in mind, there are a number of limitations and strengths that are important to discuss.

Limitations

Themes from the interview data generally fit together with the survey data, however several participant characteristics must be considered when interpreting the findings. Among others, the length of time participants were in BOT, their SUD diagnosis (cannabis or polysubstance), severity of use, and reasons for using cannabis are variables that could significantly impact grief reactions during recovery. Furthermore, there was a discrepancy when comparing the qualitative and quantitative data that indicates cannabis may not have been one participant's drug of choice. This is significant because participants who prefer cannabis over AOD will be more likely have a stronger attachment to cannabis, and therefore be more likely to experience grief reaction while abstaining. Another limitation is that data were primarily retrospective. I frequently asked participants to recall or reflect on past experiences and therefore inaccuracies may be included. Participants were in different stages of treatment and because progress made in treatment could impact how participants' recalled their thoughts and feelings when separating from cannabis, this is a limitation of the study. Severe and recent cannabis (and AOD) use can cause significant memory impairments and therefore additional inaccuracies must be considered in interpreting the results of this study.

Although it would have been ideal to ask each participant the 25 questions and corresponding follow-up questions, time constraints and participant characteristics made it unrealistic to replicate the interviews in their entirety. Some questions had to be shortened or eliminated due to time limitations. Lastly, the researchers were able to recruit only six participants despite enormous efforts to collect data from a sample of 10-15 BOT participants. Saturation was reached on most themes. While the findings in any small, descriptive, qualitative study are not generalizable to the larger population, the results are still pivotal to the

development of Matheson's Drug Loss Theory and illustrate an authentic experience of the losses from separation from one's drug of choice in recovery.

Strengths

The investigation of participants' loss experiences after discontinuing cannabis use was implemented as an effort to further explore the role of grief in recovery. Researchers (Matheson, unpublished; Streifel & Servaty-Seib, 2009) are advocating for the inclusion of grief-work into AOD treatment because several studies (Denny & Lee, 1984; Haralson, unpublished; McGovern & Peterson, 1986, Streifel & Servaty-Seib, 2006; 2009), including the present, have acknowledged grief-like symptoms among those in recovery from AOD. The semi-structured interview was an invaluable component of this study. The qualitative face-face interviews functioned as a mechanism for gathering rich data that illustrated the complexity of drug loss in the context of relinquished cannabis use. The semi-structured nature of the interviews allowed me to follow each participant's lead, omit, and rearrange the questions as needed. Furthermore using quantitative in addition to qualitative methods of data collection allowed my advisor and I to compare the themes to results gathered using reliable and valid measures. Another strength relates to the fact that one interviewer conducted all six interviews, transcribed half of the interviews, co-coded all of the data, and wrote up the results.

Significance of Study

Academics, researchers, and clinicians are still working towards an understanding of how surrendered drug use may be experienced as a loss event. Research has suggested that having a strong emotional bond or relationships can have the same effect on individuals' world view and meaning-making (Ainsworth & Bowlby, 1981). This study found that participants tended to allow their cannabis use and association with the cannabis lifestyle to motivate how they

organized their beliefs and actions around using. Most fascinating is how the qualitative themes depicted the grief experiences that are universally recognized in the context of other loss events.

Clinical Implications

The emotional and physical reactions in response to quitting cannabis were apparent throughout participants' interviews. An important consideration for clinicians and researchers is the impact of the ambiguous and disenfranchised loss experience of ending drug use on treatment outcomes. Preexisting mental health disorders also appear to influence their drug loss reactions and treatment outcomes. Furthermore, variations in participants' investment in using tended to correlate with the nature of their emotional reactions to the loss, suggesting it may be worthwhile to explore even further the clinical implications of the emotional bond on short-term and long-term treatment outcomes. Attachment objects that are fundamental to an individual's well-being and contentment are "cathexis objects" (Jennings, 1991), so it makes sense that individuals who felt a strong link between their cannabis use and well-being were more distressed by abstaining.

An ambiguous loss like drug loss is what Boss and Couden (2002) have referred to as a type of loss with which individuals struggle to cope. Integrating this knowledge of the profound effect that relinquishing cannabis use can have on an individual's mental health, sense of self and identity, and social networks, will only benefit treatments. Treating the recovering individual as one who is both 'bereaved' and 'recovering' may help clinicians better meet the unique needs of individuals in treatment and therefore improve treatment outcomes. One additional step that is needed is the development and testing of treatment elements that can be used before, during, and after AOD treatment to address the loss event that is the separation from one's drug of choice. Family therapists are uniquely qualified to develop and administer these interventions since it appears as though the loss event is similar to relational losses such as the loss of a partner or

loved one. It is posited that providing grief counseling to people in drug treatment related to the loss of their identity and the relationship with their drug of choice may improve short and long - term treatment outcomes, and improve the experience of recovery for countless people in treatment.

Future Research

The grief and loss experiences among individuals in substance abuse treatment and recovery have been minimally researched. The novelty of this topic leaves much room for future research. Results from this study indicate that the relational aspects of cannabis and individuals' early life relationships, including attachment injuries, would be particularly beneficial to explore further. In light of the emergence of Matheson's Drug Loss Theory and the findings of the current study, researching individuals' histories with loss events, grief, and bereavement may provide insight to variations in grief experiences after drug loss. Furthermore, the data indicate the majority of participants reported coping motives for using. Researching the influence of adversity and development on individuals' experiences forming, and relinquishing emotional bonds to cannabis is another direction that would contribute to future research on drug loss. More qualitative studies are critical to gaining more insight about the drug loss experience, and work towards the implementation and evaluation of grief-work curriculum in substance abuse treatment.

TABLE 1: DEMOGRAPHIC QUESTIONNAIRE
(N = 6)

		Range	Average
Year of birth		1990-1995	1992
Age when first trying 'drug of choice'		13-18	15
Days involved in BOT		35-120	69
Months without 'drug of choice'		1-11	6
Ethnicity		Gender	
	83%		67%
White (5)	17%	Male (6)	33%
Latino or Hispanic (1)		Female (2)	
Drugs used/abused in the past		Drug of choice entering BOT	
Marijuana	6	Marijuana	4
Alcohol	6	Alcohol and marijuana	1
Cocaine	3	Others: [Mu]shrooms	1
LSD	2		
Ecstasy	2		
Prescription Drugs	2		
*Xanax	1		
*OxyContin, Codeine,	1		
Adderall	2		
Others	1		
*2c-B, DMT,	1		
Psilocyloin, Salvia,			
Dinorum			
*[Mu]shrooms			
Drug used during event leading to BOT		Last time using MJ	
	1	16 or more weeks ago	2
Marijuana	4	14-15 weeks ago	1
Alcohol	1	12-13 weeks ago	1
N/a		8-9 weeks ago	1
		6-7 weeks ago	1

TABLE 2: CUDIT RESULTS
(N = 6)

Participant	CUDIT Total Score	Dependence Level
Janelle	26	Severe
Tyler	25	Severe
Sam	25	Severe
Johnny	23	Moderate
Adam	10	Mild
Sarah	7	Mild
Average Score	19.3	Moderate

TABLE 3: CUDIT ITEM AVERAGES
(N = 6)

Item No.	Question	Average
1	Have you used any cannabis over the past 6 months?	3.8
2	How often do you used cannabis?	2
3	How many hours were you “stoned” on a typical day when you had been using cannabis?	2.66
4	How often were you “stoned” for 6 or more hours?	2
5	How often during the past 6 months did you fail to do what was normally expected from you because of using cannabis?	0.83
6	How often during the past 6 months did you needed to use cannabis in the morning to get yourself going after a heavy session of using cannabis?	1.83
7	How often during the past 6 months did you have a feeling of guilt or remorse after using cannabis?	2.3
8	How often in the past 6 months have you had a problem with your memory or concentration after using cannabis?	1.83
9	Have you or someone else been injured as a result of your use of cannabis?	0
10	Has a relative, friend or a doctor or other health worker been concerned about your use of cannabis or suggested you cut down over the past 6 months?	2.6

TABLE 4: CBI SUBSCALE SCORES
(N = 6)

Participant ID Number	Participant Name	Images/Thoughts Subscale Score	Acute Separation Subscale Score	Grief Subscale Score	Total CBI Score
1.	Janelle	16	12	12	40
2.	Sarah	8	17	5	30
3.	Johnny	14	13	8	35
4.	Tyler	14	13	7	34
5.	Adam	11	7	6	24
6.	Sam	16	13	8	37
Average Scores		13.17	12.5	7.67	33.3

TABLE 6: CBI ITEM AVERAGES
(N = 6)

Question	Total Score	Average Score	Qualitative Answer
Do you experience Images of the events surrounding the time when you stopped using marijuana?	11	1.8 3	Sometimes
Do thoughts of marijuana come into your mind, whether you wish it or not?	11	1.8 3	Sometimes
Do thoughts of weed make you feel distressed?	9	1.5 0	Never/Sometimes
Do you think about marijuana?	15	2.5 0	Sometimes/Often
Do images of pot make you feel distressed?	10	1.6 7	Never/Sometimes
Do you find yourself preoccupied with images or memories of using marijuana?	9	1.5 0	Never/Sometimes
Do you find yourself thinking of a reunion with marijuana?	14	2.3 3	Sometimes/Often
Do you find yourself missing marijuana?	15	2.5 0	Sometimes/Often
Are you reminded by familiar objects (photos, possessions, rooms, etc.) of marijuana?	17	2.8 3	Often
Do you find yourself pining/yearning for marijuana?	12	2.0 0	Sometimes
Do you find yourself looking for marijuana in familiar places?	8	1.6 0	Never/Sometimes
Do you feel distressed/pain if you are confronted with the notion that you won't be able to use pot again?	14	2.3 3	Sometimes
Do reminders of using marijuana cause you to long to use again?	13	2.6 0	Sometimes/Often
Do reminders of using marijuana cause you to feel loneliness?	8	1.3 3	Never
Do reminders of using marijuana cause you to cry about not using anymore?	7	1.1 7	Never
Do reminders of using marijuana cause you to feel sadness?	7	1.1 7	Never
Do reminders of using marijuana cause you to feel loss of enjoyment?	11	1.8 3	Sometimes

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APPENDIX A: DEMOGRAPHIC QUESTIONNAIRE

Year of Birth: _____

Gender: Male Female Other: _____

Ethnicity: Hispanic or Latino Black or African American White

American Indian or Alaskan Native Hawaiian or Other Pacific Islander Asian

Other: _____

Please circle all of the drugs you have used/abused in the past (circle all that apply)

Alcohol Marijuana Heroin Cocaine Methamphetamine

Ecstasy LSD Prescription drug: _____

Other drug: _____

What is the “drug of choice” you were last using before entering treatment this time (circle one only)?

Alcohol Marijuana Heroin Cocaine Methamphetamine

Ecstasy LSD Prescription drug: _____

Other drug: _____

When was the last time you used that “drug of choice”:

1 week or less 2-3 weeks ago 4-5 weeks ago 6-7 weeks ago 8-9 weeks ago

10-11 weeks ago 12-13 weeks ago 14-15 weeks ago 16 or more weeks ago

At what age did you first use that “drug of choice?” _____

What’s the longest time you’ve been without that “drug of choice?” _____

What was the drug that which you were under the influence during the event that resulted in your current involvement at Back on TRAC? _____

How many days have you been involved with Back on TRAC? _____

APPENDIX B: CANNABIS USE DISORDER IDENTIFICATION TEST (CUDIT)

Have you used any cannabis over the past 6 months? Yes No

If YES, please answer the following questions about your cannabis use.

Please tick the box that is most correct for you in relation to your cannabis use over the past 6 months.

1. How often did you use cannabis?

Never	Monthly or less	2-4 times a month	3 times a week	4 or more times per week
0	1	2	3	4

2. How many hours were you “stoned” on a *typical day* when you had been using cannabis?

1 or 2	3 or 4	5 or 6	7 to 9	10 or more
0	1	2	3	4

3. How often were you “stoned” for 6 or more hours?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

4. How often during the past 6 months did you find that you were not able to stop using cannabis once you had started?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

5. How often during the past 6 months did you fail to do what was normally expected from you because of using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

6. How often during the past 6 months did you need to use cannabis in the morning to get yourself going after a heavy session of using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

7. How often during the past 6 months did you have a feeling of guilt or remorse after using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

8. How often in the past 6 months have you had a problem with your memory or concentration after using cannabis?

Never	Less than monthly	Monthly	Weekly	Daily or almost daily
0	1	2	3	4

9. Have you or someone else been injured as a result of your use of cannabis?

No	Yes
0	4

10. Has a relative, friend or a doctor or other health worker been concerned about your use of cannabis or suggested you cut down over the past 6 months?

No	Yes
0	4

APPENDIX C: MODIFIED CORE BEREAVEMENT ITEMS (CBI) SCALE

1. Do you think about marijuana?

Never	Sometimes	Often	Always
1	2	3	4

2. Do you find yourself missing marijuana?

Never	Sometimes	Often	Always
1	2	3	4

3. Are you reminded by familiar objects (photos, possessions, rooms, etc.) of marijuana?

Never	Sometimes	Often	Always
1	2	3	4

4. Do thoughts of marijuana come into your mind whether you wish it or not?

Never	Sometimes	Often	Always
1	2	3	4

5. Do you find yourself thinking of a reunion with marijuana?

Never	Sometimes	Often	Always
1	2	3	4

6. Do you experience images of the events surrounding the time when you stopped using marijuana?

Never	Sometimes	Often	Always
1	2	3	4

7. Do images of pot make you feel distressed?

Never	Sometimes	Often	Always
1	2	3	4

8. Do thoughts of weed make you feel distressed?

Never	Sometimes	Often	Always
1	2	3	4

9. Do you feel distressed/pain if you are confronted with the notion that you won't be able to use pot again?

Never	Sometimes	Often	Always
1	2	3	4

10. Do reminders of using marijuana cause you to feel loss of enjoyment?

Never	Sometimes	Often	Always
1	2	3	4

11. Do reminders of using marijuana cause you to feel loneliness?
 Never Sometimes Often Always
 1 2 3 4
12. Do reminders of using marijuana cause you to long to use again?
 Never Sometimes Often Always
 1 2 3 4
13. Do you find yourself looking for marijuana in familiar places?
 Never Sometimes Often Always
 1 2 3 4
14. Do reminders of using marijuana cause you to feel sadness?
 Never Sometimes Often Always
 1 2 3 4
15. Do you find yourself preoccupied with images or memories of using marijuana?
 Never Sometimes Often Always
 1 2 3 4
16. Do you find yourself pining for/yearning for marijuana?
 Never Sometimes Often Always
 1 2 3 4
17. Do reminders of using marijuana cause you to cry about not using anymore?
 Never Sometimes Often Always
 1 2 3 4

APPENDIX D: INTERVIEW PROTOCOL

Interview Introduction

Well first I just want to thank you for taking the time to participate in this study. This interview will take about 1 hour and it will be about your past marijuana use as well as possible grief reactions you may have had since not using.

You can decide not to answer any of the questions I ask if you'd prefer not to and whether you choose to participate or not will not affect your treatment here at BOT nor your standing at CSU. You may see me jotting down some notes during our conversation today but remember that everything you tell me today will be completely confidential. The way we ensure that is that your name will never be associated with anything you tell me.

The only people who will know or have access to your name are me and Jenn Matheson, my advisor. Neither of us will ever tell anyone whether you participated or not, and the only reason that Jenn Matheson will have access to your name is because she will be the one who will keep your signed informed consent form in a locked cabinet in her office, but I really want to emphasize that she will never know what you said because your name will never be associated with the information we are recording today. Do you have any questions about the informed consent form you read before you came?

Interview Questions

OK, let's go ahead with the first question then.

1. I first want to start off by reviewing what you said on one of your questionnaires.
 - a. You indicated that you, at some point, were using marijuana and getting high for *about X hours out of the day. (question #2 on CUDIT)*

2. So tell me, when did you first use marijuana?
 - a. How old were you?
 - b. How did your use change over time until recently?
3. How much would you say you used marijuana when you first started?
 - a. How much were you using when you quit using this most recent time?
4. What was your preferred way to get high off marijuana?
5. What was it like for you most of the time when you used marijuana?
 - a. What did you enjoy the most about it?
 - b. What did you not enjoy about it?
6. How did you decide to stop using marijuana this most recent time?
 - a. Who was involved with that process?
 - b. What circumstances led to you stopping this time around?
7. When you first stopped using, how did it make you feel physically?
 - a. When were these physical effects of stopping most noticeable for you?
 - b. Say more about what that was like... And what else?
8. Many people really struggle to stay abstinent form marijuana.
 - a. What do you think it is about marijuana that makes it so difficult for people to stop using and not return back to using?
9. What about social situations.
 - a. How do social situations in which marijuana is being used moderately or excessively differ from social situations in which alcohol is being consumed?
10. When you first stopped using, what kind of feelings or thoughts came up for you?
 - a. When where these thoughts or feelings most noticeable for you?

- b. Say more about what that was like... And what else?
11. I saw that on one of your questionnaires you indicated that you do think about using marijuana. That's pretty normal.
- a. How often would you say you find yourself thinking about marijuana? Every minute, hour, day, etc...
 - b. Would you say you spend more time thinking about the sensation of getting or being high or some other aspect of using marijuana? For example the friends you used with, paraphernalia, places you would hang out, etc...
12. When you think about it now, what do you miss about getting or being high?
- a. What would you say you miss the most about getting high?
 - b. Why do you think you miss that part the most?
13. What would you say you miss about being high? Why do you think you miss that part the most?
14. Sometimes people think back on their drug use and describe different factors, like stressful life events or stages of life that may have had an influence over their drug use experience.
- a. Would you say this is true for you?
 - b. How would your marijuana use have been affected if other circumstances in your life had been different?
15. How do you think that the frequency or intensity that you used marijuana is influencing how you're currently feeling about no longer using?
- a. So for example, if you're patterns of use were less/more, would that amplify or minimize your response to this idea of not using marijuana?

16. What are all of the ways that you've noticed that your relationships with others have changed since you stopped using marijuana?
- a. What are some of the positive and negative changes that you attribute to quitting?
 - b. What changed between you and your family members?
 - c. What changed between you and your friends?
 - i. Tell me more about what things were like with you and your friends while you were still using.
 - ii. What would you and your friends do for fun? How has circle of friends changed or stayed the same since you quit using marijuana? Have you noticed other changes in how you interact with your peers/friends?
 - d. Did you have a romantic partner at the time you quit most recently? If so, what changed between you and your significant other?
17. Now I'm going to shift gears slightly now and ask you to think about the future.
- a. Have you given any thought to what your use of marijuana will look like after BOT?
 - b. How did you come to point where you can say that this is what your use will look like?
18. Some people who quit using marijuana never use again, while others choose to use again.
- a. Tell me about all the different ways you've thought about your future with marijuana.
 - b. What feelings come up for you when you think about the possibility of not ever using marijuana again?

- c. What feelings come up for you when you think about having a reunion with marijuana, in other words, choosing to use again?
19. I'm wondering whether or not someone like you who stops using marijuana experiences any feelings of loss at having quit. I'm calling this reaction or response 'drug loss.'
- a. First, I am wondering if you can relate to that idea based on your personal experience? Say more about that.
 - b. Tell me more about how you think of this idea of quitting marijuana as a loss experience.
 - c. If you had to give me an example of that loss, what would it be?
 - d. What has it been like for you?
20. What has been the most difficult part about your decision to stop getting high?
- a. For some people, when marijuana is used in social settings, there is a gradual build-up of things (like doing activities, listening to certain music, or other familiar experiences) that then sort of spark their desire to use and reminders that their use has been lost. I'm curious if you identify with this idea at all. Tell me what you have experienced?
21. If I asked you if you thought you had a bond or relationship with marijuana sort of the way you might have a special bond or relationship with another person, what would you say to that?
22. I'm wondering whether the feelings associated with quitting marijuana are similar to the feelings associated with losing a friend or family member. What do you think?

23. What are some ways that this experience you've had has been similar or different to what you experienced after being separated from or feeling you lost someone you were close to, whether the loss was death-related, or not.
24. Is there anything about your quitting experience or the loss you may have felt that you'd like to tell me?
25. What have I missed?

Interview Debrief

I just want to thank you again for your time. I also want to make sure you are doing OK since we might have talked about some difficult things. How was that experience for you? Is there anything you want to tell me about it? I also just want to remind you again to please speak with your clinician here if anything comes up for you because of this interview. Thank you so much for your time.

APPENDIX E: RECRUITMENT FLYER

Drug Loss Research Study

The purpose of this study is to understand the physical, emotional, cognitive, behavioral, and spiritual reactions of people in BOT who have stopped using marijuana. The concept of drug loss and individuals' experiences of grief and loss will be explored.

If you meet all four of the following criteria, you are eligible:

- Current BOT participants
- Participants who identify marijuana as their drug of choice OR
- Participants who use marijuana as their drug of choice
- Men and women 18 years of age or older

What will you be asked to do?

- Schedule an individual interview
- Complete three questionnaires
- Participate in an audio-recorded, 45-60 minute individual interview

Compensation

- You will receive a coupon for a free UA for your participation in this study

If you have any questions or are interested in participating contact

Brie Bassett or Lisa Miller
University Counseling Center
(970) 491-2426

or

Mackenzie Miller, Co-PI
Master's Student, HDFS
Jenn Matheson, PhD, LMFT
PI and Associate Professor, HDFS
(970) 491-7472

APPENDIX F: INFORMED CONSENT

TITLE OF STUDY: The Experience of Drug Loss among College Students in Treatment for Cannabis Abuse

Principal Investigator:

Jenn Matheson, PhD, LMFT
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1570 Campus Delivery
Fort Collins, CO 80523-1570
970-491-7472
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Co-Principal Investigator:

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WHY AM I BEING INVITED TO TAKE PART IN THIS RESEARCH?

This study is recruiting individuals who are currently involved with the Back on TRAC (BOT) program at Colorado State University (CSU). Individuals who are 18 years of age or older and being treated for either a cannabis use disorder or a polysubstance use disorder are invited to participate in the current study. The goal is to examine the grief reactions and experiences of grief and loss that individuals' have after stopping their use of marijuana.

WHO IS CONDUCTING THE STUDY?

Dr. Jenn Matheson and Mackenzie Miller will be conducting this study. Ms. Miller is a graduate student in the Marriage and Family Therapy program at CSU, and Dr. Matheson is her advisor on this thesis project.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of this study is to understand the physical, emotional, cognitive, behavioral, social, and relational reactions of people in BOT who have stopped using marijuana.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?

Individual interviews will last 45-60 minutes and will take place in a quiet, private room in Aylesworth in the Drugs Alcohol and You (DAY) Programs offices located on CSU's campus. Prior to the interview, participants will be asked to complete a research packet that contains 3 questionnaires that may be completed where and when is most convenient for each participant. It should take no more than 15 minutes to complete all 3 questionnaires.

WHAT WILL I BE ASKED TO DO?

Participants will be asked to do several things: 1) sign up for an individual interview; 2) before the interview session: complete 3 questionnaires and also read-through the informed consent form; 3) bring the completed questionnaires and consent form to the interview; 4) at the interview session: ask any questions you may have about the study and confirm your willingness to participate by signing the consent form; and 5) answer the interview questions while being audio-recorded.

ARE THERE REASONS WHY I WILL NOT BE PERMITTED TO TAKE PART IN THIS STUDY?

Participants will not be allowed to participate if they are not currently involved with BOT. You will not be included if you are not at least 18 years of age. Individuals who do not have a cannabis use disorder or polysubstance use disorder including cannabis use will not be permitted to participate. People who do not identify marijuana as their 'drug of choice' will not be selected to participate. Finally, if you have used marijuana in the last 30 days, you will not be allowed to participate.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There are no serious risks anticipated to anyone who participates. It is possible that as a result of discussing previous drug use, grief-related symptoms could be triggered and you could experience mild psychological distress. We will encourage all participants talk with their BOT clinicians about any symptoms of distress brought on by participation in the study.

It is not possible to identify all potential risks in the research procedures, but the study researchers have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

ARE THERE ANY BENEFITS FROM TAKING PART IN THIS STUDY?

The study is intended to better understand individuals' drug loss experiences after the use of marijuana is discontinued. That is, the grieving process and grief-related symptoms caused by no longer using marijuana will be explored. While there may be no direct benefit to you associated with participating in this research, it is possible that through discussing your drug history, you may better understand the significance of discontinued drug use, the drug loss experience, and the roles that both play in your recovery process. It is also possible that participants experience feelings of relief during and after the individual interview and the unique experiences (both challenging and rewarding) that they have had.

DO I HAVE TO TAKE PART IN THE STUDY?

Your participation in this research study is completely voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision to participate or not participate will not affect or impact your treatment in BOT or your standing as a student at CSU in any way.

WHO WILL SEE THE INFORMATION THAT I GIVE?

We will keep private all research records that identify you, to the extent allowed by law. For this study, a unique research number will be assigned to your questionnaires and your interview transcript. Therefore, the only places that your name will appear in our records are on this consent form and the interview sign-up sheet, neither of which will be linked with the unique research number that you are assigned. You should be aware that for the purpose of confirming your substance use disorder diagnosis, your medical records will be accessed by the BOT medical assistant, Brie Bassett. Because Brie Bassett already has access to BOT participants' medical records, for the purposes of this study, she will be the only individual to view your medical records. Only information pertaining to your substance use disorder diagnosis, and no other information in your medical records, will be viewed, recorded, or used.

To confirm your substance use disorder diagnosis, Mackenzie Miller will work with Brie Bassett in a private room at the BOT office to view and record participants' diagnoses. Following the completion of all individual interviews that will be conducted for this study, the researcher will hand-write each participants' name and corresponding unique research number (1-15) on a sheet of paper. Next, the researcher will sit with Brie Bassett and read-off each participant's name, one at a time. Brie Bassett will then look-up participants' diagnoses as each name is read aloud by the researcher. Next, Brie Bassett will verbally communicate participants' diagnoses back to the researcher. To record the diagnoses of each participant, the researcher will hand-write his or her diagnosis next to the corresponding research number. Immediately after each participant's substance use disorder diagnosis is recorded, the researcher will use a permanent marker to black-out the participant's name. This process will be repeated until each diagnosis has been retrieved and all names have been blacked-out. It is anticipated that it will take no more than 30 minutes to retrieve participants' diagnoses from their medical files. Therefore no link-list will be kept and participants' confidentiality will be maintained.

No lists containing participants' names and corresponding research numbers and/or formal diagnoses will be kept. Participants' medical records will not be within eye-sight of the researcher or another third party. Brie Bassett has been asked to assist with this study because as the BOT medical assistant, she currently and regularly refers to and accesses BOT participants' medical records. For this reason, Brie Bassett will be the only individual with access to the medical records of participants' in this study. This will ensure that participants' medical records are not accessed or viewed unnecessarily (e.g., by the researcher) or by individuals outside of participants' familiar BOT treatment team. These procedures are intended to protect participants' confidentiality.

In order to identify the presence of marijuana in participants, the THC levels obtained from participants' most recent UA's. Information pertaining to participants' THC levels will be collected and recorded. Only the level of THC from participants most recent UA will be recorded. Utilizing the same procedure for recording your formal substance use disorder diagnosis, Brie Bassett will work with the researcher to access and record this select information. Again, no link-list will be kept and participants' confidentiality will be maintained.

Only the research team will have access to the information you provide. All materials associated with the study will be kept in a locked file cabinet only accessible to the principal and co-principal investigators. The digital audio-recordings from the individual interviews will be destroyed immediately after the exact words are transcribed into a Microsoft Word document. Participants' substance use disorder diagnoses and THC levels will be typed into an Excel spreadsheet using the corresponding research number. Again, only the participant's assigned unique research number, not name, will be used.

The only exceptions to the above is if we are asked, for audit purposes, to share our research files with the CSU Institutional Review Board ethics committee. Even if audited, no one would be able to link you to your data.

CAN MY TAKING PART IN THE STUDY END EARLY?

If you do not participate in the individual interview or do not complete the 3 questionnaires, you may be removed from the study. In the event that you are participating in the interview and feel the need to leave before all questions have been asked, whether or not you are excluded from the study will depend on how early-on in the interview you choose to leave.

WILL I RECEIVE ANY COMPENSATION FOR TAKING PART IN THIS STUDY?

A free Urinary Analysis (UA) at Turning Point Youth Center will be offered to each participant as compensation for participation in this study. Following the interview, you will receive a coupon for a free UA at Turning Point. No other compensation will be offered. Your identity/record of receiving compensation (NOT your data) may be made available to CSU officials for financial audit.

WHAT IF I HAVE QUESTIONS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind before the interview. Questions can be directed to Mackenzie Miller (970-491-5991), Lisa Miller or Brie Bassett (970-491-2427). Later, if you have questions about the study, you can contact the co-principal investigator, Mackenzie Miller, at miller.mackenzie@rams.colostate.edu.

If you have any questions about your rights as a volunteer in this research, contact Janelle Barker, Human Research Administrator at [970-491-1655](tel:970-491-1655). We will give you a copy of this consent form to take with you.

WHAT ELSE DO I NEED TO KNOW?

Involvement with this study will require several steps:

1. Inform the co-principal investigator (Mackenzie Miller), BOT medical assistant (Brie Bassett) or BOT director (Lisa Miller) of your interest in participating
2. Select a timeslot to schedule your individual interview using the sign-up sheet available at the BOT office
3. Pick-up your research packet available at the BOT office
 - a. Thoroughly read this informed consent form and complete the 3 questionnaires found within the research packet and bring them to your scheduled interview
4. Review and sign this informed consent form with the researcher while at the interview
5. Attend and participate in the individual, face-to-face interview
6. Receive your coupon for a free UA at Turning Point

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing 4 pages.

Signature of person agreeing to take part in the study

Date

Printed name of person agreeing to take part in the study

Name of person providing information to participant

Date

Signature of Research Staff

Date