Using an Acceptance and Commitment Training Protocol to Decrease Drug Use

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Using an Acceptance and Commitment Training Protocol to Decrease Drug Use

by

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Applied Behavior Analysis
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Abstract

Behavior analysts have had much success in affecting behavior change with individuals diagnosed with intellectual disabilities as well as those who would be considered typically developing with a variety of intervention strategies; most of which involve affecting direct acting contingencies. However, the realm of language-based psychopathology has just begun to be addressed within the field through language based, or indirect acting strategies. Acceptance and Commitment Therapy (ACT) is based on the concept of derived stimulus relations and allows for a behavior analytic treatment of language-based psychopathology. The current study was intended to test the efficacy of a brief protocol-delivered ACT intervention with individuals who smoke marijuana. Oral swab drug screens were the primary dependent variable, along with the Acceptance and Action Questionnaire II (AAQ-II). All six ACT components were taught to each subject using a set list of metaphors and exercises and was assessed using a concurrent/non-concurrent multiple baseline across participants design. Results indicate that the brief protocol impacted levels of marijuana consumption with all three participants and that their self-reported levels of struggle (via the AAQ-II) lessened over the course of the training.
Introduction

The Center for Disease Control and Prevention (1982) reported that marijuana use has been rapidly increasing in frequency among Americans. The CDC estimates that over 25 percent of US citizens have used it. Several adverse effects have been linked to chronic marijuana use. These include; short-term memory impairment, slowness of learning, "amotivational syndrome" described as a pattern of energy loss, diminished performance of valued activities (such as work and school), and harmed family relationships (The CDC, 1982). This suggests that marijuana use, especially chronic use, can lead to problems with engaging in valued types of behavior. Work, school, and other areas that may be important to individuals can be adversely affected by marijuana use.

Fortunately, a behavior analytic approach may provide a valuable course of action for individuals suffering from a broad list of disorders, substance abuse being one of them. The focus is on relational language and the effects that functional verbal relations may produce. This approach is based on the notion that 1) covert verbal behavior is behavior, 2) these covert behaviors participate in relational frames both directly experienced and derived, 3) context supports transformation of function through relational networks, 4) and that the content of thoughts (i.e., cognitions) should be separated from the functional properties that are adversely affecting the individual. Relational Frame Theory (RFT) and its technology, Acceptance and Commitment Therapy (ACT) are behavior analytic approaches to language based disorders, and they provide a functional account for how aversive private events may become pervasive in people’s lives.
ACT and Transformation of Stimulus Function

Forming relational responses between stimuli results in transformation of stimulus functions for all of the stimuli involved (See Hayes, Barnes-Holmes, & Roche, 2001, for information on Relational Frame Theory [RFT]). When two stimuli are related, the function of each stimulus in a relational network is altered according to the stimuli involved and relationship between them. The implication of this process is the potential production of function that does not result from the history of pairing/experience that is said to be required of associative learning. For instance, it is possible to establish a three-member equivalence network whereby one of the stimuli (e.g., B) functions a priori as a discriminative stimulus. As a result of participation in the relational network and due to the contextual control of “equal to”, other stimuli (e.g., C) will acquire discriminative function although the history of pairing is absent.

Another aspect of RFT that has important clinical applications involves the concepts of contextual cues. There are two types of contextual cues; C\textsubscript{func} and C\textsubscript{rel}. A C\textsubscript{func} is a contextual cue that designates how a certain stimulus will function for an individual with respect to that individual’s learning history. C\textsubscript{rel} is a contextual cue that cues an individual to relate stimuli even if the specific relation has never been directly trained (Torneke, 2010). Torneke uses the example of the metaphor, “to argue with him is to be run over by steamroller.” In this sentence the C\textsubscript{rel} would be the word “is,” which cues the reader/listener to relate “to argue with him” and “to be run over by a steamroller.” The C\textsubscript{func} would be, “squashed/run over by a steamroller” which would most likely elicit a powerful aversive function. More specifically, the word “is” cues the listener to form an equivalence frame. When “to be run over by a steamroller” enters into the relational frame of equivalence it transforms the function of “to argue with him.” The ability for humans to relate based
on contextual cues allows humans to form arbitrary relations. Arguing and getting run over by steamrollers share no formal similarities but humans can relate them because of the contextual cues which set the occasion for relational responding.

**Clinical Application**

Humans have evolved the capacity for arbitrary relations because this ability has aided in survival and reproduction. However, language can be a “double-edged sword.” According to Fletcher and Hayes (2005), thoughts are often experienced indirectly, in the form of changes in function, rather than as a process occurring in the moment, which is termed, “cognitive fusion.”

Cognitive fusion, according to Hayes, Strosahl, and Wilson (1999), is defined as, “excessive or improper regulation of behavior by verbal processes, such as rules and derived relational networks.” Cognitive fusion may have some major effects on human behavior. First, temporal and evaluative relations become related to physiological events which may lead to people engaging in prejudice, fear, and attempting to regulate and avoid their own thoughts, feelings, and bodily sensations even when that process is harmful. This specific effect is termed “experiential avoidance” (Boulanger, Hayes, and Pistorello, 2009). Second, the verbal behavior individuals use to describe themselves becomes rigidly rule-governed and insensitive to direct contingencies. Third, human thinking and its reasons, explanations, and justifications for behavior as well as the human ability to temporally reason (remembering the past and thinking about the future) become barriers to staying “in the moment” and contacting direct contingencies (Fletcher & Hayes, 2005).

The effects of these processes caused by cognitive fusion can lead to, “psychological inflexibility” which is, “the inability to persist or change behavior in the service of chosen values”. Psychological inflexibility is created by weak contextual control over verbal behavior. In contexts that promote fusion, human behavior is guided more by inflexible verbal behavior (rule governance) than by actual contingencies (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). This rule governance of
behavior can be useful (ex. being told not to touch something hot like the stove so you never have
to contact that aversive direct contingency). However, when a person formulates a rule such as, “I’m
fat,” even if a loved one voices concerns about how thin they actually are and how malnourished
their body is, “fusion” to verbal rules becomes extremely maladaptive and potentially dangerous.

**Specifics of Acceptance and Commitment Therapy**

Behavior therapy was developed with two distinctions from previous methodologies. It was
designed to produce a scientifically based analysis of behavioral health problems and their treatment
in terms of basic behavior analytic principles and to develop operationally defined and empirically
validated interventions for such problems (Hayes et al., 2006). Many modalities of treatment found
within contemporary cognitive and behavioral therapy are linked to mentalistic constructs and not to
basic principles derived from operationally defined learning theory.

Mindfulness practices have been recognized for thousands of years as effective means of
self-regulation. There are many definitions of the term, but Acceptance and Commitment Therapy
(ACT) defines it as, “the defusing, accepting, open contact with the present moment and the private
events it contains as a conscious human being experientially distinct from the content being noticed”
(Fletcher & Hayes, 2005). Traditional Cognitive-Behavior Therapy (CBT) deals with thoughts by
aiming to dispute and restructure their content, while ACT focuses on the relationship between the
person and their thoughts and feelings. In other words, CBT aims to change topography and
frequency of verbal events while ACT aims to transform the function of those events.

The primary implications of RFT in respect to ACT are: (1) adaptive verbal behavior is
based on some of the same processes that can lead to psychopathology so it is not forthcoming to
eliminate these processes (or possible), (2) the idea that cognitive networks can be restricted or
eliminated is not sound from a behavior analytic perspective because these networks are the result of
historical learning processes (you can’t unlearn you’re learning history); (3) attempts to change
aspects of a relational network (telling an individual not to think about something) actually makes those aspects more salient, worsening the problem; (4) it is possible to reduce the impact of aversive private events without reducing the frequency of them since they are controlled by contextual variables. In summary, these implications mean that it is not necessary to focus exclusively on the content of cognitive networks in clinical intervention; it is better to focus on their functions instead (Hayes et al, 2006).

From an ACT/RFT point of view, while psychological problems can emerge from the absence of relational abilities (severe intellectual disabilities for example), a primary source of psychopathology is, “the way that language and cognition interact with direct contingencies to produce an inability to persist or change behavior in the service of long-term valued ends” (Hayes et al., 2006).

ACT is built on six dimensions that are interchangeable and connected. The main purpose of ACT is to undermine cognitive fusion in a safe and nonjudgmental environment. ACT uses some of the same concepts as humanistic psychology when it comes to clinical interaction such as providing a safe environment for an individual who wishes to change their behavior and the clinician does not choose the behavior wished to be changed. There is no evidence that all six components need to be used and there is no set order in which they must be utilized. The ACT model contains the following six components listed here in short order as adapted from Hayes et al. (2006), for more description, refer to Appendix A.

**Acceptance.** Acceptance, involves the nonjudgmental embrace of covert verbal behavior occasioned by an individual’s reinforcement and punishment history without attempting to change frequency or form, even when doing so could increase psychological harm (making undesirable private events more salient)
Cognitive defusion. Cognitive defusion attempts to alter the functions of aversive thoughts and other private events, rather than trying to alter their topography or frequency.

Being present. Being present refers to ongoing non-judgmental contact with psychological and environmental events as they occur.

Self as context. Self as context refers to the separation of the person from the words used to describe the person.

Values. Values are seen as rules that identify chosen reinforcers that are intangible and not able to be acquired, but can be instantiated moment by moment.”

Committed action. ACT encourages the development of larger and larger patterns of effective action linked to chosen values—thus committed action is a sort of goal setting of behaviors that match with the individual’s values.
Research on ACT

The efficacy of ACT has been investigated for anxiety (Dalrymple & Herbert, 2007; Eifert et al., 2009), pervasive stress at the workplace (Flaxman & Bond, 2010), for positive psychotic symptoms (Bach & Hayes, 2002), schizophrenia (Veiga-Martinez, Perez-Alvarez, & Garcia-Montes, 2008), and has been compared to traditional cognitive therapy (Forman, Herbert, Moitra, Yeomans, & Geller, 2007) as well. ACT has been shown to be very promising as an intervention for substance abuse as well.

Hayes, Wilson, et al. (2004) compared Methadone Maintenance (MM) alone to methadone maintenance in combination with 16 weeks of either Intensive Twelve-Step Facilitation (ITSF) or ACT. Results showed that the addition of ACT was associated with lower objectively assessed opiate and total drug use during follow-up than methadone maintenance alone, and lower subjective measures of total drug use at follow-up. Most measures of adjustment and psychological distress improved in all conditions, but there was no evidence of differential improvement across conditions in these areas. The ITSF group showed a reduction from intervention to follow-up in percentage of negative drug screens whereas the ACT group showed a continuous upward trend in negative drug screens throughout pre and post-treatment and in follow-up. Both ACT and ITSF merit further exploration as a means of reducing severe drug abuse.

Gifford et al. (2004) conducted a pilot study to test whether ACT is more or less effective than Nicotine Replacement Therapy (NRT) in helping individuals quit smoking tobacco. The study randomly assigned individuals (n = 76) to ACT or NRT. The NRT group received a brief session with a licensed psychiatrist and free nicotine patches while the other group received standard ACT
treatment. The study found that there was no difference between groups at post-treatment but the ACT group showed significantly higher abstinence rates at follow-up.

Hernandez-Lopez, Luciano, Bricker, Roales-Nieto, and Montesinos (2009) conducted a preliminary study to compare ACT and CBT to reduce tobacco smoking. The results showed that ACT may be an effective treatment in assisting individuals to stop smoking tobacco. However, the study was quasi-experimental and does not demonstrate a functional relation between ACT and the prevalence of individuals successfully quitting. Also, the study had a small sample size (n = 81) with limited statistical power according to the authors (Hernandez-Lopez et al.).

In a case study performed by Batten and Hayes (2005), ACT helped an individual suffering from substance abuse with comorbid PTSD reduce psychological distress (as measured using self-report rating scales) and drug-using frequency to zero level.

Smout et al. (2010) investigated whether ACT would increase treatment attendance and reduce methamphetamine-use and related issues compared to cognitive behavior therapy. There were 104 adult participants who engaged in methamphetamine use, who were randomly assigned to receive 12 weekly 60-minute individual sessions of ACT or CBT. There were no significant differences between the treatment groups in treatment attendance and methamphetamine-related outcomes however, methamphetamine use (toxicology-assessed and self-reported), negative consequences, and dependence severity significantly improved over time in both groups (Smout et al., 2010). However, ACT did not improve treatment outcomes or attendance compared to CBT.

Stotts et al. (2012) developed and tested a treatment based on ACT to assist in opioid detoxification. Success rates for opioid detoxification are very low. This may be due to overt and covert symptoms associated with opioid withdrawal. Few therapies account for the aversive stimulation that is specific to opioid withdrawal. The participants of the study were opioid dependent patients who were attending a licensed methadone clinic. The participants were
randomized to receive 24 individual therapy sessions of ACT or treatment as usual in a six month period. No difference was found for opioid use during treatment. However, 37 percent of participants in the ACT condition were successfully detoxified at the end of treatment compared to 19 percent of those who received treatment as usual (drug counseling) (Stotts et al., 2012). Other self-report measures such as fear of detoxification were also reduced across time in the ACT condition compared to the drug counseling condition.

Twohig, Schoenberger, and Hayes (2007) utilized ACT to reduce marijuana consumption. Three adults who met criteria for marijuana dependence were treated using an abbreviated version of ACT. The participants attended eight weekly 90-minute individual sessions. The effect of the intervention was assessed using a noncurrent multiple baseline across participants design. Self-reported marijuana use, confirmed through oral swabs, reached zero levels for all participants at post-treatment. At a 3-month follow-up, one participant was still abstinent and the other 2 were using but at a lower average level of consumption compared to baseline. Depression, anxiety, withdrawal symptoms, and general levels of experiential avoidance improved. This preliminary study suggested that a protocol version of ACT may be found efficacious and that single subject designs can be used to analyze intervention effects. It suggests that ACT may be effective in decreasing marijuana use among typically developing individuals and that further research is warranted for this population.

There are some limitations in the research performed on ACT in the context of substance abuse. First, most of the studies available do not measure overt behavior; instead they use self-report assessments that can be interpreted differently by different individuals. In some studies, self-report forms are created by the researchers and then used as a dependent variable without any test of validity first. One possible way to improve and add to the literature on ACT’s effects on behavior would be to measure overt behavior in addition to self-report rating scales. For depression,
engagement of value-consistent activities could be measured. For anxiety, the frequency of avoidance behavior could be measured (the number of activities a person avoids due to aversive stimulus functions could be measured by someone other than the individual suffering from experiential avoidance such as a significant other or family member).

Second, the use of quasi-experimental designs and small \( n \) group studies falls short of supporting generalizations to other populations. It could be useful to use standard behavior analytic single-subject research methodology as in Twohig et al. (2007) (although the data collection methods were still primarily self report measures) to examine individual changes in behavior and then move on to larger comparative group study methodology with large samples. The use of overt behavior measures and single-subject design could also help improve the acceptance of ACT as a behavior analytic procedure.

Many studies have been performed to test the efficacy of ACT with typical adults for various issues including drug use but none have used a strict protocol delivered intervention with little to no clinical dialogue. Rather, protocols are used as guides as a way to cover specific components since the protocols are intended for clinical psychology use. No studies have attempted to use only behavioral shaping, teaching using only metaphors, and behavioral activation components. Also, only one study using ACT for individuals who suffer from drug abuse has utilized single subject design and this study utilized mostly self-report measures (self-reported frequency of use). They performed drug screens at only three points in the study for each participant.

The purpose of the current study was to investigate the effectiveness of ACT as an intervention utilizing teaching on mindfulness components, and behavioral exercises for decreasing marijuana use with individuals who met the criteria for marijuana dependence using single subject design. The study utilized a more stringent dependent measure than previous research, a more behaviorally oriented protocol, and used single subject design.
Method

Participants

Three participants were recruited to complete the study. One participant was recruited from an assisted living rehabilitation center for individuals diagnosed with Traumatic Brain Injury (TBI) and two from the general public using flyers placed throughout the community. Each participant signed a consent form. All individuals met the criteria for marijuana dependence (as defined by the American Psychiatric Association, 2000) and indicated a desire to decrease their drug use. A diagnosis of substance dependence is made if three or more of the following criteria occur at any time in the same 12-month period: tolerance, withdrawal, having a persistent desire to cut back or control substance use and unsuccessful attempts to do so, spending a considerable amount of time obtaining the substance(s), social, occupational or recreational activities are given up or reduced because of use of the substance, and/or the substance is used despite knowledge of persistent or recurrent physical or psychological problems caused by that particular substance (American Psychiatric Association).

Tolerance is defined by any or all of the following: a need for markedly increased amounts of the substance to achieve intoxication or the desired effect and/or markedly diminished effect on the user with continued use of the same amount of the substance (American Psychiatric Association, 2000). Withdrawal is described as either of the following: characteristic withdrawal symptoms from the substance such as insomnia, restlessness, loss of appetite, depression, irritability, and anger or consuming a closely related substance to relieve or avoid withdrawal symptoms (American Psychiatric Association).

Participant 1 was a 28 year old female with no mental illness diagnosis. She was a student at
the time of the study and expressed the desire to decrease her use mainly in order to perform better in her studies. The participant indicated that drug use also kept her from engaging in valued leisure activities and attaining a desirable job due to random drug screens.

Participant 2 was a 32 year old male with no mental illness diagnosis. He was also a student at the time of the study. The participant had a history of chronic opiate use, and had been incarcerated several times due to his use. However, the individual was only engaging in marijuana use at the time of the study. Participant 2 indicated that drug use kept him from engaging in social activities and was greatly affecting his performance in school.

Participant 3 was recruited from a facility for individuals with a diagnosis of TBI. The subject was a 52 year old male who had a history of chronic marijuana, cocaine, methamphetamine, and opiate use. However, the individual was only engaging in marijuana use at the facility. The individual’s goal was to reduce but not eliminate use in order to gain his independence by leaving the facility. The participant indicated that he enjoyed smoking marijuana and that it caused no problems with the exception of delaying his achievement of independence.

Setting

The brain injury facility where part of this study was conducted (for participant 3 only) contains a main room, which locks down with the press of a button, a large outdoor recreational field with a basketball goal and other activities, and group homes/apartments. This facility is dedicated to individuals diagnosed with TBI and is staffed 24 hours each day. Staff members are responsible for resident safety at all times and prohibited from engaging in behaviors that may impede this duty.

Sessions for participant 3 were performed in training rooms for new employees and recreational facilities and a nature trail on the grounds at the main facility. The staff training areas were 3m by 4m with a lockable door and large rectangular table in the center. The nature trail wraps
around the facility and is roughly one quarter of a mile long. It has benches throughout and was
used infrequently.

For participants 1 and 2, which were recruited from the general population from flyers
attended sessions (including an intake session before the research begins) at The University of South
Florida (Tampa and St. Petersburg campuses) in private rooms found in the main library of each
campus. The primary investigator arrived in the reserved room 15 min before the participant to
ensure confidentiality. The rooms have lockable doors and all information gathered in sessions was
discarded after relevant data were transcribed under a pseudo name.

Dependent Variable

Drug use was the primary dependent variable. Psychological flexibility was also measured as a
secondary self-report measure and is describe later. The target behavior of drug use is defined as
followed:

Drug use. This behavior is defined as the act of consuming illicit psychoactive substances
(marijuana or synthetic cannabinoids for the purposes of this study).

Dependent Measures

Three measures were used in this investigation. The main dependent measure was oral swab
drug screen. Secondary measures included self-reported frequency of drug use, and a self-report
measure of psychological flexibility called the Acceptance and Action Questionnaire II (AAQ-II;
Bond, Hayes, Baer, et al., 2011). A stimulus preference assessment was used to find potential
reinforcers for each individual as well.

Oral swab drug testing. Marijuana use was monitored weekly by using instant drug screens.
The participant was swabbed then tested for marijuana and other drug derivatives three times
weekly. A six-panel oral swab test was used. All six drugs were tracked (amphetamines, cocaine,
marijuana, opiates, meth-amphetamines, and phencyclidine (PCP)) but marijuana use was the
primary focus. The other drugs were tracked to see if other forms of drug use increased in frequency during the study. The oral swab tests can detect marijuana use up to 24 hr prior to testing, and only the presence or absence of marijuana metabolites (a dichotomous rather than a continuous measure) were reported by the tests. The drug screens were administered on a variable time (VT) schedule. To ensure randomization of drugs screens and to decrease predictability, poker chips with each day of the week were created and then placed in a cup. Three of the chips were drawn by one of the investigators in the study each Monday, which designated what day drug screens were to be administered (participants were screened on the same days). The screens were FDA approved and tested for validity by the FDA. FDA approved screens were utilized to ensure there were no false positive or negative readings.

For each participant, an oral swab test specifically made to test for synthetic cannabinoids was administered one time during the study. These screens test for six compounds of synthetic cannabinoids. They were administered when frequency of positive drug screens reduced dramatically to test for substitution of substances or at follow-up, whichever occurred first. This measure was included because smoking synthetic cannabinoids may be a confounding variable in that a shift in drug use might have occurred upon a reduction in marijuana intake.

**Intake self-monitoring (self-reported drug use).** Based on the procedures of Twohig et al. (2007), participants were given index cards and asked to place a mark on the card each time they use marijuana. Because the participants used varying methods and amounts of substances, they were instructed to use the metric that most closely fit with the amount they used (e.g., joints per day or single use pipes). This metric, although not exact, was applied consistently across time for both baseline and intervention to allow the detection of changes in the most applicable measurement unit for each participant as a function of the introduction of the independent variable (ACT). Self-reported frequency was helpful in identifying changes in level, trend, and variability considering they
tracked their drug use throughout the study beginning in baseline. Tracking drug use may affect the frequency of the behavior but since it was done in both baseline and intervention, it should be a minimal threat to internal validity. At each ACT session, the participants reported the intake amounts to the experimenter. In an attempt to collect reliable data, the subject was ensured that the self-reported data would remain confidential in order to avoid aversive consequences such as disapproval from others. Time was spent at the first (intake) session teaching the individuals how to take data. This measure served as a secondary dependent variable and had two purposes; to test whether this is a valid measure with this specific population (does the self-report data correspond with the drug screens?), and to have more data to analyze for each participant.

Acceptance and Action Questionnaire (AAQ-II). The AAQ-II (Bond, Hayes, Baer, et al., 2011) is a seven-item questionnaire and the questions are rated on a seven-point Likert-type scale. Lower scores reflect greater experiential willingness and ability to act in the presence of difficult thoughts and feelings. The AAQ-II has been found to be reliable self-report measure and has good convergent and discriminant validity (Bond, Hayes, Baer, et al.). The AAQ-II was used for all participants in the study.

Stimulus preference assessment. This assessment was utilized to find preferred items for each individual in an effort to reinforce attendance at therapy sessions. It is a short open ended questionnaire which the therapist read to each individual, and can be found in Appendix C. These items (coffee and pastries for participants 1 and 2 and fishing magazines for participant 3) were provided after a completed therapy session. The items were not given contingent upon particular behaviors during session or frequency of marijuana use, they were contingent on only attendance of sessions.
Research Design

The primary dependent variable of the intervention was evaluated using a concurrent (participants 1 and 2) and nonconcurrent (participant 3) multiple baseline across participants design. Each component of intervention was staggered across participants. For the concurrent participants, there was a two-week stagger in intervention implementation, meaning the second participant started on week three of treatment for the first participant. The drug screens (y-axis) were rated as percent of positive drug screens. This design was chosen in an attempt to show experimental control (change in frequency of positive drug screens is a direct result of the independent variable (ACT)) without utilizing a reversal since the ACT skill set cannot be unlearned in a return to baseline.

The AAQ-II scores were displayed as a pre-treatment, post-treatment, and follow-up bar graph to illustrate changes in psychological flexibility. The multiple baselines were utilized to show changes in overt behavior, while the AAQ-II was utilized in an effort to show whether or not a change in psychological flexibility changed the participants’ overt behavior.

Treatment Integrity and IOA

All sessions were videotaped, and one randomly selected tape of each session was scored for treatment integrity. For example, for the values session, one participant’s session was scored for integrity. A research assistant watched the video and graded each session. The observer had a copy of Appendix A and scored the individual session. For treatment integrity, 33 percent of all sessions were scored. Percentage of items correctly covered by the therapist was then calculated as treatment integrity. This was calculated by dividing the number of items covered correctly by the total number of items covered. The observer scored two components: whether or not each exercise/metaphor was in the predetermined list of possibilities for that session and whether the therapist implemented it correctly.

Participant 3 attended neurocognitive therapy, art therapy, physical therapy, and saw a licensed
mental health counselor. Those treatments were kept consistent throughout the study as to not add any confounding treatment variables. Prior to the intervention, the primary researcher of this study met with the case manager for participant 3 to ensure that his schedule remained constant throughout the intervention.
Procedure

Treatment consisted of an introductory session followed by five weeks of hour-long ACT sessions involving one primary component of the ACT model which were delivered once weekly as a protocol (Hayes et al., 1999). This specific protocol was created for drug use and abbreviated for use in this study. A list of possible metaphors and exercises was compiled (see Appendix B). Also, worksheets were utilized and are located in Appendix C. Verbal assent was required before each session. The therapist read the contextual cues within the session as well as their prior knowledge about the participant and their problems to determine which exercises and metaphors to use. Knowledge about the participant was collected from the stimulus preference assessment interview conducted in the introductory session and provided important tools for sessions (see Appendix B). For example, if a participant expressed an interest in fishing, the fishing metaphor that involves relating hooking a fish to getting “hooked” to ineffective verbal rules, would most likely be effective. In a different example, if a participant had no prior knowledge of chess or disliked chess, the chessboard metaphor mostly likely would not be effective.

There was a final exercise introduced in each session to probe whether or not the skill set for that component was effectively taught. If the individual was able to relate their drug use with the final exercise/metaphor it was used as a discriminative stimulus to move on. The protocol that was delivered to participants was the same for typical adults and adults with TBI as well as the session-by-session breakdown. The metaphors and exercises are designed to be effective for anyone who is verbally capable. These same metaphors have been used in previous literature and have found to be effective for drug use and abuse.
Session one (intake session).

The first session began with 10 min of rapport building time. The primary investigator introduced themself and had a brief discussion with each participant about their drug use.

During this session the participant completed a university-approved consent form, completed the AAQ-II, and was shown how to record their own drug use for the self-report measure. They were shown how to self-monitor his or her marijuana intake. The informed consent was provided with a discussion of the ACT model (what ACT is and what it involves), the importance of experiential exercises, practicing skills, and possible adverse experiences. Participants then complete an oral swab drug screen. The consent form indicated that the participant would receive three drug screens each week.

A stimulus preference assessment interview was conducted with each individual to identify potential inexpensive reinforcers to provide contingent on attending sessions. Each participant was told that a reinforcer will be provided after each attended session (they must stay for the entire session). Correct responses (explaining session material correctly) and participation related to specific exercises was reinforced with socially mediated positive reinforcement. The participant only received praise directly following deliteralization of language and participation in exercises and discussion, not selection of values. This is important because the therapist runs into the danger of reinforcing inaccurate verbal behavior instead of utilization and generalization/maintenance of ACT skills. Lastly, the participant was asked to complete a values questionnaire (Harris, 2009) for homework. This worksheet helped the participant identify values that are important to them and rate how much they engaged in valued behavior.

Session two. The content of the previous session was discussed first (ACT overview) followed by completion of the values questionnaire worksheet (Harris, 2009) if it was not completed for homework. A discussion was held about how values and goals are functionally different. The
The goal of the session was to transform the function of ineffective pliant rules and bring behavior under the control of direct contingencies (tracking). Pliant rules are verbally stated contingencies that are maintained by socially mediated consequences (Hayes, Barnes-Holmes, & Roche, 2001). Tracking rules are verbally stated contingencies that are maintained by the direct contingencies themselves (Hayes et al., 2001). The therapist engaged the participant in several metaphorical exercises that helped establish behavior that corresponds with values as reinforcing events in and of themselves (correspondence of values and actual behavior becomes a conditioned reinforcer). The final metaphorical exercise determined whether to end the session or perform a booster exercise. The final metaphor was the Bull’s Eye exercise. The participant was introduced to the analogy of their life’s direction and a bull’s eye found on a dartboard. Then, the participant was asked to show on a Bull’s Eye worksheet how their life was in accordance with their values. If the participant was unable to make the connection, a booster metaphorical exercise would have been chosen out of the list in Appendix A that was not utilized during the therapy session. When the session closed, the participant was also asked to make a list of as many of their values as they could on notecards provided by the therapist. This list was something they would be encouraged to look at frequently throughout the day.

**Session three.** The session began with a brief discussion of values and the homework assignment. If the homework assignment was not completed, it was to be completed briefly during this time. Creative hopelessness is a term used in ACT where the therapist attempts to create an establishing operation for committed action. The therapist took the participant through several metaphors and exercises in order to make sure the participant grasped the concept of creative hopelessness and then introduced the concept of acceptance. There was one final exercise, which was to be the discriminative stimulus for ending the session or for additional teaching (another metaphorical exercise).
For creative hopelessness, the final metaphorical exercise was the Man in the Hole metaphor. The participant was asked to explain how the metaphor applied to their drug use. For example, the participant could have said, “all these things I’ve done to control my drug use have dug me deeper into the hole of addiction, in order to get out of the hole I need to put down the shovel and quit trying to control what I think about and how often I think about it” or, “I just need to drop the shovel.” Correct responses and participation in the exercises were reinforced with socially mediated positive reinforcement (praise). If the participant stated, “I don’t know” or stated something that is irrelevant to creative hopelessness, the therapist would have provided corrective feedback allowing for questions and discussion about the metaphor. Then, an additional metaphor would have been introduced (picked from the list of possible metaphors from Appendix A that wasn’t introduced during the session).

**Session four.** The session began with a brief (2-3 min) discussion of the concepts from the last session (creative hopelessness). Next, the participant was taken through several metaphors and exercises about the concept of acceptance. The goal of the session was to teach the individual how thought suppression makes verbal events more salient and to teach the skill of allowing aversive private events to occur without attempting to change topography or frequency, which facilitates habituation of the aversive properties of those private events. The final metaphorical exercise for acceptance was the Tin Can Monster exercise (Hayes et al., 2011). This exercise involved the relating of a huge monster made of tin cans and string to aversive private events. It is used to teach individuals how to see thoughts as an observer instead of fusing them with reality. If the individual was able to participate with the exercise and relate it to their own experience the session ended and if not, a booster exercise would have been chosen from the list in Appendix A that was not utilized within the session. The therapist asked the participant to start practicing some acceptance exercises
for homework if they were willing. The exercises were used for specific aversive private events identified during the session and chosen by the participant and the therapist.

**Session five.** The session began with a brief (2-3 min) discussion of acceptance. Next, the participant was taken through several metaphors and exercises about the concept of cognitive defusion and being present. The primary goal was for the participant to begin to deliteralize verbal events in the moment. This session, like values, was intended to bring behavior under control of tracking rules instead of pliant rules. The session ended with the Beautiful Cup metaphor (Hayes et al., 2011). If the participant was able to point out that evaluations are not truth and relate the metaphor to their private events the session ended. If not, corrective feedback would have been provided and another metaphor would have been introduced from Appendix A that was not introduced during the session.

**Session six.** This session, which focused on committed action, began with a brief (2-3 min) discussion of the concepts (defusion and contact with the present moment) from the last session. The discussion about committed action began with the Setting Values-Based Goals Worksheet, adapted from Harris (2009), which helped to choose a domain of life that is a high priority for change, choose the values to pursue within this domain, develop goals which are guided by values, and take action mindfully (Harris, 2009). Next, the participant was taken through several metaphors and exercises about the concept of committed action. The goal of the session was to engage in formative and motivative augmenting. Formative augmenting is behavior due to relational networks that establish given consequences as reinforcers or punishers (Hayes et al., 2001). Motivative augmenting is behavior due to relational networks that temporarily alter the degree to which previously established consequences function as reinforcers or punishers (Hayes et al.). Another worksheet was then completed and discussed. The final metaphorical exercise was the Passengers on a Bus exercise. Private events were related as passengers on the bus (the participant) heading in the
valued direction of the individual. This was physically acted out with the therapist saying the types of aversive thoughts the participant has described in previous sessions while the participant tried to walk towards a landmark, which was told to represent valued direction. This exercise brings all the previously taught components together. Accepting private events, defusing them as reality, acting in accordance with values, and taking committed action in the present moment. As in the previous sessions, if the participant did not accurately relate the metaphorical exercise to their own private events or verbally stated they do not understand, booster exercises would have taken place as needed. If time was up and the individual did not grasp the concept of committed action, a short 30 min booster session would have been scheduled for the following week. A concluding discussion binding all six components and the participant’s plans was then held to conclude the fifth session and the participant were thanked for being a part of the study.
Results

Figure 1 shows the percentage of positive drug screens (out of three) per week for all three participants across baseline, intervention, and four weeks of follow-up. Figure 1 indicates that the ACT intervention was successful in reducing frequency of drug use for all three participants. For all participants, drug use remained high after the first and second session (values and creative hopelessness) but began a downward trend around the third session (acceptance). Although the data varies, all participants remained at low levels throughout the four follow-up weeks. All participants had one positive drug screen during the last follow-up week. The X data point shows that a week of synthetic cannabinoids screens was run and that tests for all participants were negative. Figure 2 illustrates the self-reported frequency of drug use for all three participants. In figure 2, the data for participants 1 and 2 closely resemble the level, trend, and variability seen in figure 1. However, participant 3 reported no drug use throughout the entirety of the study.

Participant 1

The data illustrates a decrease from 100 percent to 67 percent of positive drug screens (two out of three screens) beginning in session two (creative hopelessness). The data remains stable at 67 percent, then drops down to 33 percent after session five (committed action) and remains at low levels throughout follow-up.

Figure 2 illustrates the extreme high levels at which this person was using prior to the study, in excess of 60 times per week which decreased to 11 times per week during the last week of follow-up data collection.

Figure 3 shows the scores of the AAQ-II test during baseline (42), after the completion of treatment (28), and during the last follow-up week (30). Higher scores (highest score is 49) indicate
more suffering in the individual’s life. Participant 1 showed a large decrease in score after treatment, then a slight increase at follow-up, which means the treatment may have aided in an increase in psychological flexibility.

**Participant 2**

Figure 1 shows a decrease to 67 percent of positive drug screens (two out of three screens) beginning in session two (creative hopelessness) then steadily decreasing to zero percent by session 4 (defusion). The data increased back to 33 percent after session 5 (committed action but remains at low levels throughout the four follow-up weeks.

Figure 2 show high levels of use (in excess of 45 times per week) during baseline for this participant. By the end of treatment, the individual reported using less than 10 times per week, and remained at low levels throughout follow-up.

Figure 4 shows the scores of the AAQ-II test during baseline (35), after the completion of treatment (32), and during the last follow-up week (32). Higher scores (highest score is 49) indicate more suffering in the individual’s life. Participant 2 showed a small decrease in score after treatment, then had the same score at follow-up, which means the treatment may have aided in a small increase in psychological flexibility.

**Participant 3**

According the Figure 1, the frequency of positive screens reduced to zero levels after four ACT sessions. The data show a brief increase in positive screens after the last session but immediately returned to zero levels afterwards. During the four follow-up weeks (beginning with week 9), the participant remained at low levels of use ranging from zero percent to 33 percent of positive drug screens.

According to Figure 2, the participant reported that they did not smoke marijuana throughout the entire study, which contradicts the oral swab screen results. Considering the higher
reliability of the drug screen data, this suggests that the self-report data was most likely not a valid measure for this participant.

Figure 5 shows the AAQ-II scores for baseline (37), post-intervention (30), and follow-up (28). The data show an increase in psychological flexibility (lower score suggests higher flexibility) at post-treatment and further increase at follow-up.

**Treatment Integrity**

Treatment integrity was also measured, and integrity was 100 percent for each of five sessions graded, meaning the therapist adhered to treatment methods validated in previous research. It ensured that the therapist delivered the correct material in the way in which it is supposed to be delivered and that the material was delivered in a true protocolized method.
Fig. 1 shows the percentage of positive drug screens (out of three) per week for all three participants across baseline, intervention, and four weeks of follow-up. The letters on the x-axis indicate which session was delivered (V means the values session was delivered, CH means creative hopelessness, A means acceptance, D means defusion, CA means committed action, FU refers to follow-up weeks). The X data points show synthetic cannabinoids probes. The dashed lines indicate that participant 3 was run nonconcurrently.
Fig. 2 shows the self reported frequency of drug use per week for all three participants across baseline, intervention, and four weeks of follow-up. The letters on the x-axis indicate which session was delivered (V means the values session was delivered, CH means creative hopelessness, A means acceptance, D means defusion, CA means committed action, FU refers to follow-up weeks). The dashed lines indicate that participant 3 was run nonconcurrently.
Fig. 3 shows AAQ-II scores during baseline, post-treatment, and follow-up for participant 1. Lower scores equate to higher psychological flexibility.

Fig. 4 shows the AAQ-II scores during baseline, post-treatment, and follow-up for participant 2. Lower scores equate to higher psychological flexibility.
Fig. 5 shows the AAQ-II scores during baseline, post-treatment, and follow-up for participant 3. Lower scores equate to higher psychological flexibility.
Discussion

The results indicate that the protocolized ACT intervention was effective in decreasing drug use for these three individuals. All individuals showed a decrease in drug use levels at various points after the intervention was implemented. The AAQ-II scores also indicate that the individuals were more able to behave in accordance to their values while in the presence of aversive stimulation resulting from ineffective rules and control strategies. While not a direct goal of mindfulness-based procedures such as seen in this intervention, all three participants verbally reported that they suffered less.

It is important to note that the purpose was to decrease drug use, not eliminate it. ACT takes the stance that the purpose of treatment should be to bring behavior under the control of the individual’s values being careful not to impose the values of the therapist upon the individual receiving treatment. Therefore, if the participant does not want to completely stop using drugs, the person implementing intervention must not encourage the individual to do so. Participant 1 did stop using marijuana immediately after treatment but was still using marijuana at follow up (although at a much lower level). Also, at follow-up for participants 1 and 3, the first drug screen was negative and the second drug screen was positive, indicating that the decrease was most likely not due to testing effects (the participants had no prior knowledge drug screening was going to take place). It was also interesting that participant 2 completely stopped using marijuana at two points in the study according to the data, which is interesting considering that their goal was to decrease (not eliminate) use.

The decrease in drug use and decrease in AAQ-II scores indicate that the individuals’ behavior may have become less regulated by pliant rules and more regulated by tracking rules as well.
as direct contingencies. In other words, the individuals may have been able to behave differently in the presence of aversive discriminative stimuli (verbal rules) due to the ACT intervention’s training on how to discriminate between rules and direct contingencies, while valuing may have increased the reinforcing properties of replacement behaviors and decreased reinforcing properties of smoking marijuana (augmenting). Also, the intervention may have brought behavior under direct reinforcing contingencies involved with not using marijuana such as social praise and engaging in reinforcing activities.

New approaches to behavior change following from a behavior analytic conceptual system should be investigated that expand the boundaries of populations and behavioral deficits and excesses that may be effectively impacted. Over the course of five decades, there is little in the behavior analytic literature on drug use and/or misuse compared to other topics. In fact, it can be argued that a direct contingency analysis does not have enough power to affect change given the reinforcers involved in drug use are so powerful (both positively and negatively reinforcing). Attempting to affect the verbal behavior that surrounds and relates to the act of drug intake, as seen herein, may improve outcomes for individuals who struggle with drug dependence/abuse. This avenue, looking at function altering effects in relational languaging, may open clinical behavior analysis to areas that have long been the domain of mainstream psychology and other fields (e.g., medical management of drug dependence such as methadone, judicial management through punishing means, educational management through delivery of delayed deleterious effects of drug misuse/abuse, etc.). A great deal more work is needed before ascertaining this approach is a valid one, and that it can be delivered in a protocol fashion that focus on teaching the participant to understand the components of ACT rather than a therapeutic relationship; however, the beginnings are showing promise.
There were some limitations in the present study. The third participant was not linked to another participant in a concurrent multiple baseline but was, however, linked nonconcurrently to participants 1 and 2, which were run concurrently. This study was delivered in a strict protocol-delivered method, with minimal to no clinical dialogue. A more personalized treatment delivered by a licensed clinical psychologist could have aided in the participants’ treatment. Also, the study could have resulted in different findings if a different order of ACT components was utilized. Different exercises and worksheets could have affected results as well.

Another limitation is the inclusion of three participants. Having more participants could have aided in demonstrating more experimental control, and in turn, shown more definitively that the decrease in drug use could be attributed to the intervention and not other extraneous variables. However, single case design allows for researchers to better examine level, trend, and variability of each individual’s data. Single case design is beneficial because it allows for a between and within analysis of data.

Future studies could utilize more participants while still using single subject design. More studies on the effectiveness of ACT using single subject design and more behaviorally focused protocols should be performed. Different order of components and focusing on particular ones more than others could be helpful as well. The results of the present study show promise for the use of ACT training but more studies performed by behavior analyst are needed to investigate whether ACT is a viable treatment for implementers who are not licensed psychologists.
References


Appendix A - Acceptance and Commitment Content Domains

Acceptance

Acceptance is the first dimension of ACT that will be discussed. It’s used as a defense against experiential avoidance. Acceptance, according to Hayes et al. (2006), involves the nonjudgmental embrace of covert verbal behavior occasioned by an individual’s reinforcement and punishment history without attempting to change frequency or form, even when doing so could increase psychological harm (making undesirable private events more salient) (Hayes et al.). For example, a drug-abusing client can be taught to feel cravings as thoughts (and possibly physiological sensations) without defense. By doing so, the therapist would be encouraging an individual to allow the craving to occur without changing frequency or form, which in turn facilitates defusion and habituation in respect to the craving.

Cognitive Defusion

Cognitive defusion attempts to alter the functions of aversive thoughts and other private events, rather than trying to alter their topography or frequency (Hayes et al., 2006). Unlike previously accepted models of changing covert verbal behavior, ACT attempts to change the way one relates to thoughts by creating contexts in which their unhelpful functions are transformed. Hayes et al. uses the example of a person thanking their mind for such an interesting thought and labeling the process as thinking (not actually contacting direct contingencies). Using the example of low self-worth, a person could say, “I am having the thought that I am worthless” instead of, “I’m worthless.” Procedures such as these have the purpose of reducing the literal quality of the thought, leading an individual to treat the thought as what it is rather than what it is directly experienced to be (Hayes et al.). The result of defusion is usually a change in believability of covert verbal behavior.
instead of focusing on a change in frequency or form (Hayes et al., 1999). In order to facilitate defusion, the individual must be able to be present and contact direct contingencies.

Being Present

The third dimension of ACT is being present. Being present refers to, “ongoing non-judgmental contact with psychological and environmental events as they occur” (Hayes et al, 2006). The goal is to have clients experience the world in the moment and to use language as a tool to describe events, not to predict and judge them. A sense of self called “self as process” is actively encouraged: the defused, non-judgmental ongoing description of thoughts, feelings, and other private events. Contact with the present moment is designed to increase awareness of the here and now facilitating contact with direct contingencies and development of adaptive tracking rule governance instead of maladaptive pliant rule governance (Fletcher & Hayes, 2005; Torneke, 2011).

Self as Context

Self as context is another dimension of ACT. As a result of relational frames such as I versus You, Now versus Then, and Here versus There, verbal behavior leads to a sense of self as a perspective. This occurs because humans get lost in a sea of language; behavior is controlled by the verbal behavior in which people use to describe the contingencies around them instead of direct contact with those contingencies. The basic idea is that “I” emerges over large sets of exemplars of perspective-taking relations (called “deictic relations”), which are differentially reinforced throughout the lives of humans (Hayes et al., 2006). Self as context is promoted in ACT by mindfulness exercises, metaphors, and experiential processes (Hayes et al., 1999).

Values

Values, according to Hayes et al. (1999) are, “chosen qualities of purposive action that can never be obtained as an object but can be instantiated moment by moment” and represent the fifth dimension of ACT. Values are categories of behavior of preferred behavior for an individual. Values
assessments are typically used as preference assessments to determine valued behavior. ACT facilitates the development of values to an individual while undermining verbal processes that might lead to choices based on avoidance, social compliance, or fusion (Hayes et al.).

**Committed Action**

Committed action is the final dimension of ACT to be discussed. ACT encourages the development of larger and larger patterns of effective action linked to chosen values. This is similar to traditional behavior therapy. Many types of behavior therapy fit into an ACT protocol including exposure, skills acquisition, shaping methods, goal setting, and others (Hayes et al., 2006). Unlike values, which are constantly instantiated but never achieved as an object, concrete goals that are values consistent can be achieved and ACT protocols usually involve therapy work and homework linked to short, medium, and long-term behavior change goals that are realistic for an individual to achieve. Behavior change attempts, in turn, lead to interaction with psychological obstacles that are addressed through other ACT processes (Hayes et al., 2006). In a sense, committed action can take on the properties of escape-extinction. An individual chooses to engage in activities that evoke aversive private events that were previously reinforced by avoidance of those situations.

**Creative Hopelessness**

Creative hopelessness is not a component of ACT but is an important process that often is used in sessions to increase motivation to change behavior (Hayes et al., 1999). The therapist and the individual seeking therapy talk about past efforts to change or control their behavior, sometimes making a list in order to increase the value of taking committed action. Creative hopelessness is a tool that therapists use to create an establishing operation (EO) for therapy attendance, willingness to utilize ACT tools, and committed action towards values-based behavior.
Appendix B - Session Breakdowns

Session Two (Values)

The session will start with 10-minute introduction of the therapist and the participant. The therapist will obtain verbal confirmation that the participant is comfortable and willing to proceed. The intervention will begin with going over the bull’s-eye worksheet with the participant. The method for this segment is to explain what values are and why they’re important. Then, the therapist will take the participant through a series of metaphors, exercises, and worksheets to bring the individual’s behavior under the control of values.

In plain language, values are statements about what we want to be doing with our life: about what we want to stand for, and how we want to behave on an ongoing basis. They are leading principles that can guide us and motivate us as we move through life. Our aim with values is to clarify what gives our life a sense of meaning or purpose, and to use our values as an ongoing guide for our actions.

Values are here and now: they’re with you everywhere you go. You can, in any moment, choose to act on them or neglect them. In contrast, goals are always in the future: a goal is something that you’re aiming for, striving for, working towards. The moment you achieve them, they are no longer goals.

Therapist: When people think values, they often think goals but really there is a big difference between the two. Values are with us everywhere we go, we are constantly behaving with them or against them. They never go away, they can never be completed, because they are specific categories of ways in which we behave in the present moment. Goals are things we work at to
achieve, they’re objective. Goals can be values-based, but they don’t have to be. I could have the value that smoking marijuana is something I enjoy and there’s nothing wrong with it and still have the goal to not smoke marijuana. Suppose I’m in some kind of rehabilitation center and a rule there states you can’t smoke marijuana. I can have to goal stop smoking marijuana because I also value independence (getting out of the facility).

Imagine there are two kids in the back of a car, and Mom’s driving them to Disneyland. It’s a three-hour trip to get there and one of the kid’s saying every five minutes, “are we there yet?” Mom’s getting annoyed, the kid’s frustrated, they’re snapping at each other, and it’s gotten to the state of chronic tension. But the other kid is looking out of the window, waving at the other cars, noticing with great interest all the towns and farms and factories that they’re driving past. Both kids reach Disneyland at the same time, and both have a great time when they get there but only one of these kids has had a rewarding journey. Why? Because he wasn’t just focused on the goal of reaching Disneyland, he also valued exploring, traveling, learning about the world around him, and enjoying life in the present moment. On the way home, the first kid keeps saying, “are we home yet?” Whereas the other one enjoys the ride by looking out the window and appreciating how everything looks so different at night. Do you see the difference between goals and values? Do you see how focusing too much on goals can be detrimental? An analogy for your life could be focusing on staying in the present moment and enjoying life without the chains of drug use instead of worrying about whether or not you relapse.

I want you to imagine that though some twist of fate you have died but you are allowed to attend your funeral in spirit. You are watching and listening to the eulogies offered by your loved ones. Imagine just being in that situation, and get yourself into the room emotionally. Okay, now I want you to visualize what you would like these people who were part of your life to remember you for. Really be bold here. Let them say exactly what you would most want them to say. (Go through
for several of their loved ones, e.g., wife, children, best friend, etc.). Let them say all of these things -- and don’t withhold anything. Have it be said as you would most want it. And just make a mental note of these things as you hear them spoken. Do you see how these are your values?

Picture your life as a movie. The first episodes are already shot. (Now summarize what you know of the – usually difficult – salient moments of the participant’s life). Now the movie is going on. Imagine you are the director and you can direct an actor that plays your part. But you’re a special kind of director with a limited power. You can’t go to the screenplay writer and ask him to change the life events happening to you or direct the other characters to act like you’d want them to do. The only actor you can have an influence on is the one playing your part. You can have him/her play exactly like the person you dream to be. Figure out how you would want him/her to act, in that precise situation you are experiencing now. How would you instruct the actor to act if you want the continuation of the movie to resemble what you would like your life to be, or to show the father, spouse, colleague, etc., that you would like to be? Write all this down on a sheet of paper and keep it. When you are having a hard time behaving in accordance with your values, think about what you just said or read what you’ve written if feasible.

When people are buried, an epitaph is often written. They say things like, “Here lies Sue. She loved her family with all her heart.” If the headstone were yours, what inscription would you like to see on it? How would you most like your life to be characterized? Again, this is neither a description nor a prediction; it is a hope; an aspiration; a wish. It is between you and the person in the mirror. What would you like your life to stand for?

Suppose you go skiing. You take a lift to the top of a hill, and you are just about to ski down the hill when a man comes along and asks where you are going. “I’m going to the lodge at the bottom,” you reply. He says, “I can help you with that,” and promptly grabs you, throws you in a helicopter, flies you to the lodge, and then disappears. So you look around kind of dazed, take a lift
to the top of the hill, and you are just about to ski down it when that same man grabs you, throws you into a helicopter, and flies you to the lodge. You’d be upset, right? Skiing is not just the goal of getting to the lodge, because any number of activities can accomplish that for us. Skiing is how we are going to get there. Yet notice that getting to the lodge is important because it allows us to do the process of skiing in a direction. If tried to ski uphill instead of down, it wouldn’t work. Valuing down over up is necessary in downhill skiing. There is a way to say this: the outcome is the process through which process can become the outcome. We need goals, but we need to hold them lightly so that the real point of living and having goals can emerge.

Suppose you are taking a hike in the mountains. You know how mountain trials are constructed, especially if the slopes are steep. They wind back and forth; often have “switchbacks”, which make you literally walk back and forth, and sometimes a trail will even drop back to below a level you had reached earlier. If I asked you at a number of points on such a trail to evaluate how well you are accomplishing your goal of reaching the mountaintop, I would hear a different story every time. If you were in switchback mode, you would probably tell me that things weren’t going well, that you were never going to reach the top. If you were in a stretch of open territory where you could see the mountaintop and the path leading up to it, you would probably tell me things were going very well. Now imagine that we are across the valley with binoculars, looking at people hiking on this trail. If we were asked how they were doing, we would have a positive progress report every time. We would be able to see that the overall direction of the trail, not what it looks like at a given moment, is the key to progress. We would see that following this crazy, winding trail is exactly what leads to the top.

Imagine that you had won the following prize in a contest: Each morning your bank would deposit $86,400.00 in your private account for your use. However, this prize has rules, just as any game has certain rules. The first set of rules: Everything that you didn't spend during each day would
be taken away from you. You may not simply transfer money into some other account. You may only spend it. Each morning upon awakening, the bank opens your account with another $86,400.00 for that day. The second set of rules: the bank can end the game without warning; at any time it can say, it’s over, the game is over! It can close the account and you will not receive a new one. What would you personally do? You would buy anything and everything you wanted, right? Not only for yourself, but for all people you love, right? Even for people you don't know, because you couldn't possibly spend it all on yourself, right? You would try to spend every cent, and use it all, right? Actually, this game is reality! Each of us is in possession of such a magical bank. We just can't seem to see it. The magical bank is time! Each morning we awaken to receive 86,400 seconds as a gift of life, and when we go to sleep at night, any remaining time is not credited to us. What we haven't lived up to that day is forever lost. Yesterday is forever gone.

When you go home today, what do you expect to find in your mailbox? Client: Bills, advertisements, junk mail, maybe a letter. How do you sort through to decide which mail needs follow up and which is considered junk? Client: I have to look at it, and decide what is important. How do you know what is important? Client: Well if I don’t pay my bills my electricity would get disconnected, and if I don't renew my license plates, I can't drive. I see, so you sort things out according to what matters to you, your priorities are easy to identify because you value the stability of a comfortable home and the freedom of driving your own vehicle. What do you do with the junk mail? Client: I throw it away. When you throw it away, is that the end of it? Client: no there's always more junk mail the next time I open the box. Why don't you follow up on it? You could call and check on those offers or you could get mad and call the advertisers and demand that they stop delivering the junk? Client: Yes, but that would just be a waste of time... I've learned those offers are things that I don't need, or they are scams. I once tried to stop the mail but other companies send more. There's always more junk mail the next day, it's not worth getting upset.
Summation: So your experience helps you sort out what is important, according to the things that matter to you. And you learn to live with the junk mail that shows up everyday. It's in the box, you notice it long enough to recognize it for what it is, and then you move onto what matters in your life... Maybe these thoughts are like the mail that shows up in your mailbox; you take action on the important things while you have to accept the fact that there will be some junk, and you simply allow it to show up.

Therapist: Now that you have clear understanding of values, make a list of as many of your values as you can think of. Don’t worry about whether they’re wrong or right, legal or illegal, ethical unethical, these are your values and yours alone. This list will be something you can look at anytime you need a reminder.

**Session Three (Creative Hopelessness)**

The creative hopelessness segment will begin with a brief discussion of what the participant has tried in the past (to describe the participant’s control strategies), how it has worked, and what it has costs (in terms of health, well-being, relationships, work, leisure, energy, money, and wasted time). A Join the Dots exercise (Harris, 2009) will be completed and analyzed with the participant.

The situation you are in seems a bit like this. Imagine that you’re placed in a field, wearing a blindfold, and you’re given a little tool bag to carry. You're told that your job is to run around this field, blindfolded. (Variation: No blindfold; if you are to live, you will move around, and eventually, in the course of living, you will encounter a hole.) That is how you are supposed to live life. And so you do what you are told. Now, unbeknownst to you, in this field are a number of widely spaced, fairly deep holes. You don’t know that at first -- you’re naive. So you start running around and sooner or later you fall into a large hole. You feel around, and sure enough, you can’t climb out and there are no escape routes you can find. Probably what you would do in such a predicament is take the tool bag you were given and see what is in there; maybe there is something you can use to get
out of the hole. Now suppose that the only tool in the bag is a shovel. So you dutifully start digging, but pretty soon you notice that you’re not out of the hole. So you try digging faster and faster. But you’re still in the hole. So you try big shovelfuls, or little ones, or throwing the dirt far away or not. But still you are in the hole. All this effort and all this work, and oddly enough the hole has just gotten bigger and bigger and bigger. Isn’t that your experience? So you come to see me thinking, “Maybe he has a really huge shovel, a gold-plated steam shovel.” Well, I don’t. And even if I did I wouldn’t use it, because digging is not a way out of the hole, digging is what makes holes. So maybe the whole agenda is hopeless -- you can’t dig your way out, it just digs you in.

Follow up: Are you digging right now?

Next, the Pushing Against the Clipboard metaphor (Harris, 2009) will be demonstrated with the participant as follows: Therapist: Can I stand up and demonstrate something to you? (Participant nods or says yes. The therapist picks up a clipboard, stands up, and walks over to the client.) You don’t have shoulder or neck problems do you? (Participant shakes their head or says no.) Good, because I want you to imagine that this clipboard is all those painful thoughts and feelings you’ve been trying to get rid of for so long, and I want you to place both your hands flat on this clipboard and push against it, trying to get rid of it. Don’t push so hard that you knock me over, but push firmly. (Participant pushes while the therapist pushes back.) That’s it keep pushing. You hate this stuff. You want it to go away. (As the client tries hard to push te clipboard away, the therapist pushes back. The harder the client pushes, the more the therapist leans into it.) Notice how much effort and energy it requires to try to make them go away. (The therapist eases off on the pushing, but retains enough gentle counter pressure to keep the clipboard suspended in midair, resting between the client’s hands and the therapist’s hands.) So here you are, trying very hard to push away all these painful thoughts and feelings. You’ve tried distracting yourself with TV, music, computers, books, avoiding certain situations and people, staying in bed, avoiding work, beating yourself up,
analyzing why you behave like you do, telling yourself life sucks, using drugs, drinking alcohol – the list goes on and on. You’ve been doing this for years: pushing and pushing and pushing. And are those painful thoughts and feelings going anywhere? Are those cravings going anywhere? Sure, you keep them at arm’s length, but what the cost to you? How much effort did you put into pushing the clipboard away, and did it ever truly go away? We’ve only been doing this for a few minutes, but how long have you been pushing away those cravings, thoughts, emotions, etc? It’s tiring isn’t it? (Participant nods or says yes while the therapist and participant are pushing on the clipboard.)

What’s it like having a conversation with me while pushing on the clipboard? I want you to imagine trying to do your job effectively, work on your program, or socializing while you’re doing this, could you do it? Can you focus easily on anything going on right now besides pushing on the clipboard? Think about the costs of your control efforts thus far. Trying to control your thoughts, emotions, and feelings is like pushing on this clipboard, it’s very difficult to do. Not to mention, it’s almost impossible to attend to anything else in your life when you’re putting so much effort into one thing. So is it correct for me to say, everything you’ve tried so far isn’t working and that it’s come at great costs?

You know that horrible feedback screech that a public address system sometimes makes? It happens when a microphone is positioned too close to a speaker. Then when a person on stage makes the least little noise, it goes into the microphone; the sound comes out the speakers amplified and than back into the mike, a little bit louder than it was the first time it went in, and at the speed of sound and electricity it gets louder and louder until in split seconds it’s unbearably loud. Your struggles with your thoughts and emotions are like being caught in the middle of a feedback screech. So what do you do? You do what anyone would. You try to live your life (whispering) very quietly, always whispering, always tiptoeing around the stage, hoping that if you are very, very quiet there won’t be any feedback. (Normal voice) You keep the noise down in a hundred ways: drugs, alcohol,
avoidance, withdrawal, and so on (Use items that fits the client’s situation.) The problem is that this is a terrible way to live, tiptoeing around. You can’t really live without making noise. But notice that in this metaphor, it isn’t how much noise you make that is the problem. It’s the amplifier that’s the problem. Our job here is not to help you live your life quietly, free of all emotional discomfort and disturbing thoughts. Our job is to find the amplifier and take it out of the loop.

The situation you are in is like being in a tug-of-war with a monster. It is big, ugly, and very strong. In between you and the monster is a pit, and so far as you can tell it is bottomless. If you lose this tug-of-war, you will fall into this pit and will be destroyed. So you pull and pull, but the harder you pull, the harder the monster pulls, and you edge closer and closer to the pit. The hardest thing to see is that our job here is not to win the tug-of-war. Our job is to drop the rope.

Imagine there are two scales, like the volume and balance knobs on a stereo. One is right out here in front of us and is called “Drug Use”. The therapist moves their hand as if it is moving up and down a numerical scale.) It can go from 0 to 10. In the posture that you’re in, what brought you in here was this: “This Drug Use knob is too high. It’s way up here, and I want it down here, and I want you, the therapist, to help me do that, please.” In other words, you have been trying to pull the pointer down on this scale. But now there’s also another scale. It has been hidden. It is hard to see. This other scale can also go from 0 to 10. (Move other hand up and down behind your head so you can’t see it.) What we have been doing is gradually preparing the way so that we can see this other scale. We’ve been bringing it around to look at it. (Move hand around to front). It is really the more important of the two, because it is this one that makes the difference and it is the only one that you can control. This second scale is called “Willingness”. It refers to how open you are to experiencing your own experience when you experience it -- without trying to manipulate it, avoid it, escape it, change it, and so on. When Drug Use (or uncomfortable feelings) is up here at 10, and you’re trying hard to control how much you use, make it go down, make it go away, then you’re unwilling to feel
the feelings, thoughts, and/or cravings associated with drug use. In other words, the Willingness scale is down at 0. But that is a terrible combination. It’s like a ratchet or something. You know how a ratchet wrench works? When you have a ratchet set one way, no matter how you turn the handle on the wrench it can only tighten the bolt. It’s like that. When anxiety is high and willingness is low, the ratchet is set and anxiety can’t go down. That’s because if you are really, really unwilling to have the feelings, thoughts, and/or cravings associated with drug use, then drug use is something to be use drugs over. It’s as if when drug use is high and willingness drops down, the drug use kind of locks into place. You turn the ratchet and no matter what you do with that tool, it drives it in tighter.

So what we need to do in this therapy is to shift our focus from the anxiety scale to the willingness scale. You’ve been trying to control drug use for a long time, and it just doesn’t work. It’s not that you weren’t clever enough; it simply doesn’t work. Instead of doing that, we will turn our focus to the willingness scale. Unlike the drug use scale, which you can’t move at will, the willingness scale is something you can set anywhere. It is not a reaction -- not a feeling or a thought -- it is a choice.

You’ve had it set low, you came here with it set low; in fact, coming here at all may initially have been a reflection of its low setting. What we need to do is get it set high. If you do this, if you set willingness high, I can guarantee you what will happen to all the feelings associated with drug use, they won’t go away but you will be able to deal with them in other ways besides use drugs. These thoughts, cravings, and feelings will still occur but they won’t affect you in the same way they used to. You won’t “need” to use drugs. Are you ready to let go of the Drug Use knob and work with me on the Willingness knob?

(This is a physical metaphor.) Your keys represent different difficult emotions, memories, thoughts and reactions. Picking up the keys and carrying them does not keep you from going anywhere. In fact, the keys can actually open doors that might be locked to us without them.
Suppose you are beginning a journey to a beautiful mountain you can see clearly in the distance. No sooner do you start the hike than you walk right into a swamp that extends as far as you can see in all directions. You say to yourself, “Gee, I didn’t realize that I was going to have to go through a swamp. It’s all smelly and the mud is all mushy in my shoes. It’s hard to lift my feet out of the much and put them forward. I’m wet and tired. Why didn’t anyone tell me about this swamp? When this happens, you have a choice: abandon the journey or enter the swamp. Therapy is like that. Life is like that. We go into the swamp, not because we want to get muddy, but because it stands between us and where we are going.

Imagine that you are stuck in quicksand, the immediate impulse is to struggle and fight to get out. But that’s exactly what you must not do in quicksand – because as you put weight down on one part of your body (your foot), it goes deeper. So the more you struggle, the deeper you sink – and the more you struggle. It seems like a lose-lose situation. With quicksand, there’s only one option for survival. Spread the weight of your body over a large surface area – lay down. It goes against all our instincts to lie down and accept that you’re stuck in the quicksand, but that’s exactly what we have to do. It’s the same way with psychological distress. We struggle and fight against it, but perhaps we never considered just letting it be, and being with the distressing thoughts and feelings, but if we did, we’d find that we get through it and survive – more effectively than if we’d fought and struggled.

Whatever the weather, or whatever happens on the surface of the mountain – the mountain stands firm, strong, grounded, and permanent. We can be like that mountain, observing thoughts, feelings, sensations, knowing inner stillness. The Bull’s Eye (Harris, 2009) and Dissecting the Problem (Harris, 2009) will be used as well as Attempted Solutions and Their Long-Term Effects (Harris, 2009) worksheets.
Session Four (Acceptance)

This segment will begin with a functional assessment interview which will help target antecedent and consequential events associated with drug use as well as determine the various functions of drug use (escape, automatic, etc.). The identification of antecedent events with an evocative function will provide exemplars to use in the acceptance and defusion segments of treatment.

Next will come a discussion of what acceptance is and what it means for the participant. Acceptance is defined as, “allowing our thoughts and feelings to be as they are, regardless of whether they are pleasant or painful; opening up and making room for them; dropping the struggle with them; and letting them come and go as they naturally do. The method of learning acceptance is making full, open, undefended psychological contact with unwanted private experiences. This will be discussed with the participant to make sure they are ready to continue.

Next, a metaphorical exercise will be conducted to help the participant get ready for acceptance and truly understand it. Therapist: First I want you to think of your mind as a separate thing or entity, not that it doesn’t exist, but that it is a separate entity from reality. What we are going to do now is open up your mind and allow it to be present, open up and make room for it, expand around it, give it permission to be where it already is, let go of the struggle with it, stop fighting it, make peace with it (these thoughts are my thoughts, they aren’t abnormal, and I won’t try to make them what I think they are supposed to be), give it some space, let it be, breathe into it, and stop wasting energy on pushing it away.

Most traditional therapies for people who have negative emotions and/or feelings is by trying to change the way they think. In other words, they teach you how to not have those pervasive thoughts. Also, this is usually the strategy that people use to not suffer from depression, anxiety, or using drugs. You say, I’m not going to think about drug use, think about something else. Well, this
might not be the best way to feel better. Let’s do a quick exercise. Close your eyes and try to clear your mind. Now, I want you to try really hard not to not think about a pink elephant. Don’t imagine the size, whether it’s a cartoon image or real image, don’t think about what shade of pink it is. Wait for a moment. What did you think about? The more you try to not think about something, the more aware we become of it. So, trying to not think about using drugs or not thinking about the feelings and emotions associated with drugs may actually be making things worse. After the participant understands the definition of acceptance, the Acceptance Exercise from Harris (2009) will be performed.

I invite you to sit upright in your chair with your back straight and your feet flat on the floor. Most people find they feel more alert and awake sitting this way, so check it out and see if this is the case for you. And either close your eyes or fix them on a spot, whichever you prefer. And take a few slow, deep breaths, and really notice the breath flowing in and out of your lungs. (Pause 10 sec). Now quickly scan your body from head to toe, starting at your scalp and moving downward. And notice the sensations you can feel in your head… throat… neck… shoulders… chest… abdomen… arms… hands… legs… feet… and toes. Now zoom in on the part of your body where you’re feeling this feeling most intensely. And observe the feeling closely, as if you’re a curious scientist who has never encountered anything like this before. (Pause 5 sec). Observe the sensation carefully… Let your thoughts come and go like passing cars, and keep your attention on the feeling… Notice where it starts and where it stops… Learn as much about it as you can… If you drew and outline around it, what shape would it have? Is it on the surface of the body or inside you, or both? Where is it most intense? Where is it weakest? (Pause 5 sec). If you drift off into thoughts, as soon as you realize it, come back and focus on the sensation. Observe it with curiosity… Does it pulse or vibrate? Feel the temperature around you… Is it warm… cold… hot? Notice now that
there’s not just one sensation, but sensations within sensations. Notice the different layers… (Pause 5 sec.)

As you’re observing this feeling, breathe into it… Imagine your breath flowing into and around this feeling… Breathing into and around it…

And as you’re breathing into it, it’s as if, in some magical way, all this space opens up inside you… You open up around this feeling… Make space for it… Expand around it… However you make sense of that… Breathing into it and opening up around it…

And see if you can just allow this feeling to be there. You don’t have to like it or want it… Just allow it… Just let it be… Observe it, breathe into it, open up around it, and allow it to be as it is. (Pause 10 sec.) You may feel a strong urge to fight with it or push it away. If so, just acknowledge the urge is there without acting on it. And continue observing the sensation. (Pause 5 sec.) Don’t try to get rid of it or alter it. If it changes by itself, that’s okay. If it doesn’t change, that’s okay too. Changing or getting rid of it is not the goal. Your aim is simply to allow it… to let it be.

Imagine this feeling is an object… As an object, what shape does it have? Is it liquid, solid, or a gas? Is it moving or still? What color is it? Transparent or opaque? If you could touch the surface, what would it feel like? Wet or dry? Rough or smooth? Hot or cold? Soft or hard? (Pause 10 sec.) Observe the object curiously, breathe into it, and open up around it… You don’t have to like it or want it, just allow it… and notice that you are bigger than this object… no matter how big it gets, it can never get bigger than you. (Pause 10 sec.)

This feeling tells you some valuable information. It tells you that you’re a normal human being with a heart. It tells you that you care that there are things in life that matter to you and this is what humans feel when there’s a gap between what we want and what we’ve got. The bigger the gap, the bigger the feeling is. (Pause 5 sec.)
Take one of your hands and place it on this part of your body. Imagine that this is a healing hand; the hand of a friend or someone you care about, and feel the warmth flowing from their hand into your body not to get rid of the feeling but to make room for it and know it’s ok to have that feeling. Keep attending to your breathing.

Life is like a stage show, and on that stage are all your thoughts, and all your feelings, and everything that you can see, hear, touch, taste, and smell. For the last few minutes, we dimmed the lights on the stage, and we shined a spotlight on this feeling and now it’s time to bring up the rest of the lights. So bring up the lights on your body, notice your arms and legs and head and neck and notice that you’re in control of your arms and legs, regardless of what you’re feeling. Just move them around a little to check that out for yourself. Now stretch and notice yourself stretching, and bring up the lights on the room around you. Open your eyes, look around, and notice what you can see, what you can hear, and notice that there’s not just a feeling here. There’s a feeling inside a body, inside a room, inside a world full of opportunity and welcome back!

How do you feel now? How could you use this exercise in the future? This exercise can be used for any kind of thought, emotion, etc. Acceptance is key in committed action towards your personal values. We can’t change our thoughts and emotions, but we can change how those things control our behavior. There is a “reality gap” in what you just experienced. There is a gap between the reality we have and the reality we desire: the bigger the gap, the more pain we feel. The way we get rid of this pain is to accept the reality that we have and remove the reality in which we desire because in the present moment, there is only reality.

This strategy is outlined by Hayes et al. (1999). One way to distance ourselves away from the literalization of language is to rephrase the things you are experiencing. Instead of saying, “I’m worthless” I can say, “I’m having the feeling that I’m worthless.” Over time, we learn to accept unwanted thoughts and emotions as what they are, not reality.
I want you to say a lot of the negative things you experience rephrased in the way I just taught you. See how you are accepting these thoughts as exactly what they are, just thoughts? Do you see how not accepting has kept you suffering and away from living in the direction of your values? Homework will be the Expansion Practice Worksheet (Harris, 2009).

**Session Five (Defusion)**

The definition of cognitive fusion will be stated to the client along with an explanation about how language is a double edge sword. Thoughts acquire literal meaning and it really feels like I am worthless and won’t ever amount to anything, even though this really isn’t true. So what we are trying to do here is separate thoughts, emotions, and feelings from reality.

Picture your thoughts as sales representatives. Some of them aren't really gifted for that job. You just tell them you are not interested or you are busy right now and they will apologize for having disturbed you and never bother you again. But then there are the tough guys. If you refuse to give them an appointment in your office, they will pop up on the parking lot when you are going back to your car or even around your house when you are mowing the lawn and put their open briefcase under your nose with those fantastic products they want to sell you. Your life is becoming a hassle; you need to spend more and more time trying to escape them. Instead of doing productive work, you spend most of your time at the office door trying to get rid of them. Maybe it's easier to let them in, listen to what they want to tell you, thank them for coming and let them go. After all, you are the boss; it's up to you to decide which product you'll buy. Therapist can also add: And maybe one or the other of all these products they advertise could be a good business opportunity?

The world’s greatest storyteller, it never stops! It’s never short of a story to tell, and it wants is for us to listen, whatever the story is. Like any great storyteller, it’ll say whatever it has to say to get our attention. Some stories are true: we can call these facts. Others are opinions, beliefs, ideas, attitudes, assumptions, judgments, predictions etc. Stories about how we see the world, what we
want to do, what we think is right or wrong, fair or unfair, good or bad. Just listen now, to the story your mind is telling you now.

Sometimes it feels like we’re being carried away downstream struggling to stay afloat amongst all the mud, filth and debris. That muck and debris are thoughts, sensations, events, feelings, and that river/stream is our distress as we drift helplessly downstream. However, we can stand on the riverbank, watching as those thoughts, events, sensations, feelings go by. You might watch individual items as they pass – perhaps a thought floating on a leaf, a sensation as a log, event as on old bicycle. We can stand and watch. (Variations: Boxcars on a train, Soldiers in a parade).

Sometimes it is useful to see the bigger picture. When something is distressing us, we’re so close to it, involved with it, part of it, that it’s really hard to stand back from what’s happening. It’s a bit like Google Earth, we see the close up view but everything else is hidden from us. "We can’t see the wood for the trees". We can zoom out our perspective, and see the bigger picture. Some might describe it as like having a helicopter view – as the helicopter takes off, getting higher and higher, it sees a bigger picture, and is less involved with the detail at ground level.

There are things in our language that draw us into needless psychological battles, and it is good to get a sense of how this happens so that we can learn to avoid them. One of the worst tricks language plays on us is in the area of evaluations. For language to work at all, things have to be what we say they are when we’re engaging in the kind of talk that is naming and describing. Otherwise, we couldn’t talk to each other. If I say, “Here is a cup”, I can’t then turn around and claim it isn’t a cup, but instead is a race car (unless I change the form to a car). Now consider what happens with evaluative talk. Suppose a person says, “This is a good cup,” or “This is a beautiful cup". It sounds the same as if that person were saying, “This is a ceramic cup,” or “This is an 8-ounce cup.” But are they really they same? If we all left the room, this cup is still sitting on the table. If it was a “ceramic cup” before everyone left, it is still a ceramic cup. But is it still a good cup or a beautiful cup?
Without anyone to have such opinions, the opinions are gone because good or beautiful was never in the cup, instead it was in the interaction between the person and the cup. It looks the same, as if “good” is the same kind of description as “ceramic”. Both seem to add information about the cup. The problem is that if you let good be that kind of descriptor, it means that good has to be what the cup is, in the same way that ceramic is. That kind of description can’t change until the form of the cup changes. And what if someone else says, “No, that is a terrible cup!” If I say it is good and you say it is bad, there is a disagreement that seemingly has to be resolved. One side has to win, and one side has to lose; both can’t be right. On the other hand, if “good” is just an evaluation or a judgment, something you’re doing with the cup rather than something that is in the cup, it makes a big difference. Two opposing evaluations can easily coexist. They do not reflect some impossible state of affairs in the world, such as the cup is both ceramic and metallic. Rather, they reflect the simple fact that events can be evaluated as good or bad, depending on the perspective taken. And of course, it is not unimaginable that one person could take more than one perspective. Neither evaluation needs to win out as one concrete fact.

Imagine a chessboard that goes out infinitely in all directions. It’s covered with black pieces and white pieces. They work together in teams, as in chess, the white pieces fight against the black pieces. You can think of your thoughts and feelings and beliefs as these pieces; they sort of hang out together in teams too. For example “bad” feelings (like anxiety, depression, resentment) hang out with “bad” thoughts and “bad” memories. It’s the same thing with the “good” ones. So it seems that the way the game is played is that we select the side we want to win. We put the “good” pieces (like thoughts that are self-confident, feelings of being in control, etc.) on one side, and the “bad” pieces on the other. Then we get up on the back of the black horse and ride to battle, fighting to win the war against anxiety, depression, thoughts about using drugs, whatever. It’s a war game. But there’s a logical problem here, and that is that from this posture huge portions of yourself are
your own enemy. In other words, if you need to be in this war, there is something wrong with you. And because it appears that you’re on the same level as these pieces, they can be as big or even bigger than you are -- even though these pieces are in you. So somehow, even though it is not logical, the more you fight the bigger they get. If it is true that “if you are not willing to have it, you’ve got it,” then as you fight these pieces they become more central to your life, more habitual, more dominating, and more linked to every area of living. The logical idea is that you will knock enough of them off the board that you eventually dominate them -- except that your experience tells you that the exact opposite happens. Apparently, the white pieces can’t be deliberately knocked off the board. (Variations: There are an infinite number of pieces in this game. There will always be another game.) So the battle goes on. You feel hopeless, you have a sense that you can’t win, and yet you can’t stop fighting. If you’re on the back of that black horse, fighting is the only choice you have, because the while pieces seem life threatening. Yet living in a war zone is no way to live. Now let me ask you to think about this carefully. In this metaphor, suppose you aren’t the chess pieces. Who are you? (Client: Am I the player?) That may be what you have been trying to be. Notice, though, that a player has a big investment in how this war turns out. Besides, who are you playing against, some other player? Suppose you’re not that either. (Client: Am I the board?) It’s useful to look at it that way. Without a board, these pieces have no place to be. The board holds them. For instance, what would happen if you weren’t there to be aware that you thought them? The pieces need you. They cannot exist without you -- but you contain them, they don’t contain you. Notice that if you are the pieces, the game is very important; you’ve got to win, your life depends on it. But if you’re the board, it doesn’t matter whether the war stops or not. The game may go on, but it doesn’t make any difference to the board. As the board, you can see all the pieces, you can hold
them, you in intimate contact with them; you can watch the war being played out in your consciousness but it doesn’t matter. It takes no effort.

Follow up: Are you at the piece level or at the board level right now?

I’ve mentioned the present moment quite a bit but I haven’t really said exactly what it is. Contact with the present moment means being in the here and now, fully conscious of our experience, instead of being lost in our thoughts. It involves flexibly paying attention to both the inner psychological world and the outer material world. Our aim here is to enhance awareness of our experience in the present moment, so we can perceive accurately what’s happening, and gather important information about whether to change or persist in behavior. Also, it helps us to engage fully in whatever we’re doing for increased effectiveness and fulfillment. In other words, worrying about the past and fear of the future keep us from enjoying the reality of the here and now!

This exercise was developed by Hayes et al. (1999) for the purpose of cognitive defusion. Here it will be used as an example of how the past changes our experience in the present moment and how defusing in the present moment changes the way we experience the world around us. First, ask the participant to say the word “milk” once. Have the participant sit with this for 30 sec. Then ask them what “shows up.” Ask the participant if they can taste the milk, what color the milk carton is, is it plastic or made of cardboard material, what brand it is, where they might have gotten it, do they think of cereal or other stimuli associated with milk. Highlight that; the mind generates thoughts about actual milk (literal meaning of the word), a number of thoughts may be generated even though there was no milk physically present, and we get the experience of milk just by uttering its name. Tell the participant that the next part may sound a little funny but to bear with you. Tell them to say “milk” over and over, faster and faster, and louder for 30 to 60 sec. Ask the participant what they’re thinking about as soon as they finish. Now say the word milk to them again and let them sit with it for 30 sec. Ask the participant if they had a different experience with the sound of
the word “milk.” Discuss how the participant can utilize this exercise for aversive private events that they experience.

The participant will be given a stack of notecards and will be told to write down an aversive private event on each card. The participant will be told to pay attention to the experience they have writing down these uncomfortable feelings and thoughts (such as cravings, aversive past experiences, etc.). After the cards are completed, the therapist will instruct the individual to hold a card 12 in from their face and to focus on what the card says for 60 sec. The participant will be instructed to pay close attention to their experience as they read the card. Therapist: Tell me about how it felt focusing on the content of what’s on the card? What did you experience while looking at the card? Did you actually feel what was written on the card? What happened to your body physically? Did you get anxious? Did your heart start to race? Could you focus on anything else besides the content on the card? Could you work, have fun, or do anything else with the content of your thoughts right in your face? Also, could you see that even though you are sitting in a room with me and none of those thoughts are reality right now, it still felt as though they were happening right now?

Now we are going to try something different. The therapist will then instruct the participant to look at the card again with it being the same distance from their face. Next, the therapist will tell the participant to focus not on the content written on the card but the actual card itself. Therapist: Look at the card and notice that it is made of paper, notice its size, and that it is much smaller than you are and how you could bend it, tear it, or move it however you want to. Keep looking at the card, but focus on breathing in and out. Scan your body and mind for any kind of discomfort. If a thought comes to you, accept it and let it in. Make space for it and notice that it’s just a thought. While still looking at the card, what do you notice around you? Is it bright in the room? What color are the walls? Are you beginning to see that even with your thoughts right in your face, you don’t
have to pay attention to the content? That even with your worst thoughts and sensations right in front of you, there is much more to experience around you? Thoughts are just thoughts, not reality!

This exercise is adapted from Hayes et al. (1999) and will be used to give participants a different, more distanced perspective of their thinking while staying in the present moment. The participant takes the role of the “person” and the therapist takes the role of “the mind.” The therapist is not taking the position that the mind and body are different entities. The exercise is used to deliteralize the contents of the participant’s private events and to teach the participant how to experience different contextual stimuli in the present moment.

Therapist: Before we start today, it is important for us to identify everyone who is in the room. By my count, there are four of us: Me, You, Your Mind, and My Mind. Let’s just set out to notice how our minds get in the way of our connecting, of being present with each other. When you notice your mind getting in the way, just mention that it’s getting in the way. I’ll do the same. Let’s see how much time we spend fending off our minds. To do this, I want us to do a little exercise. One of us will be a person, the other will be that person’s Mind. We are going outside for a walk, using a special set of rules: The Person may go where he or she chooses; the Mind must follow. The Mind must communicate nearly constantly about anything and everything: describe, analyze, encourage, evaluate, compare, predict, summarize, warn, criticize, and so on. The Person cannot communicate with the Mind. If the Person tries to talk to the Mind, the Mind should intervene. The Mind must monitor this carefully and stop the minding the Mind if the rule is violated (by saying, “Never mind your Mind!”). The Person should listen to the Mind without minding back and go wherever the Person chooses to go. After at least five min, and the Mind will monitor this, we will switch roles. The Person becomes the Mind, and the Mind becomes the Person. The same rules will apply for another five min. Then we will split up and walk quietly and individually for 5 min, noticing that each of us is still taking a mind for a walk—it is just the familiar Mind that is inside your
head. Follow the same rules as before during these 5 min: dispassionately let the Mind describe, analyze, encourage, evaluate, compare, predict, summarize, warn, point out, and so on, without minding back.

First, the therapist will make sure the participant is willing and ready to engage in this exercise. The participant will be instructed that a craving will be evoked and asked if this is okay. The exercise will begin by inducing relaxation by using a brief five min body scan exercise. Guide the client through visualizing waves at the ocean. Very slowly describe the gradual swell, as the water gathers together, building, rising, climbing, and creating a wall of water.

Slow down even more as the wave reaches its peak, the first signs of foam start to emerge at the peak of the wave and then slowly watch the wave over-balance and watch the wall of water curl over, sliding, tumbling, falling back into the rest of the sea and spreading forward rapidly as it heads toward the shore. Ensure the client is capable of generating a vivid image of a wave rising, peaking and spilling toward the beach before introducing the next phase. Practice until the client can generate the image.

Next, invite the client to generate an urge to use their drug of choice by calling to mind some of its appetitive qualities. As soon as the client indicates some experience of craving, guide the client back to the image of the wave rising and guide them to ‘see this wave as the urge to use you are experiencing right now’. Let them know their job is to surf this wave, as a surfer would. Slowly guide them through riding the wave as it builds and peaks, and then to ride the wave into the shore. Continue the exercise until the client no longer has the craving.

Debrief the participant, explaining to them that this is something that they can use on a regular basis and that other imagery stimuli can be utilized.

First, the therapist will draw and X on a sheet of paper. The therapist will instruct the participant to notice X, and then say there’s X and you are noticing X. Then the therapist will say if
you can notice X, you cannot be X. The therapist will explain that X changes continually; the you who notices X does not change. Therefore, whatever you can observe and notice is not you. The therapist will then tell the participant they are going to do another exercise, if they are willing.

Close your eyes, and follow my voice. Just relax. For a moment now, turn your attention to yourself in this room. Picture the room. Picture yourself in this room. Now begin to go inside your skin, and get in touch with your body... Notice any feelings that are there. Now notice any emotions you are having. Now get in touch with your thoughts. Now, get in touch with the observer--the part of you that noticed the bodily sensations, the feelings, the thoughts. As the observer, hear and follow this:

Think back to a time when you were a child. Think of a specific time. Remember what you were doing then, what was happening. Now as you are thinking about that, I want to ask you a question. Was that you then? Does the person looking from behind these eyes share an essential continuity with that child? I want you to notice that you have been you your whole life. Thus, while you have a body, you don't experience that you are your body. When your body changes, you are still you.

Focus your attention on this central concept: Allow yourself to realize this as an experienced fact not just as a thought, or belief, or point of view. Think of all the ways that your body has changed, all the situations it has been in, while you remained constant. (Leave a period of silence.)

Now let yourself consider this: "I have a role to play, and yet I am not my roles. My roles are many and constantly changing. Sometimes I'm in the role of a (fit these to client, e.g., "mother... or a friend... or a daughter... or a wife... sometimes I'm a respected worker... other times I'm a leader... or a follower" etc.) I play some role all the time. If I were to try not to, then I'd be playing the role of not playing a role. Even now part of me is playing a role... the client role. Yet all the while, the observer... the part of me I call "I" is watching. I can play my constantly changing roles, yet all the
while I can be there, as a constant, steady observer of it all. So I have roles, and yet I am not my roles."

Allow yourself to realize this as an experienced fact. You know it is true, and you've known all along, although sometimes you may forget it. This is no just another rap, or belief system, or perspective. It is your experience of your life roles, and you are simply allowing yourself to realize that you are observing your own roles.

Now, still as the observer, look at this: "I have many emotions. My emotions are countless, contradictory, changing. They may swing from love to hatred, from calm to anger, from joy to sorrow, and yet I have been here right along. Even now I am experiencing emotion, interest, boredom, embarrassment, relaxation. And throughout, I am capable of observing it all. Though a wave of emotion may come over me, it will pass in time. The observer part of me knows that I am having this emotion and yet I am not this emotion. The emotions are constantly changing. The observer remains there, the same. Thus, I have emotions, but I am not my emotions."

Focus your attention on this central concept: "I have emotions, but I am not my emotions." Allow yourself to realize this as an experienced fact, not just a belief. Think of things you have liked, and don't like any longer; of fears that you once had that now are resolved. Yet you experience yourself as a constant. You are there through it all.

(Leave a period of silence)

Now let's turn to a most difficult area, your own thoughts. Consider this: "I have thoughts, but I am not my thoughts. My thoughts are constantly changing. In my life I have gained new ideas, new knowledge and experience. I can think something falsely and then find out the truth and think something entirely different. Sometimes my thoughts are foolish and make little sense. Sometimes thoughts come up automatically, from out of nowhere. Yet all the while, the observer part of me is
seeing these thoughts. The observer part of me knows that I have thoughts, and yet I am not my thoughts.

Allow yourself to realize this as an experienced fact. This is the way it is, though often we lose touch with it. And notice even as you realize this, your stream of thoughts will continue. And you may get caught up with them. And yet in the instant that you realize that, you also realize that a part of you is standing back, watching it all. So now watch your thoughts for a few moments-- and see that watching happened, and then observe that as well. (Leave a period of silence)

So you are not just your body... your thoughts... your feelings... your roles. These things are the content of your life, while you are the arena... the context... the space in which they unfold.

As you see that, notice how you can distance yourself from the things you’ve been struggling with, and putting up with. You’ve been trying to change your roles, to get rid of your "bad" feelings, to control your mind. And the more you do that, the worse it gets... The more entangled you become... the less you are even "there." You’ve been trying to change the content of your life. Yet the observer knows that there is no need for the struggle. You don’t have to change these things first before your life can work, because they are not you anyway. You can give up the struggle, and start being OK about yourself. Not because you think so, but because the observer knows that as an experienced fact. (Pause a few moments)

Now again picture yourself in this room. And now picture the room. Picture the room (describe it to the client). And when you are ready to come back into the room, open your eyes. Process with the client his or her experience of the exercise just completed. Avoid analysis of the experience, but focus on the experience itself. Leave the client with reference to the chessboard metaphor, saying, "There is one other thing which the board, as a board can do, other than hold the pieces. It can see what is there, feel what is there, and still say, “Here we go!”
Session Six (Commitment to Action)

This next and final segment is entitled committed action. Committed action means taking larger and larger patterns of effective action, guided and motivated by values. It also means flexible action: readily adapting to the challenges of ever changing contextual variables by either persisting with or changing behavior as required or doing what it takes to live by our values. The idea here is to translate values into ongoing, evolving patterns of action. To establish the pattern of repeatedly returning to our values, no matter how many times we lose touch with them. Here’s where we turn those values into feasible goals and commit to action. We’ll identify barriers to action and learn how to overcome them.

Imagine you are going on a journey. Somewhere really special, where you really want to go, somewhere you've wanted to go your whole life. When you get to the train station you see two trains, one is a bit odd looking and strange, some of the seats look a bit hard and overall it looks a bit dirty and uncomfortable. On the next platform, there is a different train; it's a super train. It looks familiar, safe, reliable, the sort of train an accountant or an insurance sales man might prefer. The sign says it has air conditioning, a cinema, and a fancy all you can eat French restaurant that is free. You think, wow! I just have to take this train; I couldn’t possibly make my journey on that other one, no way! So you wait for this 'great' train to get ready to board and the odd looking train goes on its way. And you wait for the safe train some more and another odd train leaves the station, and another. All the while you are waiting for a chance to board this great reliable train so you can take your journey, as yet another odd looking one leaves. But here is the thing. What if the safe train can't ever board, what if it won't ever leave the station. What if you are waiting for the wrong train?!

Essentially we have two trains, one that will help clients move forward that might be difficult and another one that they would rather wait for. It should be possible to alter the descriptions of the two opposing trains to better fit our clients' difficulties.
Living according to your values is like hitting the bull’s eye in a game of darts. This can be physically acted out by drawing a bull’s eye and having the client point out within the bull’s eye they are in relation to their values.

If your value is the compass point by which you want to guide your life’s journey, your goals are the road map that can lead you there.

Goals that involve getting rid of something or stopping something are called “dead man goals”. The only person capable of achieving such goals is a dead man.

Step 1 and 2 often allow for a powerful discrimination of the importance of goals. Discriminating between 2 and 3 diminishes the importance of goals a bit and puts the way or how of moving into the spot (“the outcome is the process through which process becomes the outcome”).

These are the steps:
1. Go around aimlessly for two or three minutes and observe your thoughts and feelings.
2. Go repeatedly toward a freely chosen goal, one after another, for two or three minutes again. Observe your thoughts and feelings.
3. Again for two or three minutes, successively choose different goals to approach AND also freely choose different ways of how you might approach your goals (going fast or slowly, hopping, crawling, going crooked with your head and eyes down, or going upright and looking straight ahead). Observe your thoughts and feelings — and choose the way you really want to move forward from now on in your life.

Most often there is both a lot of fun (e.g. jumping around in the room, crawling on the floor, or making any kind of funny movements) and a sense of sobriety and genuineness in the air as we all become mindful of HOW we might want to walk the walk of life.

This exercise binds all components of ACT. This exercise shows how passengers (thoughts) can ride on the bus without deterring the individual from travelling in a certain direction (valued
action), towards a certain goal (committed action). Then, the therapist and participant will act out the exercise telling the individual to walk towards a point in the room while the therapist says some of the aversive thoughts the individual tries to avoid.

The Setting Values-Based Goals Worksheet, adapted from Harris (2009), helps to choose a domain of life that is a high priority for change, choose the values to pursue within this domain, develop goals which are guided by values, and take action mindfully (Harris, 2009). Participants will fill out this worksheet without judgment and identify how they will follow through with the chosen goals.

The Willingness and Action Plan Worksheet, also adapted from Harris (2009) focuses more specifically on chosen goals and identifies possible barriers to committed action. Participants will fill out the worksheet, again, without judgment (these are the participants’ goals, not the therapist’s). A discussion of possible solutions to these barriers will follow as well as the different behavioral changes that will be necessary to complete the participants’ chosen goals.
Appendix C – Worksheets

Stimulus Preference Assessment (Interview)

Interviewee: ____________________________

Interviewer: ____________________________

Date: __________________

1. What are your favorite things to do while at home?

2. What would you buy if you had $100 to spend?

3. What are your favorite activities when going out into the community?

4. What are your hobbies?

5. What do you like to do in your free time?

6. If you had the opportunity to spend a day doing anything you wanted, what would you like to do?
7. Who are your favorite people to do things with?

8. What are your favorite foods to eat?

9. What is your favorite type of music? What artists do you like?

10. What TV shows do you enjoy?

11. What are your favorite movies?

12. Do you enjoy spending time on the internet? What are your favorite websites?

13. If you have a goal of working, what would your dream job be?
VALUES WORKSHEET (Adapted from Kelly Wilson’s Valued Living Questionnaire)

Deep down inside, what is important to you? What do you want your life to stand for? What sort of qualities do you want to cultivate as a person? How do you want to be in your relationships with others? Values are our heart’s deepest desires for the way we want to interact with and relate to the world, other people, and ourselves. They are leading principles that can guide us and motivate us as we move through life.

Values are not the same as goals. Values are directions we keep moving in, whereas goals are what we want to achieve along the way. A value is like heading North; a goal is like the river or mountain or valley we aim to cross whilst traveling in that direction. Goals can be achieved or ‘crossed off’, whereas values are an ongoing process. For example, if you want to be a loving, caring, supportive partner, that is a value – an ongoing process. If you stop being loving, caring and supportive, then you are no longer a loving, caring, supportive partner; you are no longer living by that value. In contrast, if you want to get married, that’s a goal - it can be ‘crossed off’ or achieved. Once you’re married, you’re married – even if you start treating your partner very badly. If you want a better job, that’s a goal. Once you’ve got it - goal achieved. But if you want to fully apply yourself at work, that’s a value – an ongoing process.

The following are areas of life that are valued by some people. Not everyone has the same values, and this is not a test to see whether you have the “correct” values. Think about each area in terms of general life directions, rather than in terms of specific goals. There may be certain areas that you don’t value much; you may skip them if you wish. There may be areas that overlap – e.g. if you value hiking in the mountains, that may come under both physical health and recreation. It is also important that you write down what you would value if there were nothing in your way. What’s important? What do you care about? And what would you like to work towards?

1. **Family relations.** What sort of brother/sister, son/daughter, uncle/auntie do you want to be? What personal qualities would you like to bring to those relationships? What sort of relationships would you like to build? How would you interact with others if you were the ideal you in these relationships?

2. **Marriage/couples/intimate relations.** What sort of partner would you like to be in an intimate relationship? What personal qualities would you like to develop? What sort of relationship would you like to build? How would you interact with your partner if you were the ‘ideal you’ in this relationship?

3. **Parenting.** What sort of parent would you like to be? What sort of qualities would you like to have? What sort of relationships would you like to build with your children? How would you behave if you were the ‘ideal you’.

4. **Friendships/social life.** What sort of qualities would you like to bring to your friendships? If you could be the best friend possible, how would you behave towards your friends? What sort of friendships would you like to build?

5. **Career/employment.** What do you value in your work? What would make it more meaningful? What kind of worker would you like to be? If you were living up to your own ideal standards, what personal qualities would you like to bring to your work? What sort of work relations would you like to build?

6. **Education/personal growth and development.** What do you value about learning, education, training, or personal growth? What new skills would you like to learn? What knowledge would you like to gain? What further education appeals to you? What sort of student would you like to be? What personal qualities would you like to apply?

7. **Recreation/fun/leisure.** What sorts of hobbies, sports, or leisure activities do you enjoy? How do you relax and unwind? How do you have fun? What sorts of activities would you like to do?

8. **Spirituality.** Whatever spirituality means to you is fine. It may be as simple as communing with nature, or as formal as participation in an organised religious group. What is important to you in this area of life?

9. **Citizenship/environment/community life.** How would you like to contribute to your community or environment, e.g. through volunteering, or recycling, or supporting a group/ charity/ political party? What sort of environments would you like to create at home, and at work? What environments would you like to spend more time in?

10. **Health/physical well-being.** What are your values related to maintaining your physical well-being? How do you want to look after your health, with regard to sleep, diet, exercise, smoking, alcohol, etc? Why is this important?
Values Assessment Rating Form

Read through the accompanying values sheet. For each of the ten domains, write a few words to summarise your valued direction, e.g. ‘To be a loving, supportive, caring, partner.’ Rate how important this value is to you on a scale of 0 (low importance) to 10 (high importance). It’s okay to have several values scoring the same number. Rate how successfully you have lived this value during the past month on a scale of 0 (not at all successfully) to 10 (very successfully). Finally rank these valued directions in order of the importance you place on working on them right now, with 10 as the highest rank, and 9 the next highest, and so on.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Valued direction (Write a brief summary, in one or two sentences, or a few key words.)</th>
<th>Importance</th>
<th>Success</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Couples/ intimate relationships</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Education and training</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirituality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizenship/ community</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health/ Physical well-being</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>


DISSECTING THE PROBLEM

This form is to help gather information about the nature of the main challenge, issue, or problem facing you.
First, please summarize, in one or two sentences, what the main issue or problem is:

Second, please describe, in one or two sentences, how it affects your life, and what it stops you from doing or being:

Regardless of what your problem is—whether it is a physical illness, a difficult relationship, a work situation, a financial crisis, a performance issue, the loss of a loved one, a severe injury, or a clinical disorder such as depression—when we dissect the problem, we usually find four major elements that contribute significantly to the issue. These are represented in the boxes below. Please write as much as you can in each box about the thoughts, feelings, and actions that contribute to or worsen the challenge, problem, or issue facing you:

<table>
<thead>
<tr>
<th>Entanglement with Thoughts</th>
<th>Life-draining Actions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What memories, worries, fears, self-criticisms, or other unhelpful thoughts do you dwell on or get &quot;caught up&quot; in that are related to this issue? What thoughts do you allow to hold you back or push you around or bring you down?</td>
<td>What are you currently doing that makes your life worse in the long run: keeps you stuck; wastes your time or money; drains your energy; restricts your life; impacts negatively on your health, work, or relationships; maintains or worsens the problems you are dealing with?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Struggle with Feelings</th>
<th>Avoiding Challenging Situations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What emotions, feelings, urges, impulses, or sensations (associated with this issue) do you fight with, avoid, suppress, try to get rid of, or otherwise struggle with?</td>
<td>What situations, activities, people, or places are you avoiding or staying away from? What have you quit, withdrawn from, dropped out of? What do you keep &quot;putting off&quot; until later?</td>
</tr>
<tr>
<td>ATTEMPTED SOLUTIONS AND THEIR LONG-TERM EFFECTS</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>What have you done to avoid or get rid of problematic thoughts, feelings, memories, emotions, or sensations? List everything you can think of whether it was intentional or not.</td>
<td></td>
</tr>
<tr>
<td>a. Did your thoughts and feelings go away?</td>
<td></td>
</tr>
<tr>
<td>b. Did they return in the long run?</td>
<td></td>
</tr>
<tr>
<td>c. Did they worsen?</td>
<td></td>
</tr>
<tr>
<td>Has this brought you closer to a rich, full, and meaningful life?</td>
<td></td>
</tr>
<tr>
<td>What has this cost you in terms of wasted time, energy, or money; or negative effects on health, well-being, work, leisure, or relationships?</td>
<td></td>
</tr>
</tbody>
</table>

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[Creative What?!?!]
EXPANSION PRACTICE SHEET

Expansion means opening up and making room for difficult feelings, urges, and sensations, thereby allowing them to “flow through” you without a struggle. You don’t have to like or want these feelings—you just make room for them and allow them to be there even though they are unpleasant. Once you learn this skill, if these feelings should resurface, you can rapidly make room for them and let them “flow on by” so you can invest your time and energy in doing meaningful life-enhancing activities instead of struggling. Aim to practice at least once a day breathing into and making room for difficult feelings and sensations.

<table>
<thead>
<tr>
<th>Expansion Practice Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day/Date/Time</td>
</tr>
<tr>
<td>Feelings/Sensations</td>
</tr>
<tr>
<td>How long I practiced</td>
</tr>
<tr>
<td>(in minutes)</td>
</tr>
<tr>
<td>What struggle switch</td>
</tr>
<tr>
<td>rating (0–10)?</td>
</tr>
<tr>
<td>10 = switch on,</td>
</tr>
<tr>
<td>0 = switch off,</td>
</tr>
<tr>
<td>5 = halfway point</td>
</tr>
<tr>
<td>(tolerance)</td>
</tr>
<tr>
<td>Used a CD or MP3 to</td>
</tr>
<tr>
<td>assist?</td>
</tr>
<tr>
<td>yes/ no</td>
</tr>
<tr>
<td>Benefits and/or</td>
</tr>
<tr>
<td>Difficulties</td>
</tr>
</tbody>
</table>
SETTING VALUES-BASED GOALS

Three Steps to Setting Values-Based Goals

Step 1: The domain of life I choose to work on is (circle one or two, but no more): work, health, education, social, parenting, intimate partner, family, spiritual, community, environment, leisure, personal growth.

Step 2: The values underlying my goals (in this domain of life) are:

When it comes to setting goals, make sure you set a SMART goal:

■ **Specific:** Specify the actions you will take—when and where you will do so, and who or what is involved. For example, this is a vague or nonspecific goal: “I will spend more time with my kids.” This is a specific goal: “I will take the kids to the park on Saturday afternoon to play baseball.” Make your goal specific enough so that you can easily tell whether or not you’ve achieved it.

■ **Meaningful:** If this goal is genuinely guided by your values as opposed to following a rigid rule, trying to please others, or trying to avoid some pain, then it will be personally meaningful. If it lacks a sense of meaning or purpose, check in and see if it’s really guided by your values.

■ **Adaptive:** Does the goal help you to head in a direction that, as far as you can predict, is likely to improve, enrich, or enhance your quality of life?

■ **Realistic:** The goal should be realistically achievable. Take into account your health, competing demands on your time, financial status, and whether you have the skills to achieve it.

■ **Time-framed:** To increase the specificity of your goal, set a day, date, and time for it. If this isn’t possible, set as accurate a time frame as you possibly can.

Step 3: My values-based goals are …

■ **an immediate goal** (something small, simple, and easy that I can do in the next twenty-four hours):

■ **short-term goal(s)** (things I can do over the next few days and weeks):

■ **medium-term goal(s)** (things I can do over the next few weeks and months):

■ **long-term goal(s)** (things I can do over the next few months and years):
THE WILLINGNESS AND ACTION PLAN

1. My goal is to (be specific):

The values underlying my goal are:

The actions I will take to achieve that goal are (be specific):

2. The thoughts/memories, feelings, sensations, urges I’m willing to make room for in order to achieve this goal are:
   - Thoughts/memories:
   - Feelings:
   - Sensations:
   - Urges:

3. It would be useful to tell myself that:

4. If necessary, I can break this goal down into smaller steps. The smallest, easiest step I can begin with is:

   The time, day, and date when I will take that first step are:
JOIN THE DOTS
What are the main thoughts and feelings showing up in your life today, that are problematic for you? Write these down below under “Body” and “Mind”. Next write down everything you have ever tried to get rid of, avoid, suppress, escape or distract yourself from these thoughts or feelings. Finally consider the long term outcomes.

**Body**
- Feelings, sensations, urges,
- cravings, symptoms of physical illness

**Mind**
- Thoughts, memories, beliefs,
- worries, self-judgments

**D - Distraction**: how have you tried to distract yourself from these thoughts and feelings (eg TV, shopping, etc)?

**O - Opting out**: we often opt out (quit, avoid, or withdraw from) people, places, activities, and situations when we don’t like the thoughts and feelings they bring up for us. What are some of the things you opt out of?

**T - Thinking**: how have you tried to think your way out of it? (e.g. blaming others, worrying, rehashing the past, fantasizing, positive thinking, problem-solving, planning, self-criticism, “What if?”, “If only ...”, “Why me?”, “Not fair!”; analyzing, trying to make sense of it, debating with yourself, denial, beating yourself up, etc.)

**S - Substances, Self-harm, other Strategies**: What substances have you tried putting into your body (including food and prescription medication)? Have you ever tried self-harming activities, such as suicide attempts or reckless risk-taking? Any other strategies you can think of, e.g. excessive sleeping?

Did these strategies get rid of your painful thoughts and feelings *in the long term* - so that they never came back?

When you have used these strategies excessively, rigidly, or inappropriately, what have they cost you in terms of health, vitality, energy, relationships, work, leisure, money, missed opportunities, wasted time?

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Appendix D – IRB Approval Form

4/23/2013

Alexander McLean, B.A.
ABA-Applied Behavior Analysis
13301 Bruce B Downs Blvd.
MHC 2113A
Tampa, FL 33612

RE: Full Board Approval for Initial Review
IRB#: Pro00010735
Title: Using Acceptance and Commitment Therapy to Decrease Drug Use with Individuals Diagnosed With Traumatic Brain Injury

Study Approval Period: 3/14/2013 to 3/14/2014

Dear Mr. McLean:

On 3/14/2013, the Institutional Review Board (IRB) reviewed and APPROVED the above application and all documents outlined below.

Approved Item(s):
Protocol Document(s):
AlexMcLean-THESIS DOCUMENT-REVISED FINAL (10-10-12).docx

Consent/Assent Document(s)*:

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

The IRB suggests that you consider applying for a Certificate of Confidentiality from the National Institutes of Health (NIH) which protects personally identifiable information about subjects in a research project while the Certificate is in effect.