Using Acceptance and Commitment Therapy to Decrease Anxiety in an Adult with Drug-Induced Psychosis

By

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Dedication
To Eric - Thank you for cheering me on throughout this rewarding experience. Your love and support have been the greatest reward of all.
Abstract
The purpose of this case study was to examine the effectiveness of Acceptance and Commitment Therapy (ACT) to decrease anxiety in a participant with drug-induced psychosis (DIP). It was hypothesized that the participant’s anxiety would decrease after seven 45-minute sessions of ACT. Furthermore, it was proposed that ACT might be able to treat multiple areas of comorbidity that the participant was experiencing. The participant was a 35-year-old White male who had a diagnosis of DIP, Bipolar Disorder Not Otherwise Specified (NOS), and Borderline Personality Disorder, with symptoms of anxiety. The Depression Anxiety Stress Scale (DASS) and the Thought Scale (TS) were used to assess the dependent variables at pre- and post-intervention. Results indicated that the participant experienced a decrease in anxiety, stress, and depression symptoms. The participant also rated delusional thoughts as more frequent, but less anxiety provoking and less believable. Furthermore, the results suggest an increase in psychological flexibility, and a decrease in experiential avoidance. Additionally, the participant reduced his substance use over the course of treatment and maintained reduced use post-treatment. It was recommended that future studies explore the effects of individual ACT, with multiple participants, to enhance the current literature. Limitations, multilevel challenges, additional future recommendations, and contributions to the field of behavioural psychology were also discussed.
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Chapter I - Introduction

Facing challenging situations in everyday life is inevitable. Although these situations can be anxiety provoking, many individuals are able to overcome these challenges. However, individuals with drug-induced psychosis (DIP) lack the necessary cognitive abilities to cope with stressful situations. For instance, typical psychotic symptomology, including hallucinations, delusions, and illusions, can create a distorted reality that may provoke fear. Psychosis is also typically accompanied by a lack of belief flexibility that increases the likelihood of experiencing unhelpful thoughts and may further contribute to the acceptance of aforementioned symptomology. Often times, these symptoms and unhelpful thoughts interact causing the external stimuli to seem anxiety provoking even when they are not. Experiencing these difficulties can lead to problems with sleep hygiene, eating habits, developing and maintaining relationships, stigmatization, suicidal ideation, treatment adherence, and isolation. Furthermore, up to 60% of individuals with psychosis also have comorbid anxiety (Cassano, Pini, Saettoni, & Dell'Osso, 1999; Dernovsek & Sprah, 2009). Thus, it is imperative that individuals experiencing psychosis receive treatment that target anxiety in order to enhance their quality of life.

Due to the growth of mindfulness and acceptance-based interventions, a third wave treatment, has been gaining popularity in the psychology field. Acceptance and Commitment Therapy (ACT) is a behavioural therapy based on the Relational Frame Theory (RFT) and is rooted in pragmatism and functional contextualism (Batten, 2011; Twohig, 2012). In other words, the theory is centered on cognition, human language, and coping with problematic thoughts in a practical way (Hayes, Levin, Plumb-Vilardaga, Villatte, & Pistorello, 2013). Thus, the core focus of ACT is to change the individual’s relationship or response to experiences, rather than attempting to change or challenge them. Hayes, Luoma, Bond, Masuda, and Lillis (2006) discussed the 6 main processes of ACT: acceptance, cognitive defusion, being present, self-as-context, values, and committed action. During ACT these processes are practiced to establish psychological flexibility: the ability to remain consciously in the present moment and to change behaviour if it serves an individual’s values (Hayes et al. 2006). For instance, an individual values being a hard-worker, his or her alarm clock goes off, and the individual has the thought “People will laugh at you if you go to this meeting. Stay in bed instead”. If the individual decided to get up and arrived to the meeting on time, he or she would be serving his or her values. In this example, the individual would be exhibiting psychological flexibility because regardless of the thought of possibly being laughed at, the individual exhibited the behaviour of going to work, in service of his or her chosen value (being a hard-worker).

In brief, ACT aims to assist individuals in living the value-oriented lives that they desire, regardless of unhelpful thoughts. Although the central purpose of ACT is not to control or change thoughts and emotions, clients may experience a reduction in troubling thoughts and anxiety as a side effect of the therapy (Hayes et al., 2006). It is likely that individuals with psychosis, experience anxiety as a result of their delusions. If this is true, then ACT is a promising treatment due to its ability to decrease proneness to delusions (Gaudiano, Nowlan, Brown, Epstein-Lubow, & Miller, 2012). Furthermore, if proneness to delusions decreases, than anxiety may subsequently decrease. Hence, the current study examines the utility of ACT in decreasing anxiety in a participant with drug-induced psychosis. It is hypothesized that, through the use of ACT, the participant will experience enhanced psychological flexibility thereby decreasing anxious symptomology.

This current thesis will explore the most recent research and literature on ACT. The literature review will address the relationship between ACT and CBT, and the effectiveness of
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ACT for various diagnoses. The methods section will contain further information about the participant, design, settings, measures, and procedures outlined. The results section will include a visual analysis and figures for clear interpretation of data. Strengths and limitations, and the conclusion will also be discussed. Furthermore, recommendations for future research and an explanation of how this study may influence the field of behavioural psychology will be addressed.
Chapter II - Literature Review

Acceptance and Commitment Therapy

ACT is an evidence-based behavioural therapy that aims to assist individuals to live their lives consistent with their values. From an ACT stance, it is believed that most psychopathology is maintained or exacerbated by experiential avoidance; the practice of attempting to control or avoid unwanted internal events. Hayes, Wilson, Gifford, Follette, and Strosahl, (1996) suggest that Borderline Personality Disorder, Panic Disorder, Obsessive Compulsive Disorder, and Substance Abuse are all examples of psychopathology in which experiential avoidance plays a role. In the case of substance abuse, it has been illustrated that substances have been used to avoid unpleasant experiences such as anxiety, depression, anger, social discomfort, and other negative emotions (Childress, McLellan, Natale, & O’Brien, 1986; Sanchez-Craig, 1984). During ACT, the therapist and the client work together using the six core processes to enhance psychological flexibility in order to create behaviour changes, as well as increase mindfulness and willingness to live in the present moment (Luoma, Hayes, & Walser, 2007).

As discussed previously, the six main processes of ACT include acceptance, cognitive defusion, being present, self-as-context, values, and committed action (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). According to Hayes et al. (2006), acceptance is used as an alternative to experiential avoidance. During acceptance, individuals are taught to embrace internal experiences without resisting or trying to change them. The process of cognitive defusion, or defusion, includes changing the way individuals interact with or relate to thoughts in order to decreases attachment to thoughts. The opposite of defusion is fusion or cognitive fusion, which is defined as holding onto thoughts and allowing them to greatly influence behaviour (Harris, 2009). During ACT, participants are taught different techniques in order to help them defuse from their thoughts. For example, if a participant thinks, “I am not a good son,” he may be taught to name his thought: “I am experiencing that thought that I am not a good son,” thanking their mind for the thought, or saying the voice out loud in a humorous tone. Being present is an ongoing process that promotes the non-judgment of occurring events while directly experiencing the present moment. During ACT, participants practice mindfulness techniques in order to remain present. Batten (2011) suggests that the inability to remain in the present moment can result in behaviours such as daydreaming, ruminating about the past and future, and dissociation. A more concrete example of this type of behaviour is when substance abuse is used to avoid experiencing negative emotions (Batten, 2011). Conversely, Hayes et al. (2006) suggest that when individuals directly experience the world, by using mindfulness strategies, they are able to display behaviours consistent with their values. This might be because when someone is attached to unhelpful thoughts they may avoid experiences in an attempt to avoid the unhelpful thoughts or uncomfortable internal events that accompany the thoughts. However, by avoiding experiences, individuals are unable to enjoy the present moment. Alternatively, by bringing attention back to the present moment, participants are able to identify the values that are important to them. Then participants are able to create goals for themselves accordingly, allowing them to display value-consistent behaviours. For example, if participants value being out in the community, but do not go to a methadone appointment because they think people will judge and talk about them, they would not be living in a way that is consistent with this value. However, if participants chose to go to their appointments regardless of their unhelpful thoughts, they would be displaying behaviours consistent with this value. The self-as-context process involves awareness of experiences without investing or attaching to them. Harris (2009) explains the self as having two components: the thinking self, which is responsible for cognitions, and the
observing self, which enables awareness of cognitive processes. Hayes et al. (2006) explain that the values principle consists of identifying values that are important to that specific individual. During this process of ACT, the therapist works with the client to recognize values that are not based on social compliance, avoidance, or fusion. Moreover, this process teaches that a value is not something that can be achieved as an object or checked off of a list because it is a constant and lifelong direction. Lastly, committed action involves setting goals and presenting behaviours that are consistent with an individual’s unique values. In other words, if values are a compass, then goals are the places to visit on the journey through a value-directed life (Forsyth & Eifert, 2007).

Currently, it appears that no study has specifically explored the use of ACT with drug-induced psychosis. However, studies have been conducted on the utility of ACT in regards to substance use, psychosis, and anxiety individually. Thus, literature regarding these topics will inform the current thesis.

ACT Compared to Traditional Cognitive Behavioural Therapy (CBT)

For years, substance use, anxiety, and psychosis have been treated with traditional Cognitive Behavioural Therapy (CBT). Although CBT is arguably the most dominant, empirically supported treatment in the field of psychology, literature shows that it is ineffective for some individuals (Craske et al., 2014; Hayes, Orsillo, & Roemer, 2010; Dalrymple & Herbert, 2007; Herbert et al., 2005; Heinberg et al., 1998). Presently, reasons for the unresponsiveness to CBT have not been established. Eifert and Forsyth (2005) argued that the more attention that is placed on the content of negative thoughts, the more rumination is maintained. Furthermore, Meuret, Hoffman, and Rosenfield (2010) propose that individuals do not respond well to cognitive restructuring techniques in CBT if they have high levels of catastrophic cognitions. In contrast to CBT’s focus on modifying dysfunctional beliefs, ACT aims to cultivate mindfulness and acceptance to promote behaviour change.

In one study by Losada et al. (2015), the effects of CBT and ACT were compared in a randomized trial for caregivers with symptoms of depression, who provide assistance to individuals with Dementia. The study consisted of 135 caregivers who were randomized to CBT, ACT, or a control group. The primary outcome measures were anxiety and depression symptoms (the Center for Epidemiological Studies Depression Scale; CES-D, and the Tension-Anxiety Subscale from the Profile of Mood States; POMS). Secondary outcomes included leisure, experiential avoidance, and dysfunctional thoughts about caregiving. Results for anxiety and depression assessments showed significant decreases for both CBT and ACT compared to the control group, but these results were only maintained by the CBT group. However, experiential avoidance only decreased with the ACT group. This may provide evidence that acceptance-based coping strategies employed in ACT are more useful than the change or control strategies unique to CBT in decreasing experiential avoidance. At follow-up, 10% of the CBT group, compared to 4% of the ACT group, had fully recovered from depression. Yet, more participants from ACT recovered from anxiety. Losada et al. (2015) noted that ACT might yield larger results for anxiety because it assists individuals in normalizing their distress and reduces worry regarding their aversive emotions, thereby reducing anxiety. Furthermore, extinction and habituation of anxious responses might have occurred as a by-product, due to mindfulness and acceptance exercises providing more exposure to difficult internal experiences (Losada et al., 2015).

Niles and colleagues (2014) found similar results regarding decreases in experiential avoidance for ACT compared to CBT. This study included 50 participants who all met the DSM-
IV criteria for an anxiety disorder. Half of the participants were randomized to ACT and the other half were randomized to CBT. Assessments were performed at pre- and post-intervention, as well as at a 6- and 12-month follow-up. Results showed that the ACT group experienced a greater decrease in experiential avoidance in the beginning of treatment, and then CBT’s decrease became steeper towards the second half. Both groups also displayed decreases in negative cognitions, but, again, the results in the ACT group were more rapid. However, Niles et al. (2014) suggest that the exposure to feared situations in CBT may be more useful at reducing negative thoughts than the values-driven process in ACT. Overall, there were no substantial differences between ACT and CBT for the outcomes of treatment. Furthermore, this study demonstrated that the mechanisms of change differ in CBT and ACT. Thus, treatment outcomes may be enhanced depending on which mechanism of change is complimentary to a specific participant.

Another study by Arch et al. (2012) examined CBT versus ACT for mixed anxiety disorders. During the study, 128 participants, who were all diagnosed with at least one anxiety disorder, were randomized to either an ACT or CBT group. The results of this study demonstrated that CBT had more treatment credibility than ACT, as demonstrated by a six-item treatment credibility questionnaire, and sensitivity to anxiety continued to decrease from 6- to 12-month follow-up. However, ACT demonstrated continued improvement of clinical severity rating from 6- to 12-month follow-up. Although no clinically significant differences were found at post treatment between the two groups, ACT was still supported as being superior for decreasing disorder severity and increasing psychological flexibility at follow-up. This study coincides with results from previous investigations that depict both treatments as effective and neither as necessarily better than the other.

**ACT and Substance Use**

ACT is one of the most evidence-based, third-wave behavioural therapies for substance use (Lanza & Menéndez, 2013). A study directed by Lanza and Menéndez (2013) investigated the effect of ACT on drug abuse in women who were incarcerated. Participants were randomized to two groups: the ACT group, and the control group (CG). Both groups were assessed at pre- and post-intervention, as well as at a 6-month follow-up. At follow-up, abstinence rates rose to 43.8% in comparison to 18.2% for the CG. Furthermore, improvements were also reported in comorbid psychopathology, anxiety sensitivity, and psychological flexibility. Literature has suggested that anxiety, depression, and feelings of anger have been linked to relapse risk factors because they facilitate the need to use avoidance strategies (Childress et al., 1986; Hayes et al., 2004). Hayes and colleagues (2004) found that substance abuse could be used as a means of trying to regulate unpleasant internal experiences. For instance, Childress et al. (1986) revealed that when detoxified opiate addicts felt anxious, depressed, and angry, it functioned as triggers for craving and withdrawal. Furthermore, experiential avoidance and consequent drug use may be used to control symptoms of withdrawal and cravings, thereby increasing the overall reinforcement (Hayes et al., 2004).

Another study by Hayes et al. (2004) compared the effects of methadone maintenance (MM) alone, MM with 16 weeks of an Intensive Twelve-Step Facilitation (ITSF), and MM with ACT for participants with poly-substance abuse and opiate addictions. The participants of this study had already been through an average of 6.5 professional substance abuse treatment programs and half had Axis II disorders in accordance with DSM-IV criteria. The study assessed for use of opiates and other drugs at pre, post, and 6-month follow-up through urine analysis.
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(UA) and self-reports. The participants of ACT had lower rates of self-reported drug use and, according to the UR’s, lower rates of both opiate and total drug use at follow-up, making ACT the most effective treatment of this study.

In addition, a meta-analysis by Lee, An, Levin, and Twohig (2015) discussed 10 randomized controlled trials that compared ACT to other treatments for treating substance abuse. Some of the treatments included nicotine replacement therapy, 12-step therapy, and drug counselling. Studies included cigarette smoking, amphetamines, opiates, and poly-substance use with a total of 1386 participants across all studies. Similar to Hayes et al. (2004), for ACT, Lee et al. (2015) found a larger effect size for abstinence rates at follow-up compared to post-tests. This provides an example of how teaching the principles of ACT can elicit an incubation effect. Meaning, as time after treatment increases, the participants are able to grasp the techniques with increased ease. The authors suggest that this is due to an increase in psychological flexibility that led to continued growth and positive behaviour change at follow-up.

**ACT and Psychosis**

Gaudiano and Herbert (2006) conducted a study to determine if brief ACT would yield a reduction in psychotic symptoms. All participants were diagnosed with various psychotic disorders or disorders with psychotic features. Amongst the participants, over half (58%) also had comorbid substance use disorders. In the study, 40 hospitalized adults were randomized to an enhanced treatment as usual group (ETAU) and an ETAU with ACT group. Results showed a reduction in social impairment, affective symptoms, believability of hallucinations, and distress related to hallucinations. For instance, the results of the Sheenan Disability Scale (SDS) for social impairment showed that the ETAU had a decrease of .1 in scores compared to a 2.4, along a 10-point numerically anchored scale, for the ACT group. Rehospitalization rates were also lower but did not yield statistically significant results. In this study, Gaudiano and Herbert (2006) successfully showed feasibility for ACT as a short-term treatment for inpatients with psychotic symptomology.

In a study by Gaudiano et al. (2012), a treatment based on the ACT approach was used to treat major depression with psychotic features. Eleven participants completed 6-months of Acceptance-Based Depression and Psychosis Therapy (ADAPT) with pharmacotherapy. Consistent with previous research, this study also illustrated success when using ACT approaches to treat severe mental illnesses. For example, the Quick Inventory of Depressive Symptomology (QIDS), the Brief Psychiatric Rating Scale (BPRS), and Peters Delusion Inventory (PDI) showed significant decreases of symptoms in a relatively short amount of time. Furthermore, self-report measures illustrated that the participants had high levels of acceptance, anticipation for treatment success, confidence for recommending treatment to others, and believed that treatment sounded logical. Moreover, participants in complete remission for symptoms of depression and psychosis were at 36% for post-treatment and 55% at 9-month follow-up, again illustrating an incubation effect. Limitations for this study included the use of pharmacotherapy and that it is unclear how much of the results ADAPT is responsible for. However, Gaudiano and colleagues (2012) noted that most participants were recruited after a hospitalization, even though they had been taking medication. This may suggest that pharmacotherapy was not sufficiently benefitting the participants.

Additionally, White et al. (2011) led a controlled trial to test the feasibility of ACT for emotional dysfunction in participants with psychosis. In the study, 27 participants were randomized to treatment as usual (TAU) or ACT with TAU. TAU included
psychopharmacology, case management, and psychotherapy was permitted. ACT included 10, one-to-one sessions. Significant increases were found in the ACT group for the Kentucky Inventory Mindfulness Skills (KIMS), and decreases were found for negative symptoms, crisis contacts, and depression scores. At 3-month follow-up the results showed no change in participants who met criteria for depression in the TAU group compared to a 75% decrease in the ACT group. Anxiety did not show a significant decrease. However, the authors recognize that results may not be representative of ACT’s ability to decrease anxiety. This is because the participants were making changes to familiar routines, which may have been anxiety provoking in the short-term.

ACT and Anxiety

Aforementioned studies have discussed the efficacy of ACT as a treatment for anxiety, stating that it can successfully increase psychological flexibility, decrease experiential avoidance, negative cognitions/disorder severity, significantly reduce symptomology, and provide quick improvements that maintain or increase at follow-up (Arch et al., 2012; Losada et al., 2015; Nile et al., 2014).

Another study explored how successful ACT is for treating Social Anxiety Disorder (SAD) over a 12-week period. Participants with co-occurring Axis I Disorders were included in this study due to high rates of comorbidity typical with SAD (Dalrymple & Herbert, 2007). Participants’ illustrated that they were highly satisfied with treatment (93.8%) and their therapist (100%), as assessed by the Client Satisfaction Survey (Dalrymple & Herbert, 2007). Dalrymple and Herbert (2007) found that the treatment reduced avoidance rather than the fear of social situations, which is consistent with the main goal of ACT. There were clinically significant increases in quality of life and decreases in social anxiety symptoms, fear of negative evaluation, and experiential avoidance.

Meuret, Twohig, Rosenfield, Hayes, and Craske (2012) used brief ACT and traditional exposure to treat Panic Disorder. Completers consisted of eight participants after two dropped out. All completers had four sessions of ACT and six sessions of exposure therapy. Exposure therapy is a technique often used in CBT, where an individual is repeatedly exposed to specific triggering stimuli. However, in this study, exposure was altered to adhere to an ACT framework. In other words, instead of inducing anxiety and teaching participants to control their anxious response, the participant would be taught to practice acceptance and diffusion. The main goal of exposure in ACT is to increase psychological flexibility rather than extinction of an anxious response (Batten, 2011). Participants experienced increases in mindfulness and willingness to experience internal events, and reductions in the severity of panic symptoms and avoidant behaviour. Meuret and colleagues (2012) also discussed that when traditional CBT approaches have not been successful, ACT is a viable alternative.

Limitations of the Reviewed Literature

Several limitations should be noted from these studies, which may have affected both external and internal validity. Arch et al. (2012) reported high attrition rates with only 34% of participants fully completing treatment. Elevated attrition rates, throughout the studies, might have resulted in the treatment effects being underestimated (Arch et al., 2012; Hayes et al., 2004). Particularly for ACT, differential attrition may have contributed to the overestimation of treatment efficacy because literature suggests that participants were less accepting of the concepts involved (Losada et al., 2015). For example, Losada and colleagues reported that the
exercises from the ACT group were rated as more difficult than the exercises from the CBT group, which may be due to ACT’s concepts opposing societal norms (e.g., the inevitability of human suffering). Moreover, the same study outlined that in order to be a participant, individuals had to of not participated in previous interventions to assist coping with caregiving. However, it was not discussed if participants had former exposure to CBT or ACT techniques. Considering the rated difficulty of ACT exercises by participants, it is possible that participants had experienced CBT previously and therefore found it easier to learn because it required less of a time commitment. Extraneous variables were present as well. For instance, Arch et al. (2012) proposed that attrition might have been due to parking and treatment fees, long travel time, and few incentives. However, it is possible that there were aspects of treatment that participants did not like or found too challenging. Participant variables regarding treatment individualization use of self-report measures, and participant interest in treatment, may have also affected the outcome. In one study treatment lacked personalization, which could have factored into treatment cessation because participants may have felt as though their specific needs were not being met (Losada et al., 2015). Losada et al. (2015) also reported effects of individual characteristics leading to attrition. They stated that thirty-three participants stopped treatment because they reported no longer being interested in the intervention due to lack of time or difficulty locating assistance for care when participating in the intervention. Furthermore, there may have been more of an increase in primary outcomes, if participants had been interested in treatment. Similarly, Hayes et al. (2004) speculated that the high drop out rate might have been due to the participants’ patterns of substance-use, satisfaction with psychotherapy, low treatment motivation, poor psychosocial adjustment, and travel time to methadone clinics. However, treatment attrition was not assessed, therefore there is no evidence for any of these hypotheses. Lanza and Menéndez’s (2013) failed to discuss extraneous variables, such as possible supports present outside of treatment that may account for rise in abstinence rates amongst the control group. This may lead to readers wondering if ACT is solely responsible for the results. Nonetheless, the study generated significant results and illustrated that ACT is even successful when being utilized in a setting that is likely to increase feelings of hopelessness; a type of setting that the participant of the current thesis is familiar with. Furthermore, another study did not include a comparison group making it difficult to detect if other confounding variables, such as outside supports, were responsible for results (Dalrymple & Herbert, 2007). Moreover, possible allegiance effects may have affected results. For instance during the Arch et al. (2012) study, treatment took place in a prominent CBT research clinic. Consequently, if therapists preferred CBT to ACT, therapeutic allegiance could have affected. Another limitation involved treatment fidelity. For example, Losada et al. (2015) did not examine if the therapists were adhering to treatment methods or if participants were receiving therapeutic support outside of the intervention. It is also unspecified whether CBT consisted of exposure-based techniques. If it did not, it would have been beneficial for the researchers to incorporate exposure in the CBT group because some of the processes of ACT naturally provide, although limited, exposure. Thus, the use of partial exposure in ACT may have contributed to the decrease in anxiety and if CBT had incorporated exposure, the results may have been closer to that of the ACT group. Regardless, even if both treatment groups utilized some form of exposure, results would most likely depend upon the mechanism of change that each participant preferred. Another difficulty amongst studies was the ability to generalize results to other participants. The findings from some literature may not generalize to all possible populations because they lacked diversity amongst the participants (Gaudiano et al., 2012; Lee, An Levin, Twohig, 2015; Meuret, Twohig,
Rosenfield, Hayes, & Craske, 2012; Niles et al., 2014;). Niles et al. (2014) participants consisted of individuals who were well educated, young, and typically single. Likewise, Lee, An, Levin, and Twohig (2015) included mostly participants who were Caucasian and female. In another study, the authors discussed that between treatment groups, the gender distribution was uneven which may have affected post-test scores (Gaudiano & Herbert, 2006). In the same study, pre-tests illustrated that the women were more likely to have severe mood and anxiety levels compared to the men, who were more likely to present with severe psychotic symptoms and substance-use. Moreover, many of the studies included were underpowered, pilot studies that did not include post- and follow-up tests, or included a short follow-up (Dalrymple & Herbert, 2007; Gaudiano & Herbert, 2006; Meuret, Twohig, Rosenfield, Hayes, & Craske, 2012; White et al., 2011;). Many of the studies explored, incorporated self-reports. Although these measures are practical and can provide insight of covert information, they pose disadvantages. Some participants may lack the necessary introspection to answer questions about themselves and might answer with response bias. In one study, self-reports from the participants were the sole assessments for mediators and outcomes (Niles et al., 2014). Therefore, the assessments may not be an accurate representation than if the researchers had used behavioural measures or tests with high reliability.

Summary and Relationship Between Literature Review and Current Thesis

The literature regards ACT as a successful treatment amongst individuals with psychosis, substance-use, and anxiety. The reviewed studies have assessed ACT through various measurement tools including symptomology assessments, treatment satisfaction ratings, quality of life tests, acceptance and mindfulness scales, and overall assessments of psychological flexibility. Results suggest ACT is efficacious in reducing experiential avoidance, negative cognitions, anxiety sensitivity, symptoms of comorbid psychopathology, disorder severity, substance-use; and increasing quality of life, acceptance, mindfulness, and psychological flexibility (Arch et al., 2012; Dalrymple & Herbert, 2007; Gaudiano & Herbert, 2006; Gaudiano et al., 2012; Hayes et al., 2004; Lanza & Menendez, 2013; Lee et al., 2015; Meuret et al., 2012; Niles et al., 2014; White et al., 2011;). This supports Lee, An, Levin, and Twohig’s (2015) statement describing ACT as a trans diagnostic model, meaning it has the capability to treat complex, broad, and typically comorbid populations. This is promising considering the breadth and complexity of the current participant’s psychopathology.

Additional similarities between the participant of the current study, and participants in the reviewed literature, provide further support of the use of ACT for the thesis. For instance, similarly to the study by Hayes et al. (2004), the participant of the thesis experiences feelings of hopelessness due to his environment (e.g., living with regular substance abusers) and unsuccessful past experiences with treatment (e.g., CBT and methadone). Likewise, the current participant is also poly-substance using, addicted to opiates, has symptoms of a personality disorder, and is currently using methadone. Because ACT was shown to be efficacious for the participants of Hayes et al.’s (2004) study, it may provide support for its use during the current thesis. Furthermore, Kessler et al. (2005) stated that substance abuse is often associated with comorbid mental health problems. If this is true, then targeting anxiety with the participant may subsequently decrease his substance use. Literature regarding substance abuse also discussed unpleasant internal experiences triggering cravings and withdrawal (Childress et al., 1986). This suggests that classical conditioning can be used to explain the difficulty behind cravings, withdrawal, and relapse. When an individual has conditioned his or herself to use substances, in
order to control anxiety, the anxiety can begin to function as a trigger for cravings and withdrawal. By teaching the participant of the current thesis to be willing to experience and accept these feelings, he may be able to unlearn old destructive behaviours in the service of cultivating a more meaningful and value-directed life. In other words, with regard to substance use, he may be less likely to relapse. Moreover, the participant of the current thesis is being treated with pharmacotherapy. According to Gaudiano et al. (2012), individuals with psychotic symptoms who are being treated with medication, will often still exhibit impairments and symptoms that place them at risk for rehospitalization and relapse. ACT has been demonstrated to decreases these risks (Gaudiano & Herbert, 2006). The present participant also experiences multiple instances of crises every day due to his paranoia. In the past, these times of crises have lead to experiential avoidance that have had adverse effects on the individual’s health. If one-to-one ACT has lead to significant decreases in crises previously, then it may also generalize to the current participant (White et al., 2011). Moreover, the current thesis has to be completed within a small time frame. This makes ACT an ideal treatment due to the clinically significant results being attained after brief treatment (Gaudiano et al., 2012; Gaudiano & Herbert, 2006).

However, traditional CBT is still viewed as the “gold standard” for treatment and therefore was compared to ACT to establish which treatment would be more efficacious for the current participant.

When comparing ACT to CBT, the literature suggests that the treatment results are nearly equal. However, ACT continuously produced significant results that were achieved quickly, and not only maintained but also increased at follow-up (Arch et al., 2012; Gaudiano, 2012; Hayes et al., 2004; Lanza & Menéndez, 2013; Lee et al., 2015; Losada et al., 2015). These findings are important considering the need for an alternative when traditional CBT approaches are not successful. Studies have also demonstrated that the mechanisms of change differ in CBT and ACT. CBT’s focus is on modifying dysfunctional beliefs, whereas ACT aims to cultivate mindfulness and acceptance, through psychological flexibility, to promote behaviour change. Thus treatment outcomes may be enhanced depending on which mechanism of change is complimentary to a specific participant (Niles et al., 2014). For instance, some argue that rumination is further maintained by increased attention on the content of negative thoughts (Eifert & Forsyth, 2005). This may be accurate for the participant of the current thesis, who has expressed frustration when focussing on trying to change thoughts and intrusive voices. Literature also proposes that individuals do not respond well to cognitive restructuring techniques and CBT if they have high levels of catastrophic cognitions (Meuret, Hoffman, & Rosenfield, 2010). Therefore, the acceptance-based techniques used in ACT may provide more benefits to the current participant, who regularly catastrophizes.

It is also a possibility that the participant may be able to combine tools learnt in CBT and ACT that will enhance his overall ability to cope. For instance, the participant could use a modified version of exposure that fits within the ACT framework. Whereas a traditional CBT-based exposure practice could be unfavourable, because the current participant experiences increased paranoia when anxious, as well as frustration due to an inability to control or change his thoughts and delusions. Previously, the participant has exposed himself to an anxiety-inducing situation, by attending a busy methadone clinic. During this time, he experienced paranoia, anxiety, and frustration, which led to cessation of methadone. This event inspired illicit substance-seeking behaviours that resulted in serious health risks and reinforced his persecutory delusions. Since, the participant of the current thesis finds trying to alter cognitions frustrating, frequently catastrophizes, and CBT-based exposure to feared situations could be detrimental to
his health or lead to premature cessation of treatment, it can be theorized that ACT would be more appropriate than CBT. Although studies on ACT show difficulties with attrition as well, the client’s frustration toward CBT may act as a deterrent to leaving treatment because it might inspire creative hopelessness. In the state of creative hopelessness, the client confronts the feeling of hopelessness in their current situation, which allows them to be willing to engage in new coping strategies.

According to the reviewed literature, ACT is a successful treatment due to its ability to enhance psychological flexibility thereby decreasing experiential avoidance. Consequently, ACT can be utilized to target behavioural changes from various categories of psychopathology, including anxiety. Thus, although the intent of the current thesis is to reduce anxiety, the participant may also experience decreases in other areas (e.g., substance use, catastrophic cognitions, frequency, conviction, and distress of persecutory delusions, and symptoms of psychosis including social impairment, affective symptoms, believability of auditory hallucinations, and distress related to auditory hallucinations). The main target of the present study is to decrease anxiety in an adult with drug-induced psychosis. Research is supportive of the utility of ACT to treat populations with psychosis, substance use, and anxiety. Therefore, it is hypothesized that ACT may lead to a reduction of anxiety for the participant of the current study.
Chapter III – Method

Participant

Before proceeding, the study was approved by the Research Ethics Board of St. Lawrence College on October 14, 2015 (Appendix A). The participant, a male, was 35 years old at the time of the study, and was selected by the researcher because he had a diagnosis of drug-induced psychosis. The participant also had comorbid substance abuse, which includes various substances that are central nervous system depressants (e.g., opiates, dimenhydranate) and central nervous system stimulants (e.g., methamphetamine, cocaine). The participant also had been diagnosed with Bipolar Disorder NOS, Borderline Personality Disorder, and exhibited symptoms of anxiety that appeared to be related to his paranoid delusions. The participant experienced regular persecutory delusions that involved him believing others were conspiring against him. These delusions included themes of being spied on, harassed, and poisoned, leading to thoughts of possible abductions, torture, and death. Pharmacotherapy included mood stabilizers and antipsychotics. Due to the nature of a case study, there were no inclusion or exclusion criteria. During the study, the participant received CBT once a week, but had never received ACT.

Informed consent procedure. Prior to the study beginning, the researcher provided the participant with a copy of the consent document, asked him to review it, and scheduled a date for the first session. Informed consent (Appendix B) was obtained during the first session on Monday October 19, 2015. In this session, the researcher reviewed the consent form with the participant and answered any questions. The agency supervisor was also present to ensure the participant’s competence to consent. In addition, the researcher asked the participant questions related to the consent form to ensure understanding and made clarifications when necessary. Two copies of consent were signed: a participant copy and a researcher copy. After the consent forms were signed, the researcher’s copy was scanned onto the researcher’s password protected computer and the agency’s Client Record Management System (CRMS), one paper copy was given to the participant, and the researcher’s paper copy was shredded. The consent document included contact information for the agency supervisor, the St.Lawrence College supervisor, and the Research Ethics Board (REB). The form described possible risks and benefits, the participant’s rights, confidentiality, where the information would be presented, and how the information would be stored.

Design

The thesis was a single-subject, AB treatment design. The data was analyzed using descriptive statistics, a table, and visual analysis in the form of bar graphs. This researcher implemented the study under the supervision of the agency supervisor. Notes were taken during and after each session so that they could be transferred to the agency’s CRMS, where they were accessible to all staff at the agency indefinitely. Notes included observations of the participant’s behaviours, the agenda for each session, and comments the participant made regarding his struggles, achievements, goals, and thoughts. Furthermore, in order to obtain baseline data, the participant’s symptoms of anxiety and his unhelpful thoughts were assessed prior to therapy beginning in session 2, October 22, 2015.

Independent variable. The independent variable was individual counselling using ACT. The treatment was based on protocols from the Group ACT Manual (Appendix C) created by Rouleau and Jobin (2014), with modifications. Rouleau and Jobin (2014) manual was modified from the original protocol by Boone and Myler (2012). Several of the ACT experiential exercises
implemented were also from the Boone and Myler (2012) protocol. Rouleau obtained consent from Boone and Myler (2012) to use the protocol on July 09, 2014, and then customized it to meet the needs of the client population. Permission for use of the Group ACT Manual was granted by Rouleau at a meeting on September 14, 2015. Minor modifications were necessary in order to use the manual for individual sessions. For instance, without group participation, some experiential exercises could not be completed (e.g., People on the bus exercise). In contrast to the manual by Rouleau and Jobin (2014), and due to time constraints, the protocol for the thesis consisted of two 45-minute sessions per week instead of one two-hour session per week. The changes in length were made because two hours were not necessary when there were no group discussions and the participant’s current cognitive behavioural therapist identified that an hour would be too lengthy for him.

**Dependent variable.** The dependent variable was defined as the participant’s anxiety level (as measured by the Depression Anxiety Stress Scale; see below). Additionally, the participant’s common thoughts were assessed as a second dependant variable (as measured by the Thought Scale; see below). The scores obtained post-treatment, when compared to pre-treatment scores, are indicative of whether or not there is a treatment effect. Furthermore, an effect shown for both tests may provide evidence of a correlation between the participant’s unhelpful thoughts and anxiety symptoms, as hypothesized by the researcher. For the current thesis, the researcher analyzed the collected data of both assessments using descriptive statistics with tables and graphs for visual analysis.

**Depression Anxiety Stress Scale.** Lovibond and Lovibond’s (1995) Depression Anxiety Stress Scale (DASS; Appendix D) is a 42-item self-assessment that uses a 4-point, numerically anchored scale to assess an individual’s emotional state (i.e., rated from “0 – did not apply to me at all” to “3 – applied to me very much, or most of the time”). More specifically, the DASS identifies the severity of the participant’s overall depression, anxiety, and stress levels over the past week. The 14-item depression subscale measures dysphoria, devaluation of life, hopelessness, self-deprecation, anhedonia, inertia, and lack of interest. The 14-item anxiety subscale measures autonomic arousal, situational anxiety, skeletal muscle effects, and subjective experience of anxious affect. The 14-item stress subscale assesses nervous arousal, difficulty relaxing, being easily upset, agitated, irritable, and impatient. The depression, anxiety, and stress subscale scores can range from 0-42 points. Twenty-eight and above on the depression subscale, 20 and above on the anxiety subscale, and 34 and above on the stress subscale is scored as “extremely severe.” According to Lovibond and Lovibond (1995), the measure has a high internal consistency and can be utilized in a variety of settings. The researcher did not conduct test-retest reliability.

**Thought Scale.** The Thought Scale (TS; Appendix E) is a self-assessment tool that was modified from the Unhelpful Thoughts and Beliefs About Stuttering Scale (Iverach et al., 2010). The original scale had high levels of internal consistency (Chronbachs alpha 0.98) and test-retest reliability (r=0.89; Clare et al., 2009). Modifications were made to the scale so that it would apply to the participant who, instead of stuttering, had thoughts and beliefs based on his delusions. For instance, the original scale rated thoughts that were associated with stuttering in the three dimensions discussed below. Conversely, the modified version rated thoughts that were associated with this thesis participant’s specific delusional thoughts in the same three dimensions. The TS was used to evaluate the client’s thought patterns pre- and post-treatment. It contained four different thoughts, based on delusions that agency staff and the researcher had identified as typical for this client. Moreover, the participant had verbally identified that these
thoughts caused him anxiety. The participant was asked to read and then rate each thought based on a 5-point, numerically anchored scale along three dimensions: frequency, believability, and how anxiety-provoking the thought was. Each dimension would provide a score of 1-5 (“1-Never/Not at all” to “5-Always/Extremely”). Higher scores indicate a greater report of frequency of thoughts, believability of thoughts, and anxiety level due to the thoughts. These three domains for each thought can also be summed and range from 3-15, with higher scores suggesting a greater overall negative impact on the participant’s life. It was hypothesized that these thoughts may show decreased scores for each category after treatment.

Setting and Apparatus
The ACT sessions took place in a pre-determined office in the residential facility. No apparatus was needed. The researcher provided all materials for each session. Materials included a pencil, note-pad, a laptop, a copy of Rouleau and Jobin’s (2014) Group ACT Manual, a copy of the informed consent sheet, mindfulness activities (e.g., deep breathing while focusing on the rise and fall of his chest), homework sheets, and a homework duotang for the client.

Procedures
Consent documents were presented to the participant on October 15 to read and review before session 1. The participant attended a total of 10 sessions: two introductory sessions including consent review and pre-test data collection, seven sessions of ACT, and a final session for post-assessments.

Introductory sessions. The participant, researcher, and agency supervisor met for session 1. They discussed consent, and the researcher and agency supervisor answered any of the participant’s questions and asked questions to ensure understanding of the project. Before commencing, the participant was asked to sign two copies of the consent form, one for the researcher, and a copy for the participant to keep.

The participant met with the researcher for session 2, to complete pre-tests. The researcher explained what each questionnaire was assessing and that if the participant had any questions or did not understand a question, he could ask the researcher at any time. The researcher then instructed the participant to fill out the questionnaires and provided him with a pencil. The participant completed the DASS and then was given the TS to complete last.

The researcher conducted the tests in a specific order due to possible order effects. Previously, when interacting with the participant he would ruminate if any of his delusions were brought up, which would significantly increase his anxiety and paranoia. The TS was individualized and targets this participant’s specific thoughts surrounding his delusions. The researcher hypothesized that the TS would be more apt to provoke anxiety than the DASS because of the assessment’s individualization. Therefore, administering the DASS first enabled the researcher to collect data in case the participant felt that the TS was too overwhelming. The researcher also hypothesized that administering the DASS first could result in gradual exposure to anxiety provoking questions that may prepare him to complete the personalized TS.

ACT sessions. It was requested that the participant attend all 7 ACT sessions because the information from each process builds upon the next process, in order to enhance psychological flexibility. The participant was provided breaks as needed in order to foster motivation and engagement. Since the session content was sequential, if a session was missed, the session would have been rescheduled to ensure that the participant was taught all sequential material as
intended. The participant was also encouraged to complete the assigned homework from every session.

Session 3 was called *Control as The Problem and Contact With the Present Moment*. The focus was on introducing ACT through psychoeducation and experiential exercises. To begin the session, the researcher conducted Boone and Myler’s (2011) exercise titled the *Brief Mindfulness* exercise. After, the researcher explained ACT and how it is different from CBT, in which the participant was already partaking. The researcher used the mountain metaphor to further explain ACT and how the researcher can assist the participant because she is on her own mountain (Rouleau & Jobin, 2014, p. 59). Expectations for attendance, patience, participation, commitment, and homework were also discussed. The researcher introduced a psychological flexibility hexaflex with blanks and explained that we would work together, through all of the processes, to fill out all of the blanks. Psychoeducation was included verbally and with the use of a PowerPoint presentation (Boone & Myler, 2011). It entailed information about acceptance, the present-moment, and control as a problem. An experiential exercise using sticky-notes was completed to illustrate using control, avoidance, and acceptance in the presence of unhelpful thoughts (Batten, 2011, p. 24). During this exercise, the researcher passed the participant a stack of sticky-notes and asked him to write down thoughts or feelings that bothered him on each sticky-note. The researcher explained that thoughts and feelings can happen quickly, will always be there, and that to illustrate this, she would toss the sticky notes towards the participant if he was okay with that. After he agreed, the researcher asked the participant to try and control these thoughts by swatting them away. The participant said it was tiring. Next, the participant was asked to avoid these thoughts by covering his face. He said it did not make him as tired but that it was still uncomfortable. Then the researcher asked the participant how easy he thinks it would be to cover his face or try to swat away thoughts while having a conversation with his sister, whom he deeply cares about. The participant replied that he felt like this all of the time and it was not easy. The researcher then asked the participant if he would like to try a new way to work with the thoughts that could allow him to enjoy time with people he loves. The participant agreed and was asked to place his hands on his lap with open palms. The researcher tossed the sticky notes to the participant and many landed in his palms. The participant was asked which way would make it easier to enjoy a value-driven life and he explained that being accepting was. Boone and Myler’s (2011) *Brief Mindfulness* exercise was completed again and then homework was assigned. The homework involved a reading called *Preparing the way for Something New* (Forsyth & Eifert, 2007) and to practice the *Brief Mindfulness* exercise that was rehearsed in session.

The focus in session 4 was on the process of values. The intention of this session was to help the client identify his values. The researcher started this session with a mindfulness-eating exercise (Boone & Myler, 2011). After the exercise, there was a discussion about the homework that had been given in session 1. Any challenges, questions, or successes were discussed. The hexaflex was re-introduced and the process of values was added to it. The experiential exercise for this session concentrated on creating goals that were value-directed by asking the participant to imagine he was 80-years-old looking back at his life. This exercise entailed the participant discussing, if he was 80-years-old, what he would say that he did not do enough of, what he did too much of, and what he would have done differently. The exercise was difficult for the client and assisted him in realizing he had not been living a life consistent with his values. After the exercise, the client expressed that he felt he had been wasting his life and that he believed his substance use had contributed to that.
Psychoeducation was provided verbally, through a PowerPoint presentation and involved the compass metaphor (Boone & Myler, 2011). The researcher explained that on a compass, north represents our values and the needle of the compass represents our behaviours. The participant expressed that he felt he had been going south; i.e., away from his values. The researcher explained that it does not matter how far south the participant had gone because he could always make the decision to move north. Another metaphor utilized was the lighthouse metaphor that teaches the same information as the compass metaphor (Boone & Myler, 2011). Homework was assigned and consisted of a reading titled True Blues (Harris, 2008), the road map exercise, and to brainstorm more values for the next session. During each following ACT session, the researcher assisted the participant in working on his values and goals worksheet. When barriers to meeting goals were discovered, the researcher collaborated with the participant to identify strategies that could help him achieve his goals.

Session 5 began on November 3, 2015 and was called values and committed action. The focus of this session was to create manageable goals and choose one value to work on for the remainder of the sessions. During this session, the researcher drew the psychological flexibility hexaflex and asked the participant to fill in some blanks with previously learned processes. Following this activity, the researcher introduced the new process of committed action. The session started with a mindfulness exercise called Leaves on a Stream (Boone & Myler, 2011). During this session values and committed action were discussed verbally and via a brief PowerPoint. After identifying his values, the participant was asked to work on one of the experiential exercises called the bulls-eye sheet (Harris, 2008). The bulls-eye sheet asks the participant to place a dot on a blank bulls-eye diagram to represent how he has been living a life consistent with his values. The centre of the diagram represented “living to my values all of the time”, and the outside line was “not living to my values at all”. After placing dots on the sheet, the participant was asked to pick one value he wanted to undertake. The participant chose “living creatively” and wrote a goal down on his values and goals worksheet (e.g., to pick up his guitar for 5-minutes everyday). Homework was comprised of a reading, to practice the mindfulness exercise that was completed in session, to complete his value-directed goal, and to complete the bold move activity (Boone & Myler, 2011). The aim of the bold move activity was to encourage the participant to exhibit a value-consistent behaviour, outside of session, which he would not typically complete, prior to the next session.

In session 6 the process of cognitive defusion was introduced. The focus of this session was to teach the participant about cognitive fusion and defusion techniques when experiencing pervasive thoughts. This session began with a mindfulness exercise titled Clouds in the Sky (Boone & Myler, 2011). Homework was reviewed and the psychological flexibility hexaflex was re-introduced with the process of defusion added to it. Psychoeducation and experiential exercises were utilized to explain how easily thoughts become fused in our mind, and that we can choose to exhibit value-consistent behaviours regardless of what our thoughts are communicating. For instance, the participant was asked to partake in an activity that encouraged him to walk around the room in the You Cannot Walk exercise (Rouleau & Jobin, 2014, p. 95). This experiential exercise involved the researcher and participant picking a piece of paper from a bag. The researcher asked the participant not to look at the paper and explained that, the writing on each paper represented his thoughts. Then the researcher asked the participant to walk around the room with her, until she dictated otherwise. After one minute, the researcher gave the participant permission to open the piece of paper, which read, “you cannot walk”. The participant hesitated for a moment and then continued to walk. The researcher asked the
participant what he thought that exercise was about and he replied that regardless of what was written on the paper, he still made the decision to walk. Thus, regardless of what internal events the participant experiences, he can choose which behaviours to display. Together the researcher and participant discussed situations in the participant’s life where his thoughts had told him to act a certain way and he had listened or ignored it. Psychoeducation was also provided in a PowerPoint to illustrate that thoughts could materialize in many different forms (e.g., thoughts, pictures, voices, memories, words). The researcher also conducted the Glasses Metaphor, which illustrated the concept of defusing thoughts without trying to control them by using props (e.g., sunglasses; Rouleau & Jobin, 2014, p. 95). During the session, the researcher put on a pair of sunglasses and stated that our thoughts, like the sunglasses, can create a filter and that we begin to believe and view things only from that perspective. The researcher stated that the filter she was looking through was the “I’m not good enough” thought. The researcher and participant discussed how looking through this filter could jeopardize important relationships that are of value to the participant and both brainstormed ways to remove this filter. The participant and the researcher discussed the act of throwing the glasses away. However, the researcher discussed that thoughts cannot easily be tossed aside. Then the researcher suggested moving the sunglasses onto the top of her head. The researcher explained that our thought would still be there, we would still be able to feel it on our head, and we would still notice it, however we would not be looking through the filter. Thus, the thought would not be controlling our behaviours. The researcher explained that sometimes our thoughts might be more prevalent and bothersome, but that we can always choose to move them aside and continue doing what we want to do by looking at them, rather than through them. The session ended with a brief mindfulness activity and homework: a reading titled Scary Pictures (Harris, 2008), practicing mindfulness, and working on the values and goals worksheet (Forsyth & Eifert, 2007).

Session 7 was the second half of teaching the process of defusion. The session started with Leaves on a Stream (Boone & Myler, 2011), a review of homework from the previous week, and the participant filled out the learned processes of the psychological flexibility hexaflex. Experiential exercises and psychoeducation were used to teach the participant how to defuse thoughts and feelings that were unhelpful and how to identify thoughts that “hook us” (Harris, 2009). In this session it was explained that when individuals allow their thoughts to have excessive influence over their behaviour it is called “getting hooked”. Together, the researcher and participant discussed that thoughts regarding the past and future typically “hook” him. The Paper-in-Face exercise was used to illustrate that although diagnoses, thoughts, and feelings will always be there, the participant can still choose to focus on living a life he will enjoy (Rouleau & Jobin, 2014, p.104). Similar to the glasses experiential exercise, the participant was asked to write a thought that “hooks” him on a piece of paper and then place the paper in front of his face. The researcher then asked the participant to attempt to have a conversation with her. After this activity, the researcher asked the participant to place the thought on his lap and try to continue the conversation. The researcher explained that the thought was still there, on the participant’s lap, but that he could do the things he wanted to do because he was not trying to look through the thought. Together the researcher and the participant brainstormed a list of defusion techniques that may assist the participant to cope with unhelpful thoughts that may “hook” him. Leaves on the Stream (Boone & Myler, 2011) was completed again at the end of session. Homework was assigned and included working a goal and a reading titled Demons on the Boat (Harris, 2008). The researcher also encouraged the participant to practice mindfulness and a defusion technique.
Session 8 entailed the process self-as-context. Session 8 began with *Leaves on a Stream* (Boone & Myler, 2011), a review of last week’s homework, and filling in the final process of the psychological flexibility hexaflex: self-as-context. The researcher introduced self-as-context using a PowerPoint (Boone & Myler, 2011) and experiential exercises. Some of the exercises included the *Observing Self with Values* (Boone & Myler, 2011) and *Notice Yourself Noticing* (Harris, 2008), which illustrate how to use the observing-self in order to notice the contents of the thinking-self. Psychoeducation involved using the *Sky Metaphor* (Rouleau & Jobin, 2014, p.114) and the *House Metaphor* (Boone & Myler, 2011). Both metaphors illustrate that the participant is strong enough to hold all internal events that occur. The researcher explained that the sky represents the participant and the changing weather represents the participant’s internal events. At the end of session 8, homework was assigned including a reading titled *Look Who’s Talking* (Harris, 2008), values and goals worksheet (Forsyth & Eifert, 2007), and practicing mindfulness.

Session 9 was about how all of the processes come together to foster psychological flexibility. Since all processes of ACT are taught by the 9th session, the goal of this session is to review all of the processes and help the participant relate this information back to his life. The session began with *Leaves on a Stream* (Boone & Myler, 2011) and homework review. The participant was encouraged to discuss challenges regarding the application of all of the processes to daily situations. The researcher asked the participant to describe each process in his own words and list exercises and metaphors that he remembered for each. At the end of the session, the researcher conducted the *Brief Mindfulness* exercise (Boone & Myler, 2011) The researcher also provided the participant with another reading titled *A Life of Plenty* (Harris, 2008) and asked the participant to continue to work on mindfulness and create goals at home. During this session the participant was encouraged to ask any questions and was reminded of supports that are made available to him at the agency. The researcher also discussed creating a summary sheet using the description of the processes that were created by the participant. This summary page (Appendix F) was personalized to the client and also included a page of things to remember as well as steps moving forward, in order to foster maintenance of treatment effects.

**Post-treatment data collection.** Post-tests were completed on November 19th 2015, in session 10. The researcher explained that the participant would be given the same questionnaires as previously completed and that if the participant had any questions or did not understand a question, he could ask the researcher at any time. The participant was provided with a pencil and asked fill out the questionnaires. The participant completed the DASS and then was given the TS to complete last.
Chapter IV – Results

For this study, it was hypothesized that ACT would decrease the participant’s anxiety. It was also proposed that ACT may be able to target multiple areas of comorbidity and that the participant’s anxiety stemmed from his delusional thoughts. For these reasons, the DASS and TS were utilized to assess the participant’s anxiety, stress, and depression levels, as well as to measure changes in the participant’s thought patterns. Descriptive statistics were used to analyze the data because the nature of the thesis was a case study. The following are the results from the study.

Descriptive Statistics

DASS. Pre- and post-tests demonstrated improvements for each category in the Assessment Results (Appendix G, Fig. 1). The measure provides categorical descriptors for each dimension and range from “normal” to “extremely severe”. Pre-tests indicated that the participant’s depression subscale score fell in “severe” range and at post-test, fell in the “mild” range. Overall, the participant’s depression score decreased by 33% after treatment. While his anxiety subscale scores decreased by 20% from pre-to-post assessments, his score still fell in the “severe” range at post-treatment. His pre-test stress subscale score fell in the “severe” range and changed to the “mild” range at post-test. The scores for the stress category indicated a 55% decrease at post-test (see Table 1 for the Assessment Scores of the DASS and TS).

TS. Pre- and post-tests illustrated the results for TS in the Assessment Results (Appendix G, Fig. 2). The average frequency, believability, and anxiety dimensions, across each thought, were examined. At the pre-test, the scores across all three dimensions for each thought ranged from 3 to 5. During the pre-assessments, the participant rated questions 1 (“I think I am being plotted against”), 2 (“I think I am being watched.”), and 4 (“When I hear people talking, I think it is about me”) as a “5” across all 3 domains. In contrast, he rated question 3 (“I think if I leave my house something bad will happen to me”) as a “3” across all three dimensions. At post-test, the scores ranged from 2 to 5. For question 1, frequency and anxiety was rated as “5” and
believability was rated as “3”. For question 2, frequency and believability was rated as “5” and anxiety was rated as “2.” For question 3, frequency and believability was rated as “4” and anxiety was rated “3.” Lastly, he rated question 4 as a “5” across all three dimensions.

Additionally, the total cumulative score across dimensions were explored and could range from 4-20. The score for overall frequency of thoughts demonstrated a 5% increase after treatment. The score for overall believability of thoughts exhibited a 5% decrease at post-treatment. Lastly, the anxiety dimension illustrated a 16% decrease after treatment (see Table 1 for the Assessment Scores of the DASS and TS).

![Figure 2](image_url)

*Figure 2.* Pre- and post-test results for each dimension of the TS. TS = Thought Scale.
### Table 1

*Assessment Scores of the DASS and TS*

<table>
<thead>
<tr>
<th>Assessments</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Difference</th>
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<tr>
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<td>16</td>
<td>8</td>
</tr>
<tr>
<td>DASS (Anxiety)</td>
<td>25</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>DASS (Stress)</td>
<td>27</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>TS (Frequency)</td>
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</tr>
<tr>
<td>TS (Believability)</td>
<td>18</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>TS (Anxiety)</td>
<td>18</td>
<td>15</td>
<td>3</td>
</tr>
</tbody>
</table>

*Note.* DASS = The Depression and Anxiety Stress Scale, TS = The Thought Scale
Chapter V: Conclusion and Discussion

Summary
This study validated the effectiveness of ACT for decreasing anxiety in a participant with drug-induced psychosis. Originally, the participant had difficulty being out in the community, even with assistance, due to anxiety associated with his paranoid delusions. However, after 7 sessions of ACT, the participant’s anxiety decreased and he was able to independently go out into the community. Not only did treatment decrease anxiety, but it also reduced stress and depression. Thus the study also supports existing literature that states ACT is capable of targeting multiple areas of comorbidity. Of all the dimensions tested with the DASS, the major change was in the stress dimension. An increase in psychological flexibility resulting in a decrease of control strategies may be responsible for this change, because there could be more anxiety associated with attempting to control unpleasant internal experiences. Moreover, when the participant recognized that his behaviours were not conducive to living a value-directed life and he felt able to be in the community, he made the decision to restart his methadone treatment. Therefore, it could be argued that because ACT decreased experiential avoidance, it also played a role in reducing substance use.

During the study, the participant reduced his experiential avoidance by participating in activities, even if he had previously identified them as anxiety provoking. For instance, attending the methadone clinic is a known anxiety trigger for the participant, which may explain the increase in delusional thoughts at post-test, according to the TS. Interestingly, regardless of the increase in frequency of delusional thoughts, the participant rated that the thoughts were less anxiety provoking and less believable. This may have been a product of self-monitoring because the participant became sensitized to rating the frequency of his thoughts. Thus, he may have had the same frequency of thoughts over the course of the thesis but began noticing them more often after completing the pre-tests. Conversely, it may have been due to an increase in psychological flexibility that allowed the participant to better cope with situations regardless of his delusions.

Statements made by the participant also illustrated changes in his thinking. These changes were both cognitive as well as behavioural and caused his relationship with his thoughts and paranoia to transform. For instance, after ACT, the participant witnessed two people conversing and thought they were talking about him. The participant told the researcher that at first he was bothered but then stated that he thought to himself “I know who I am and what I’ve done” and he was no longer concerned. During session 8, in response to thinking people wanted to harm him, the participant stated “Sometimes I worry about dying, but then I remind myself that everyone dies eventually you know? So I am just going to do things I want to do until I die, instead of worrying about it”. These statements demonstrate that the participant’s attachment to these thoughts had decreased. Therefore he was able to experience the thoughts without allowing them to interfere with his life. Following this statement, the participant began drawing, playing his guitar, visiting family, and returned to methadone treatment, which are value-directed behaviours. Furthermore, the participant’s self-awareness increased by the last session. This was exhibited by his ability to recognize when he was being hooked by the past, whereas before treatment, he would often talk for weeks about an event that occurred years ago.

Relevance to the Literature Review
Losada et al. (2015) mentioned that ACT decreased experiential avoidance whereas CBT was not able to elicit a decrease. The results of the current thesis illustrated a decrease in experiential avoidance after ACT, which were seen in the participant’s increase of value-directed behaviours.
This was a change that, according to the participant, had not occurred during CBT. This may support Losada et al.’s (2015) statement that the acceptance-based coping strategies were more effective than the control or change strategies associated with CBT in decreasing experiential avoidance.

White et al. (2011) study depicted ACT’s ability to decrease negative symptoms, frequency of crisis contact, and depression scores. The current thesis presented similar results that depict a decrease in depression scores and negative symptoms such as social withdrawal. This article also explained that making changes to routines might naturally be anxiety provoking. This could provide an explanation for why the changes in anxiety were not as significant as expected. The current thesis also supports White et al. (2011) regarding decreases in crisis. For instance, the current participant exhibited an increased ability to cope with anxiety provoking situations that, in the past, had led to crises.

By the end of treatment, the researcher noted a decrease in reported substance use. This may support Kessler et al. (2005) statement that substance abuse is often associated with comorbid mental health problems. Thus, the decreases in anxiety, depression, and stress may have facilitated the participant’s decrease in substance use.

**Strengths**

Conducting a case study permitted the researcher to fully focus on one client and gain a thorough case conceptualization, leading to a selection of the best possible treatment. Collaboration with the participant ensured motivation and commitment to treatment. For instance, the participant created manageable goals that were individualized and he was subsequently more likely to follow-through because they were meaningful to him. Another treatment strength was that it was conducted in an applied setting because the client will be easier to generalize it to his life, when the researcher is not present.

ACT itself, possessed strengths with this client specifically. The participant had participated in CBT previously and had expressed frustration when attempting to challenge his delusions, because he believed his delusional thoughts were real. However, during ACT, the participant enjoyed that the researcher did not tell him his thoughts were wrong, yet still addressed the feelings associated with them. For example, when the participant heard people talking he would misinterpret the external stimuli and think the people were talking about him (e.g., calling him names, creating plans on how they would abduct him). Often, individuals would challenge these thoughts by stating that people were not talking about the participant and that their conversation had nothing to do with him. This would usually upset the participant because from his perspective, what he heard was real and he felt frustrated that someone was trying to convince him otherwise. However, one of the theories in ACT is that whether a thought is true or not does not matter: What matters is if the thought is workable or not for that specific client. Thus, in the above example, the researcher would ask the participant why the statement, made by the individuals, bothered him. The participant would typically respond by saying it was because it made him fearful of future events that could happen. In this instance, the researcher would assist the participant to identify that he was getting “hooked” by the future, and work with him to defuse the thoughts and increase contact with the present moment.

**Limitations**

As with all studies, limitations were present. One limitation was a lack of quantitative data. Including quantitative data in a study may have increased reliability. Another limitation
ACT TO DECREASE ANXIETY

occurred because the researcher regularly spent time with the client before data collection. Although this enabled the researcher to build rapport with the participant, which may have contributed to treatment success, it is also a threat to internal validity. For instance, since multiple baseline measures were not taken, it cannot be ruled out that non-therapy specific factors, specifically “befriending” (a type of comparison psychosocial treatment occasionally used in treatment studies of schizophrenia), contributed to treatment outcomes. Befriending may have led to post-test results showing more of a treatment effect because the participant wanted to impress the researcher. This effect would not have been as high at post-test because the researcher and participant had not yet established a friendship. In contrast, befriending may have been strength because it allowed the researcher to build therapeutic rapport, which may have otherwise been difficult due to the participant’s delusions. Some of these limitations may also include threats to external validity. Due to this study incorporating one subject, there is not sufficient evidence that this treatment could generalize to other people living in different circumstances or with different levels of supports. During the treatment, the participant attended one CBT session per week. Therefore, it is difficult to establish if the treatment results were caused by ACT or by CBT. In September the participant had also decided to cease methadone treatment because his delusions were too intrusive for him to cope with, leading to experiential avoidance, increased drug seeking, illegal behaviours which reinforced his paranoia, and putting his life at risk. For these reasons, it can be argued that the CBT treatment, alone, may not have been enough to assist the participant with coping. Thus, ACT may be responsible for the results. It is also possible that the participant may have found that the two therapeutic models were conflicting which could have affected his ability to respond to treatment. Nevertheless, although it would be difficult to tell if ACT is solely responsible for the treatment results, introducing a new treatment to the participant has taught him a new coping style. Consequently it is also possible that various tools from ACT could be used with several tools from CBT in order to enhance the participant’s overall coping abilities.

Limitations were also found when administering the assessments. For example The DASS does not take substance-use into consideration. For instance, during the pre-test, question 2 and 7 should have been omitted because the client was experiencing withdrawals, resulting in shakiness. At the time of the post-test, the participant reported experiencing dry mouth as a side effect of his medication. By reporting these symptoms on the DASS, they are being misinterpreted as anxiety symptoms. Including these questions skewed the data showing a 5-point difference between the pre- and post-test. While excluding these 2 questions would have resulted in the pre- and post-test being 22 and 15 respectively, which is an 8-point difference. Although it does not appear to be a significant difference, omission of questions 2 and 7 would have resulted in the anxiety category changing from extremely severe to severe. The TS also possessed limitations because it was created specifically for this participant and therefore had not been used with a larger sample to test for construct validity. Also, due to the specificity of the test items, the specific delusional thoughts would need to be altered depending on the individual being tested and his or her particular delusional thoughts. Moreover, results might be skewed by demand-characteristics if the participant acted as though his symptoms decreased in order to try and confirm the researcher’s hypothesis.

Multilevel Challenges

Working with an individual who has complex concurrent disorders presents many challenges. For this client in particular, many of the challenges were related to his paranoia,
pharmacotherapy, and addiction related behaviours. This study is comprised of four levels of challenges including client, program, organization, and society.

**Client Level.** Time was limited to build therapeutic rapport with the client, which may have increased the difficulty when working with an individual who experiences persecutory delusions. For instance, at times the participant would accuse the researcher of lying about her educational background: stating that she was actually a police officer who was going to put him in prison. Paranoia also made obtaining consent difficult. Specifically, when the participant read the section, of the consent document, titled possible harms. In this instance, he proceeded to repeat the word “harm” and believed the researcher was a member of an organized crime group who aimed to harm him. Additionally, pharmacotherapy created barriers at the client level. A side effect of the participant’s medication was drowsiness and he regularly increased his level of methadone, thereby exacerbating these effects. Together, the medication impaired his ability to retain information taught during sessions.

**Program Level.** When working with an individual who experiences anxiety, due to his paranoia, administering assessments can be challenging because they can be anxiety provoking. Consequently it cannot be guaranteed that the test results accurately reflected what the participant was experiencing. It was also difficult to include all of the information necessary into shortened sessions, especially if the participant was in crisis from increased paranoia, substance withdrawals, or was drug-seeking.

**Organizational Level.** The facility did not contain a formal counselling room so, with permission, the researcher utilized the head nurse’s office during her lunch break. However, some staff preferred to use the room during this time, or residents needed medical attention. Subsequently, a few sessions began late. Furthermore, there were a number of times where staff would walk into the room mid-session which resulted in heightened paranoia and anxiety levels for the client.

**Societal Level.** Regardless of the recognition of concurrent disorders existing, society continues to stigmatize individuals coping with mental health and substance abuse problems. At a societal level, this problem is challenging because an individual, like the participant of this thesis, who is working hard to create a better life for himself, should not be ostracised from the community. When individuals dealing with these issues are labeled and excluded it may result in the justification of future maladaptive behaviours, in order to cope with shame and guilt often associated with substance abuse and mental health disorders. For this reason it is essential to go into the community with clients and model appropriate behaviours to, not only the client, but members of the public. This is imperative in order to foster independence and integrate clients into the community. Furthermore, in order to reduce stigma, it is important to educate people in the community and the individual diagnosed with the disorder, so that they can share correct information with others.

**Implication for the Behavioural Psychology Field**

This thesis is significant to the behavioural psychology field because it supports the potential efficacy of ACT as a treatment option. More specifically, it provides some evidence that individual ACT may benefit populations with complex concurrent disorders. By offering individual ACT treatment at a community mental health and addictions organization, it would provide individuals, who feel uncomfortable in group-settings, with successful coping skills they otherwise may not have been exposed to. Furthermore, when individuals, such as the participant of the thesis, experience various categories of psychopathology and have limited adaptive coping
ability, there is an increased risk of them exhibiting behaviours that put their lives at risk. Thus, it is important to target as many issues as possible, in a short time-span, to decrease risk of harm and increase overall quality of life. Therefore, the brief duration of the ACT protocol used in the current thesis was appropriate. This thesis supports the utility of ACT when treating an extensive list of concerns including anxiety, depression, substance use, catastrophic cognitions, conviction and distress of persecutory delusions, and symptoms of psychosis including social impairment, believability of auditory hallucinations, and distress related to auditory hallucinations.

**Recommendations for Future Research**

ACT is an empirically-based therapy that has been gaining momentum over the last several years. To ensure continued growth within this model, it is imperative to conduct studies that build upon previous research. The current thesis was successful and thus, should be replicated with more participants. Furthermore, although group settings can be useful, there are various individuals who avoid therapy, such as the current participant, because they feel uncomfortable in a group-setting. Therefore, conducting future studies on the effects of individual ACT, with multiple participants, would enhance the current literature. Future researchers may decide to include individuals who are both in a residential facility and living independently. This would allow the results to show if success is contingent on the amount of support in each participant’s environment.

In this thesis, the participant had been receiving CBT once a week, making it difficult to conclude treatment results were solely due to ACT. For future studies, when working with participants who are receiving outside treatment, researchers should consider administering multiple pre-baseline assessments to evaluate cognitive and behavioural changes due to existing treatments prior to commencing ACT treatment. Alternatively, future studies could randomly assign participants to either CBT or ACT.

Working with individuals who have psychosis pose numerous challenges that vary from case-to-case. Additionally, the completion of this thesis had a time limit. Consequently, future researchers should increase the overall therapy length to allow for improved therapeutic rapport, which can be difficult to create and maintain with this population. More time would also allow for possible session rescheduling and follow-up assessments. Upcoming researchers should consider finding a therapy room that has a more flexible schedule, allowing all information to be taught at a slower pace. This could enhance the participant’s ability to retain the information being taught.

This study assessed quantitative data such as the frequency and believability of unhelpful thoughts, as well as how anxiety provoking the thoughts were. Future studies might want to record these every session in order to increase reliability and discover a connection between thoughts and specific sessions. Obtaining data on homework completion may be beneficial to demonstrate the relationship homework completion has with treatment success. Furthermore, this study recorded data on symptomology regarding anxiety, depression, and stress, which provided information of ACT’s ability to treat a breadth of symptoms. From the results gathered and the experiences shared by the participant, the researcher could hypothesize that there was an increase in psychological flexibility, mindfulness, self-awareness, and a decrease in experiential avoidance. However, research may benefit from obtaining quantitative data for these areas.
References


Appendix A
Letter of Approval

Research Ethics Board Members
Alison Tucker (Chair)
Jill Dennis
Lavinia Inbar
Marie-Line Jobin
Christian Keresztes
James Morris-Pocock
Maha Othman
Jody Souka-Marleau

October 14, 2015

Jenna Dekoster
716 Collins Bay Road,
Kingston, ON K7M 5G9

SLC REB Reference Number: 2015-REC-22 Project
Title: Using Acceptance and Commitment Therapy
to Decrease Anxiety in an Adult with Drug-Induced Psychosis

Dear Jenna:

I am writing to advise you that the Research Ethics Committee – Psychology
(REC-P), a subcommittee of the Research Ethics Board (REB) of St. Lawrence
College, has granted Approval to the above-named research study. Your
research may now begin.

You have one year to complete the project from the time of approval.
Should you require more time to complete your project, you will be required
to submit a request for ongoing ethics approval for your project. This must
be submitted prior to REB approval expiry.

Please review St. Lawrence College's Policy on Research Integrity, which is
attached for your convenience. You are obligated to keep your files up to
date and inform the REB of any changes to your study. Any changes to the
approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Both a Request for Amendment of an Approved Project form and a revised application must be submitted to the research office for review by the REB.

Any adverse or unanticipated events during the course of your research must be reported to the REB as soon as possible. The REB reserves the right to review your file at any time to ensure that research is being conducted in accordance with all SLC policies.

Once your project is complete, you are required to complete a Project Termination form (included with REC-P approval documents). This form must be submitted as a final report about your research to the REB.

Best wishes for the successful completion of your project.

Best Regards,

Alison Tucker
Chair, Research Ethics Board

cc. Cam McEachern, Director, Research
    Jordan Maile, faculty supervisor
Appendix B
Consent Form

**Project Title:** Using Acceptance and Commitment Therapy to Decrease Anxiety in an Adult with Drug-Induced Psychosis

**Principal Investigator:** Jenna Dekoster  
**Name of College Supervisor:** Dr. Jordan Maile, C. Psych.  
**Name of Agency Supervisor:** Mike Switzer, B.A.A. BPsych.  
**Name of Institution:** St. Lawrence College  
**Name of Agency:** Addictions and Mental Health Services – Kingston Frontenac Lennox and Addington (Low Barrier Housing Service)

**Invitation**
You are being invited to take part in a research project. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at the Low Barrier Housing Service for Addictions and Mental Health Services – Kingston Frontenac Lennox and Addington (AMHS-KFLA). As a part of my placement, I am completing a project (called an applied thesis). I would like to ask you for your help to complete this project. Please read the information carefully and ask any questions you may have before you decide to take part.

**Why is this research being done?**
My project uses one-on-one therapy to help with anxiety. The type of therapy being used is called Acceptance and Commitment Therapy (ACT). This type of therapy is meant to assist you in living the type of life that is consistent with your personal values, regardless of any thoughts that may be causing you problems. The therapy sessions involve practicing mindfulness exercises and finding ways to help you deal with anxiety easier. An example of a mindfulness exercises may involve practicing deep breathing while imagining a peaceful scene, and paying close attention to different sensations occurring in the body (e.g., the rise and fall of your chest with every breath).

**What will you need to do if you take part?**
If you choose to take part in the study you will be asked to take part in 2 therapy sessions every week, for 5 weeks (a total of 10 sessions). The sessions will be held on Tuesday and Thursday at 12:00 p.m., at the Housing Services and will last about 45 minutes. The sessions will be run by me and will take place in a private room, in the main office. At the first session, my supervisor and I will discuss the consent form and answer any questions you may have. After, you will be asked to complete two questionnaires about your anxiety and thoughts. The questionnaires should take about 30 minutes together. At the end of the project, you will be asked to complete the same questionnaires. Throughout the project, you will work with me to learn techniques for recognizing and dismissing unhelpful thoughts, and setting goals. You will also be asked to complete mindfulness exercises and to practice these outside of therapy.
What are the potential benefits of taking part?
All of the work completed during the project may help you to decrease your anxiety and live the type of life that you want to live. The mindfulness exercises may also help you feel calm. Furthermore, this project might help you learn more about yourself.

What are the potential benefits of this research study to others?
The information from this project may also be used to help improve future treatment for other people who are trying to cope with similar problems as you.

What are the potential disadvantages or risks of taking part?
Risks from taking part in this project are minimal but they may include an increase in stress levels due to some of the activities and questionnaires that require you to think about your anxiety and thoughts. However, you may find that the mindfulness activities are very relaxing and may help to alleviate this stress.

What happens if something goes wrong?
Everybody is different and if you do have a strong reaction to a questionnaire, anything we talk about, or any therapeutic activities, you may talk to me or another staff member. Remember that you have access to the housing rehabilitation workers, on site, 24/7. If at any point during the program you need to talk to someone you can talk to one of the staff members, or we can put you in contact with another professional. If you become upset while doing the questionnaires or while at your therapy appointments, please let me know and you may take a break or we can reschedule.

Will the information collected from you be kept private?
All information that identifies you will be kept confidential unless required by law. Information collected from the questionnaires will only be used to figure out a little more about your anxiety (e.g., how severe the symptoms are and any difficulties that you experience) and your thought patterns (e.g., how often you have certain thoughts and how much they bother you). This information will be used to ensure the best treatment possible for you during this program. Information will only be accessible by my college supervisor, agency staff, and myself. All consent forms and questionnaires will be kept on a password-protected computer and all paper documents will be shredded. Consents will be kept for 10 years and St. Lawrence College will keep all research data for 7 years. All session notes will be kept on file at AMHS-KFLA indefinitely. Your name or any identifiers will not be used on any public reports, publications, documents, or presentations on this project.

Do you have to take part?
Taking part is voluntary. It is up to you if you would like to take part in this project. If you do decide to take part, you will be asked to sign this consent form. If you do decide to take part, you are still free to stop at any time, without giving reason, and without experiencing any penalty, or negative effects. If you do decide to stop, please speak to my supervisor or myself to let us know.

Contact for further information
The Research Ethics Board at St. Lawrence College has reviewed this project. The project will be developed under the supervision of Dr. Jordan Maile, C. Psych. (Supervised Practice), my
supervisor from St. Lawrence College. I appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me (JDekoster12@student.sl.on.ca). You can also contact my College Supervisor Dr. Jordan Maile (jordan.maile@gmail.com) or you may contact the St. Lawrence College Research Ethics Board (reb@sl.on.ca).
Consent
If you agree to take part in this project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained at the Housing Services.

If you have any concerns about your right as a participant please ask me before signing this document.

By signing this form, I agree that:

✔ The program has been explained to me.
✔ All my questions were answered.
✔ Possible harm and discomforts and possible benefits of this program have been explained to me.
✔ I understand that I have the right not to participate and the right to stop at any time.
✔ I am free now, and in the future, to ask any questions I have about the program.
✔ I have been told that my personal information will be kept confidential.
✔ I understand that no information that would identify me will be released or printed without asking me first.
✔ I understand that I will receive a signed copy of this consent form.
✔ I understand that the data from this study will be presented at the St. Lawrence College Behavioural Psychology Poster Gala, and may be reported at other conferences or published in a scientific journal. No identifying information will be included in these reports.

I hereby consent to take part.

________________________ ___________________________ __________________________
Participant Name Signature of Participant Date

________________________ ___________________________ __________________________
Student Printed Name Signature of Student Date

________________________ ___________________________ __________________________
Witness Printed Name Signature of Witness Date
The procedures in this staff training manual are meant to be used by agency staff, as part of the broader services they provide, or under supervision of agency staff.
# Table of Contents

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Letter to Future Facilitators

Dear Facilitator(s):

This group protocol was designed with depression and anxiety as the forefront for participant recruitment; however, the sessions complement any diagnosis. The key importance to this group is that diagnoses are not what we consider important to participate, but rather symptomology. If an individual is experiencing pain, suffering, negative self-talk, overwhelming emotions, guilt, stress, unawareness, lacking motivation, or are experiencing difficulty in their day-to-day lives, ACT can assist with helping these individuals increase their psychological flexibility and coping strategies.

The sessions were designed through a pilot study that was approved by the Research Ethics Board. Changes were made on a week-to-week basis to meet the needs of the participants at the time. The exercises and didactic information can be altered according to the needs of the participants. I strongly encourage that the more you stick to the material in the manual, the more likely you are to ensure that you teach the six core processes of ACT. The core processes include: Acceptance, Present Moment, Defusion, Self-as-context, Values, and Committed Action. ACT also incorporates a lot of Mindfulness-based exercises. This is important for the clients to do in order to recognize and be able to live in the present moment. This protocol also involves many experiential exercises in order to help individuals understand the material and connect it to their everyday lives. Homework is also an essential component of this protocol because by providing readings and work in between sessions, the participants bridge the gap and can more easily generalize the material to their day-to-day tasks.

There are many useful resources that can assist you in learning what ACT is and how one can use ACT effectively. I strongly encourage you to seek out these resources in order to better meet your clients’ needs while staying true to the goals of ACT. Although currently there is no criteria set in place to facilitate ACT therapeutically, I do recommend that you join the Association for Contextual Behavioral Science (ACBS) in order to keep up-to-date with ACT and the related therapies. Please feel free to contact me with any questions at t.rouleau@outlook.com and best of luck on your ACT journey.

Regards,

Tracy Rouleau, BAA Behavioural Psychology
**Introduction**

Individuals struggling with mental illness experience many challenges and symptoms that can interfere in one’s quality of life and day-to-day functioning, including finding and maintaining employment. These individuals need support and therapy to assist with managing the symptoms correlated to their mental illness. In most cases, creating and achieving goals is an important aspect of therapy. By incorporating a valued-directed therapy, one can increase the likelihood that a realistic and personal goal can be achieved. Traditional methods, such as Cognitive Behavioural Therapy (CBT) have been used in the past, but newer, evidenced-based therapies have been on the rise. Third wave behavioural interventions, such as Acceptance and Commitment Therapy (ACT), focus on changing individual’s responses to their thinking instead of trying to alter their thinking (Broley, 2013). Sharp (2012) suggests that ACT teaches acceptance, but also change, simultaneously, in therapy. ACT not only targets behavioural changes in the individual, but also encourages and increases personal development (Hayes, Pistorello, & Levin, 2012). Tending to the individual’s personal development and behavioural changes can assist in achieving one’s desired goals. ACT does this by incorporating six unique processes into the therapy (Hayes et al., 2012). These components focus on acceptance, defusion, individual’s self now, personal values, mindfulness, and committed action (Hayes et al.). Due to ACT being able to target a broad range of symptoms and disorders by addressing the six common processes (Hayes et al.), it is important to examine and utilize this evidence-based therapy to help individuals manage symptoms and increase psychological flexibility.


ACT TO DECREASE ANXIETY

Materials Needed for Implementation

Session 1:
- Computer and projector for the PowerPoint presentation
- Flipchart and markers (mountain metaphor illustration and group guidelines/considerations)
- A rope or a scarf (Tug-of-war metaphor exercise)
- Grapes (or raisins) (Eating Grapes exercise)

Session 2:
- Computer and projector for the PowerPoint presentation
- Paper and Pens for the participants to use (Imagine you are 80 years old exercise)

Session 3:
- Computer and projector for the PowerPoint presentation
- Flipchart and markers (Bulls Eye exercise)

Session 4:
- Computer and projector for the PowerPoint presentation
- Slips of paper that have the words “You cannot walk” printed/written on them (Walking exercise)
- Bag or hat to put the slips of paper into
- Sunglasses (Green Glasses metaphor)

Session 5:
- Computer and projector for the PowerPoint presentation
- Large cue cards (or a sheet of paper) and markers (Paper-in-face exercise)

Session 6:
- Computer and projector for the PowerPoint presentation
- Flipchart and markers (House metaphor)

Session 7:
- Flipchart and markers, paper for participants (writing information)
- Rope or a scarf (Tug-of-war exercise)
- Sunglasses (Green Glasses metaphor)

Session 8:
- Flipchart and markers, paper for participants (writing information)
- Celebratory food (cupcakes) and drinks (pop or juice)
Session 1
Control is the Problem
Contact with the Present Moment
1. Facilitator Introductions (Name, background) & Mountain Metaphor
   a. Facilitator: Discuss and draw on board how we are all the same in that we can experience the same processes. (Draw a mountain with a stick figure in the center). “This is life’s mountain. This stick figure represents you right now, at this time. We can help you, not because we are at the top of the mountain looking down at you trying to climb it, but rather because we are on our own mountain” (draw second mountain and a stick figure in the center) “and we can see what you are going through and help you choose your best path to reach the top. Everyone is on their own mountain of life. The goal is that we can try to help each other notice how the techniques we learn in this group can play out in positives ways in our lives to live a life of values and happiness.”

2. Discuss Group symptoms and commonalities.
   a. Facilitator: Discuss “Often groups are geared towards Depression and Anxiety, and that’s okay. The key to ACT though is finding the same processes, the same symptoms that cause human suffering, so although Depression and Anxiety and Substance abuse, and so on are all different in their own way on the surface, what keeps them going is often pretty similar. All these disorders go hand-in-hand with other problems, like low self-esteem, eating problems, sleeping problems, substance problems, relationship problems, and so on—so let's focus on things we can change, like the symptoms. All issues are welcome in this group even if it isn’t strictly a Depression or Anxiety issue.
   b. Discuss facilitator anxiety at the moment in first meeting everybody and running group; focus on how everyone can feel symptoms.

3. Mindfulness Exercise—Brief Mindfulness

4. Group Considerations and Guidelines
   a. Have participants create their own rules. Use a whiteboard paper and create group rules together. (Brooke to make copies for all participants on break). Ensure that the following rules are put in somehow:
      i. Confidentiality: What happens in group stays in group when it is about personal information and peer stories; however the experience of group, such as exercises and Psychoeducation can be shared.
      ii. Attendance: The expectation of this group is that you attend all eight session, including the pre-assessment meeting. Even if you have other appointments it is a priority, especially since it is only once a week for a hour and a half. If you really, really, really must miss a session please contact Tracy or Brooke as soon as possible so we can meet prior to the following meeting to go over information that was missed.
      iii. Confusion: You might get confused during group and that is okay. We will be discussion some complex and complicated material that is probably very different than what you have ever learned before. The beginning session may be confusing to you, but try to accept that with openness and willingness because you will understand everything soon enough. This is all part of the process. You will benefit from this. I will always be available 30 minutes prior to each session and 30 minutes after each session for questions, clarification, or to talk.
Please come and see me during those times or call the office and leave me a message and I can get back to you.

iv. Patience: Most of what is being taught in each session builds off of the session before that. Benefits may not start to appear until maybe session 3, or 4, or 5 and so on. That's okay. Improvement will occur at one's own pace, and participants who engaged in ACT have reaped benefits long after their ACT sessions ended. So, be patient and expect that perhaps there will be confusion in the beginning, and perhaps results won't show right away, but all will be well in the end.

v. Participation: This group will do so many different types of things in session and outside of session. We'll be doing activities in class that we will be calling exercises. Marie-Line and I will be teaching new concepts. We will do so many different things. Some exercises might seem silly, but if you engage and participate then you will reap the benefits. Try to put your entire self into the experience. The more you put in, the more you are likely to get out of it.

vi. Homework: Yep. Homework. Homework will not be hours and hours of time consuming, challenging work. When I say homework I mean life exercises. This is very important to the process and the expectation is that you will do some homework in between sessions. Some things will include, some readings, worksheets, maybe to practice an exercise we completed in session, things like that.

vii. Facilitator Commitment: Marie-Line and I have rules too. We abide by the same ones as you, but we also commit to being present in the group as well and giving our whole selves. We will be hardworking and compassionate to your needs, and we commit to helping you all move into the direction of the life that you want to live.

5. Participant Introductions
   a. In pairs of two or three, participants will introduce themselves to others by saying their name and talking about what they wanted to be when they grew up, and if that has changed now, and why and simply chat as much, or as little as they want to each other. After the introductions are made, someone from the group will then introduce another participant by saying that participant's name and something that they thought was cool about them. (Example: “This is Jim and he wanted to be a firefighter.”)

6. Psychoeducation—
   a. Facilitator: Explain that all this didactic learning is great, but that the most important parts of group are the exercises that we do in class. It is important to learn acceptance by living it and not just reading about it. Learning ACT is like riding a bicycle. If I were to just verbally tell you how to ride it, like sit your bottom on the seat, put your feet on the pedals, oh and keep your balance, and so on and so on, you might look at me like “what on earth is she talking about?”, that’s why we believe the best way is to go out and try it yourself. That’s what we hope you will all do. Practice, practice, practice. Practice doesn’t mean perfect. No one is perfect at acceptance and
mindfulness and always being in the present moment. But practice does make progress, and progress helps you be your best. And that is what we want from you.

7. Psychoeducation—
   a. Control—refer to PowerPoint

8. Tug-of-War Metaphor—
   a. Facilitator: Use a scarf or a rope for this exercise. Have a volunteer or a co-facilitator help. Explain to the group that the volunteer is a monster, and that this monster is whatever that is bothering you (e.g., anxiety, depression, eating disorder...). Have the volunteer grab one end of the rope and you grab the other end. Play the tug-of-war game with the volunteer. Explain the fight and struggle one has with their monster. Now the group imagine a pit between you and the volunteer, and that the more you pull the more it pulls and you get nowhere. A good example to use is that you desire visiting your friend over there (another volunteer may help, and this volunteer can be sitting across the room or in their regular seat). Keep trying to pull the monster towards your desire. You can’t because the monster is stronger. Ask the group for help and suggestions to beat this monster. In the end, drop the rope and walk to a different destination. To make this even more empowering, have the volunteer follow you anyways. Let the group know that, even if the monster follows, you can still do what you want to do. The monster and you were stuck together at home, but now you’re doing what you want to do, and if the monster tags along, so be it, you’re still doing what you want to do.

9. Brief Mindfulness Exercise—Eating Grapes
   a. Group discussion

10. Homework Assignment
        i. The Mindfulness and Acceptance Workbook for Anxiety by John Forsyth and Georg Eifert
        a) Mindfulness CD Track 1—daily, record on Mindfulness Practice recording Sheet
Power Point

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Brief Mindfulness

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Mindfulness Exercise: Eating Raisins

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive

*Modified version: Eating Grapes
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
**Reading—Part 1—Preparing the Way for Something New**

Can be retrieved from:
Session 2

Values
1. Mindfulness Exercise—Brief Mindfulness and Leaves on a Stream
   a. Clients to get into groups of two or three to discuss homework and personal
      experiences win regards to the homework.
   b. Group discussion.
2. Homework Take-up—
   a. Refer to PowerPoint for questions.
   b. Discuss and share in groups of two or three.
   c. Discuss and share as a whole group.
3. Experiential Exercise—Imagine you are 80 years old
   a. Refer to PowerPoint for questions.
   b. Discuss and share in groups of two or three.
   c. Discuss and share as a whole group.
4. Psychoeducation—
   a. Refer to PowerPoint for presenting material.
   b. Compass Metaphor:
      i. Facilitator: Explain that the compass acts as a tool that always points North,
         North represents our values. The needle of the compass represents one's
         behaviours. No matter what we do, or think, or feel, we can always go
         towards North (aka our values) (eg., If one values being a hard-worker—the
         alarm clock goes off at 5:30am and you have to be at work for 6:30am,
         would pressing snooze ten times signal someone who is hard working? No,
         the needle on the compass would not be pointing North, but if that
         individual got up and dressed and went to work on time, the needle would
         be pointing North and thus that individual would be moving towards his/her
         value).
5. Exercise—Value and Goals Worksheet
   a. Facilitator: Introduce the exercise, and walk around the room to assist clients with
      the work.
6. Homework Assignment—
   a. Reading: Chapter 5 (p. 46-54) True Blues
      i. The Happiness Trap by Russ Harris (2008)
   b. Mindfulness CD Track 2—daily, record on Mindfulness Practice Recording Sheet
   c. Worksheets: Values Road Map & Bulls Eye
Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Brief Mindfulness + Leaves on a Stream

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Value and Goals Worksheet

Can be retrieved from:
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
LIFE
Bulls Eye Exercise

Can be retrieved from:
Reading—Chapter 5—True Blues

Can be retrieved from:
Session 3
Values and Committed Action
Power Point

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
1. Mindfulness Exercise—Brief Mindfulness and Leaves on a Stream
2. Homework Take-up—
   a. Discuss as a group any successes, challenges, areas to improve on.
   b. Remind clients that “falling off the wagon” with the mindfulness exercises can happen, and if it has that they need to be gentle with themselves, realize that this can happen and will happen in life, and all they can do at this point is move on and continue with their commitment to do the practices. Much like breathing during mindfulness exercises, just come back.
   c. Facilitator: Hand out a new Bulls Eye Sheet to the clients (if they were not successful with their Bulls Eye homework). Have clients work on the sheet while providing assistance and walking around the room to help. Once it appears that everyone’s paper is completed, draw a bulls eye on a large piece of paper or on the whiteboard. Put the four titles: Work/Education, Leisure, Personal Growth/Health, and Relationships. Under each title, put one of your goals (or make up goals). Put the marker (just a circle, or an X) where you believe/want it to be for each category. Have the clients describe and explain how your behaviours and goals match up, and what you can do to be closer to the middle of the bulls eye (e.g., if the facilitator’s goal is to go to the gym to be healthy and her marker is far away from the centre, it would appear that she is not living in a valued-directed way since she is not behaving in ways that would bring her closer to her value of healthy living).
   d. Group discussion.
3. Experiential Exercise—Values and Goals Worksheet
   a. Facilitator: Explain the worksheet to the group. Assist clients by walking around the room to help fill out the information.
4. Psychoeducation—Committed Action slide (refer to PowerPoint).
5. Homework Assignment—
   a. Reading: Chapter 26 (p. 180-182) Troubleshooting Values
      i. The Happiness Trap by Russ Harris
   b. Mindfulness CD Track 3—daily, record on Mindfulness Practice Recording Sheet
   c. Worksheets: Bold Move sheet
   d. Complete the goal worked on in session, and if comfortable, share with the group next week.
Committed Action

• “Beginning to live in accordance with your true values takes the willingness to engage in committed action”

• “The best of intentions mean very little without behaviors to back them up”

Brief Mindfulness + Leaves on a Stream

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
**Bulls Eye Exercise**

Can be retrieved from:
Value and Goals Worksheet

Can be retrieved from:
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
A Bold Move

Can be retrieved from:
Reading—Chapter 26—Troubleshooting Values

Can be retrieved from:
Session 4
Defusion I
1. **Mindfulness Exercise**—Brief Mindfulness & Leaves on a Stream (Cloud Version).

2. **Homework Take-up**—
   a. Participants to get into groups of two or three and discuss the homework.
   b. Discuss challenges, successes, and thoughts as a whole group.
   c. Problem-solve together, if challenges did occur.
   d. Discuss goal from last week and create a new objective to the original goal, or create a new goal (assigned as homework for the current week—restate that it is homework during the homework assigning stage at the end of group).

3. **Psychoeducation—Pervasive Thoughts**
   a. **What are the numbers?**
      i. Facilitator: Come up with three numbers (e.g., 123). Tell the participants to recite the three numbers. Then, ask them if they could remember the three numbers in a couple of hours if they were to receive $100 to do so (please note to the clients that no monetary prize will actually be awarded). Ask them to repeat the numbers again. Then, ask them if they could remember the numbers in two days, if the prize was $1000. Have them repeat the number one more time to you.
      ii. Take-home message: The clients only recited those three numbers a couple of times and yet they remembered those numbers. Thoughts are like this as well. We may tell ourselves certain thoughts in our heads, and it may take only a few times for it to stick and fuse to our more permanent/every day thoughts and thinking.
   b. **Finish the sentence.**
      i. There is no place like home.
      ii. Facilitator: We may have seen the movie 'The Wizard of Oz' a few times, but still remember the ending to the sentence.
      iii. Take-home message: Same as the number exercise above; that message/thought has fused to our memory and thinking, and thus more readily available in our minds.
   c. **I'm so sad I think I will just...**
      i. Facilitator: We may all fall back on certain thoughts, emotions, activities, and so on that we are used to (e.g., I'm so sad I think I will just go to bed and cry).
   d. **Voice in your head.**
      i. Refer to PowerPoint for instruction.
   e. **Road Signs.**
      i. Facilitator: Our minds are like road signs almost. Our voices and thoughts that run through our head, might tell us what to do (e.g., Don’t walk that way because you might see someone that you know and you’ll have to talk to them). So, our minds, in some ways, act like roads signs, telling us when to stop or go, or be cautious. Often, these road signs may not actually be the reality of the situation, and might try to over-protect you and not give you any opportunities to try new things, or do activities that are moving you towards your valued-life direction.
   f. **Cell Phone.**
      i. Same message as road signs—tells you what to do.

4. **Experiential Exercise—Bus Metaphor**
   a. Facilitator: Ask for two volunteers to assist with the exercise. Secretly explain to the volunteers (now considered passengers on the bus) that when the exercise begins to stand behind you and say statements such as “You can't do it”, “Turn right”, “This is too stressful”, “Stop now”, “Go back, it was easier there”, and so on. Facilitator,
pretend to be driving a bus. Explain to the group that the bus is your life and you are trying to drive yourself to your values. Point to an area in the room and say that that’s your value (e.g., being a good mother). Note that you are well aware that you see where you need to be driving to in order to behave in your value-directed ways and so on. The volunteers will now begin stating the above example statements. When they do so, you will start to visibly have difficulty steering the bus. You will follow the directions of the volunteers, so if a volunteer says to stop the bus, you will stop the bus. After a moment of demonstrating the struggle, make a suggestion to fight the passengers. Carefully pretend to fight the passengers, but note that by doing this, you are still not getting any closer to your values. Attempt to kick one of the passengers out, but make note that the passenger just jumps back into the bus, and thus you are still not closer to your values. Ask the group what you should do.

b. If the suggestion to just drive with the passengers and make the decision to continue on your route is stated. Demonstrate that in a visible way, and relate that to how we can do that every day with the thoughts in our heads, and how that brings us closer to our values. If other suggestions occur, you can demonstrate them as well, as long as if it is poor coping strategies, that comes out in the activity and the clients understand that.

5. Experiential Exercise—Walking
   a. Facilitator: Create slips of paper that say "You cannot walk". Have clients pick a piece of paper out of a hat/bag, but to not read the slip of paper yet. Once everyone obtains a paper, tell them to slowly and safely walk around the room. Explain to them that no matter what, they need to continue walking around the room. At this point, clients do not know what the paper says, nor do they know that everyone has the same information on their papers. Now, have the clients read the slip of paper while still walking. Allow a moment to pass, and then have the clients read their message out loud continually. Clients should still be walking, but some may not because some may have listened to the message on the paper.
   b. Take-home message: You and your mind can act independently from one another, these thoughts are not in charge of your behaviours, and although it may be difficult or impossible to turn off your thoughts—you can relate to the thoughts differently.

6. Psychoeducation—describing thoughts and what they can be (refer to PowerPoint)

7. Psychoeducation—Fusion
   a. Green Glasses Metaphor
   b. Facilitator: Put on a pair of glasses, or if possible have enough pairs of glasses for all members of the group. Explain that our thoughts can cause a film/fog over ourselves, and that we begin to believe and only see things from that perspective. The glasses become our thoughts and expectations. But, what if we simply move the glasses a little bit off of our eyes. You can demonstrate this by flipping the glasses on the top of your head and wear them like that, or to remove them slightly, the key is to have them no longer over the eyes. Explain that the thoughts, aka the glasses, are still there, but that they are not running the show, and you may hear them from time to time, and they might get louder and closer here and there, but that you can always move them aside and continue doing what you were doing.

8. Psychoeducation—Introduction to: Thoughts that Hook Us

9. Homework Assignment
   a. Reading: Chapter 8 (p. 70-75) Scary Pictures
      i. The Happiness Trap by Russ Harris (2008).
   b. Mindfulness CD Track 4—daily, record on Mindfulness Practice Recording Sheet
c. Worksheets: Getting Hooked (first row) & Values and Goals Worksheet from the beginning of the session.
Power Point

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive

Modified by author.
**Brief Mindfulness and “Clouds in the Sky”**

Can be retrieved from:

Modified to Clouds in the Sky instead of Leaves on a Stream by author
Value and Goals Worksheet

Can be retrieved from:
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Getting Hooked

Can be retrieved from:
Adapted from "Getting Hooked" in Harris (2009) *ACT Made Simple*
Reading—Chapter 8—Scary Pictures

Can be retrieved from:
Session 5
Defusion II
1. Mindfulness Exercise—Brief Mindfulness and Leaves on a Stream
2. Homework Take-up—
   a. Facilitator: Ask the clients what the three numbers were from last week. Re-illiterate the message from last week that we tend to hold onto/fuse thoughts, messages, and so on easily, and it does not mean that what we hear or think is reality.
   b. Facilitators: Have clients get into groups of two or three to discuss homework.
   c. Facilitator: Discuss as a group.
3. Experiential Exercise—Defusion—Paper-in-face Exercise
   a. Facilitator: Give each client a cue card and a marker. Have the client write down something that bothers them (e.g., the thought that “I can’t do it”, or my anxiety, or feeling of worthlessness). Now, have the clients put the cue card right in front of their faces so to cover their eyes. With the cue card covering the eyes, tell the clients to engage in a conversation with their peers, they cannot remove the cue card from their view. Let this go for a moment. Now, ask the clients how their thought/feeling/anxiety got in the way from their conversation. Most likely, some will say that it was difficult, that they could not relate to their peer, could not tell if the peer was talking to them, and so on. Now, ask the clients to place the cue cards with the words up on their lap. Now have them engage in a conversation with their peers. Let that go for a moment. Now, ask the clients to describe that scenario.
   b. Take-home message: The thoughts, feelings, diagnoses, will probably always be there, but instead of letting it take the lead and cover you and shade you from what you want out of life, put it off to the side. As you noticed, the cue card was still there, it was on your lap, but you were able to do it. You were able to have a conversation with your peers and not let it affect you or your actions.
4. Psychoeducation—
   a. Refer to the PowerPoint
5. Experiential Exercise—Milk, Milk, Milk
   a. Facilitator: Have participants repeatedly say “Milk, milk, milk”
   b. Take-home Message: By repeating the word milk, it lost a lot of its meaning.
6. Psychoeducation—
   a. Refer to PowerPoint
7. Mindfulness Exercise—Notice Five Things
   a. Refer to the exercise at the back.
8. Homework Assignment—
   a. Reading: Chapter 6 (p. 56-62) Troubleshooting Defusion
   b. Mindfulness CD Track of choice—daily, record on Mindfulness Practice Recording Sheet
   c. Worksheets: Getting Hooked & Values and Goals Worksheet
   d. Answer the questions at the back of their reading.
   e. Practice a defusion technique with a recurring thought this week.
Power Point

Can be retrieved from:

Modified by Author.
**Brief Mindfulness and “Clouds in the Sky”**

Can be retrieved from:

Modified by author.
Notice Five Things

Can be retrieved from:
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Getting Hooked

Can be retrieved from:
Adapted from "Getting Hooked" in Harris (2009) ACT Made Simple
Value and Goals Worksheet

Can be retrieved from:
ACT TO DECREASE ANXIETY

Reading—Chapter 9—Demons on the Boat

Can be retrieved from:
Session 6
Self-as-context
1. Mindfulness Exercise—Mindfulness Plus Relational Values Exercise
2. Homework Take-up—
   a. Have participants discuss the homework as a group. Remind participants to not discuss their experiences to the facilitator, but rather ask each other questions and lead the conversation together. The facilitator can add comments and questions here and there, but allow the participants to take the lead.
   b. Participants are to come up with a new objective/goal.
3. Psychological Flexibility Hexaflex Picture drawn on Paper—hand out for all participants.
4. Psychoeducation—PowerPoint
5. Experiential Exercise—Brief Observing Self with Values Exercise
6. Psychoeducation—use the same principle as the Sky PowerPoint, but use a house metaphor.
   a. Facilitator: Explain that the individual is like an old house. The house is always there, it stands the same as it always did, but the furniture inside might change over time. New visitors may come and go. The paint colours on the walls may change every once in a while. These things change over time, but the house is still the same house that stood tall all those years.
   b. Take home message: Same as PowerPoint.
8. Homework assignment—
   a. Reading: Chapter 23 (p.157-164) You’re Not Who You Think You Are (Russ Harris, The Happiness Trap, 2007).
   b. Mindfulness CD Track of choice—daily, record on Mindfulness Practice Recording Sheet
   c. Worksheets: Values and Goals Worksheet (Come up with a new objective/goal prior to leaving the session)
Power Point

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
ACT TO DECREASE ANXIETY

Retrieved from:
www.contextualpsychology.com
Brief Observing Self with Values Exercise

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Weekly Mindfulness Chart

Retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Value and Goals Worksheet

Can be retrieved from:
Reading—Chapter 7—Look Who’s Talking

Can be retrieved from:
Session 7
Psychological Flexibility I

Picture retrieved from:
www.contextualpsychology.com
1. Mindfulness Exercise—Notice Yourself Noticing
2. Homework Take-up—
   a. Discuss in smaller groups.
   b. Discuss as a group.
3. Psychoeducation—Psychological Flexibility Hexaflex
4. Psychoeducation—Acceptance
   a. Discuss the concept and main idea of Acceptance.
      i. Separate into small groups and have participants come up with what Acceptance is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or an experiential exercise.
      i. Tug-of-War Metaphor from Session 1.
   c. Discuss how the process can be used in day-to-day life.
      i. Group Discussion.
5. Psychoeducation—Defusion
   a. Discuss the concept and main idea of Defusion.
      i. Separate into small groups and have participants come up with what Defusion is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or an experiential exercise.
      i. Green Glasses Metaphor from Session 4.
   c. Discuss how the process can be used in day-to-day life.
      i. Group Discussion.
6. Psychoeducation—Present Moment
   a. Discuss the concept and main idea of Present Moment.
      i. Separate into small groups and have the participants come up with what Present Moment is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or a mindfulness exercise.
      i. Brief Mindfulness and Leaves on a Stream exercise from previous sessions.
      ii. Facilitator: Make the connection that this mindfulness exercise, although used for the Present Moment concept, also incorporates Acceptance and Defusion. (If a participant mentions that it is also connected to self-as-context, that can still be considered an appropriate connection that works for this question).
   c. Discuss how the process can be used in day-to-day life.
      i. Group Discussion.
7. Homework Assignment—
a. Reading: Chapter 29—A Life of Plenty (p. 199-202) (The Happiness Trap by Russ Harris).

b. Mindfulness CD any Track—daily, record on Mindfulness Practice Recording Sheet.

c. Worksheet: Values and Goals Worksheet. Ask participants to come up with the goal on their own at home, if some participants need the extra assistance, have those participants stay behind and help them create the goal.
Notice Yourself Noticing

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Retrieved from:
www.contextualpsychology.com
Brief Mindfulness + Leaves on a Stream

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http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Weekly Mindfulness Chart

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Value and Goals Worksheet

Can be retrieved from:
Reading—Chapter 29—A Life of Plenty

Can be retrieved from:
Session 8
Psychological Flexibility II
1. Mindfulness Exercise—Brief Mindfulness & Leaves on a Stream
2. Homework Take-up—
   a. Discuss as a group.
3. Psychoeducation—Self-as-context
   a. Discuss the concept and main idea of Self-as-context.
      i. Separate into small groups and have the participants come up with what Self-as-context is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or an experiential exercise.
      i. Talk about Power Point from Session 6 with the sky and weather metaphor.
   c. Discuss how the process can be used in day-to-day life.
      i. Group discussion.
4. Psychoeducation—Values
   a. Discuss the concept and main idea of Values.
      i. Separate into small groups and have participants come up with what Values is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or an experiential exercise.
      i. Bulls Eye Worksheet.
   c. Discuss how the process can be used in day-to-day life.
      i. Group Discussion.
5. Psychoeducation—Committed Action
   a. Discuss the concept and main idea of Committed Action.
      i. Separate into small groups and have participants come up with what Committed Action is and give a brief description.
      ii. Discuss as a large group.
      iii. Facilitator: Use flipchart and markers to scribe the ideas. Participants should be provided with paper to write down the information.
   b. Use a metaphor and/or an experiential exercise.
      i. Values and Goal Setting Worksheet.
   c. Discuss how the process can be used in day-to-day life.
6. Celebrate successful completion of the group.
   a. Cake and Gingerale.
7. Fill out Surveys.
8. Fill out assessments.
   a. Some participants may want to stay back and fill out the assessments one-on-one.
**Brief Mindfulness + Leaves on a Stream**

Can be retrieved from:
http://contextualscience.org/act_for_depression_and_anxiety_group_cornell_unive
Bulls Eye Exercise

Can be retrieved from:
Value and Goals Worksheet

Can be retrieved from:
Readings—Chapter 33—A Meaningful Life; Chapter 32—Onward and Upward; Suggestions for Crisis Times

Can be retrieved from:


All photos (unless otherwise specified) were retrieved from http://openphoto.net/
Appendix D  
Depression Anxiety Stress Scale (DASS)

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I found myself getting upset by quite trivial things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I was aware of dryness of my mouth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I couldn't seem to experience any positive feeling at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I experienced breathing difficulty (eg, excessively rapid breathing,</td>
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<td></td>
<td>breathlessness in the absence of physical exertion)</td>
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<tr>
<td>5</td>
<td>I just couldn't seem to get going</td>
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<tr>
<td>6</td>
<td>I tended to over-react to situations</td>
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<tr>
<td>7</td>
<td>I had a feeling of shakiness (eg, legs going to give way)</td>
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<td>8</td>
<td>I found it difficult to relax</td>
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<tr>
<td>9</td>
<td>I found myself in situations that made me so anxious I was most</td>
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<tr>
<td></td>
<td>relieved when they ended</td>
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<tr>
<td>10</td>
<td>I felt that I had nothing to look forward to</td>
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<tr>
<td>11</td>
<td>I found myself getting upset rather easily</td>
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<tr>
<td>12</td>
<td>I felt that I was using a lot of nervous energy</td>
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<tr>
<td>13</td>
<td>I felt sad and depressed</td>
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<td>14</td>
<td>I found myself getting impatient when I was delayed in any way (eg, lifts,</td>
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<td></td>
<td>traffic lights, being kept waiting)</td>
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<tr>
<td>15</td>
<td>I had a feeling of faintness</td>
<td></td>
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<tr>
<td>16</td>
<td>I felt that I had lost interest in just about everything</td>
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<tr>
<td>17</td>
<td>I felt I wasn't worth much as a person</td>
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<tr>
<td>18</td>
<td>I felt that I was rather touchy</td>
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<tr>
<td>19</td>
<td>I perspired noticeably (eg, hands sweaty) in the absence of high</td>
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<tr>
<td></td>
<td>temperatures or physical exertion</td>
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</tbody>
</table>

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0  Did not apply to me at all
1  Applied to me to some degree, or some of the time
2  Applied to me to a considerable degree, or a good part of time
3  Applied to me very much, or most of the time
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>I found it hard to wind down</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>23</td>
<td>I had difficulty in swallowing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>24</td>
<td>I couldn't seem to get any enjoyment out of the things I did</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>25</td>
<td>I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>26</td>
<td>I felt down-hearted and blue</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>27</td>
<td>I found that I was very irritable</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>28</td>
<td>I felt I was close to panic</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>29</td>
<td>I found it hard to calm down after something upset me</td>
<td>0 1 2 3</td>
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<tr>
<td>30</td>
<td>I feared that I would be &quot;thrown&quot; by some trivial but unfamiliar task</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>31</td>
<td>I was unable to become enthusiastic about anything</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>32</td>
<td>I found it difficult to tolerate interruptions to what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>33</td>
<td>I was in a state of nervous tension</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>34</td>
<td>I felt I was pretty worthless</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>35</td>
<td>I was intolerant of anything that kept me from getting on with what I was doing</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>36</td>
<td>I felt terrified</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>37</td>
<td>I could see nothing in the future to be hopeful about</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>38</td>
<td>I felt that life was meaningless</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>39</td>
<td>I found myself getting agitated</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>40</td>
<td>I was worried about situations in which I might panic and make a fool of myself</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>41</td>
<td>I experienced trembling (eg, in the hands)</td>
<td>0 1 2 3</td>
</tr>
<tr>
<td>42</td>
<td>I found it difficult to work up the initiative to do things</td>
<td>0 1 2 3</td>
</tr>
</tbody>
</table>
Appendix E
Thought Scale (TS)

Read each statement below & circle the number that describes you best in terms of:
A) How **often** you have these thoughts       B) How much you **believe** these thoughts     C) How **anxious** these thoughts make you feel

<table>
<thead>
<tr>
<th>1 = Never / Not at all</th>
<th>2 = Rarely / A little</th>
<th>3 = Sometimes / Sort of</th>
<th>4 = Often / A lot</th>
<th>5 = Always / Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) How <strong>often</strong> I have these thoughts.</td>
<td>B) How much I <strong>believe</strong> these thoughts.</td>
<td>C) How <strong>anxious</strong> these thoughts make me feel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>1. I think I am being plotted against.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I think I am being watched.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I think if I leave my house something bad will happen to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. When I hear people talking, I think it is about me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Modified from Iverach et al., 2010
Appendix F
Summary Document for Participant

Acceptance and Commitment Therapy (ACT)

ACT is comprised of six components:

1. Present Moment
   - “Now”, staying in the moment, fully engaging in what you are doing, not focussing on the past or the future.

2. Acceptance
   - Embracing your life and fully accepting it (e.g., problems, good things, people, private events, anything that happened in the past & may or may not happen in the future.), being gentle with yourself, having self-acceptance, “picking up your road signs and walking with them”.
   - Exercises: Leaves on a stream.

3. Values
   - What is important to you (e.g., your “lighthouse” or “north on your compass”), it is what you would want people you care about to say about you, and what kind of person you aspire to be.
   - Exercise: values and goals worksheet, Bull’s-eye, “80-year-old self looking back at his life”.

4. Committed Action
   - Goals that you set (that have to do with your values), “The best of intentions mean very little without behaviours to back them up”.
   - Exercise: values and goals worksheet.

5. Defusion
   - Defusing from our thoughts = not letting private events influence our behaviours, separating from our private events and recognising them for what they truly are (words, language etc. that we have attached meanings to).
   - Exercise: “You cannot walk” exercise, “Glasses” exercise (e.g., visualize taking your “my memory sucks” glasses off and placing them on your head), defusion techniques (e.g., thanking the butterfly “thank-you but your not helping me right now”, Leaves on a stream, funny voices, picturing it in a funny way).

6. Self-as-context
   - This is about your “observing self” (e.g., pure awareness, the part of you that notices your “thinking self”), observing private events without being hurt by them.
   - Exercise: “Notice 5 things”, “notice myself noticing”, Sky metaphor (e.g., weather constantly changes, and the sky can experience the worst storm but the sky never breaks / private events constantly change and you can have the worst private events, but your mind does not break. You can handle all of the weather that comes your way).
**Things to remember**

- The point of ACT is **not** to try to control or avoid situations or private events (e.g., thoughts, memories, feelings). It is to **accept** them!

- It is much easier to live a meaningful life when we are not busy trying to fight or avoid private events or life-situations. Remember when I tossed sticky notes at you and opening your palms, being accepting, was a lot easier? Remind yourself to be accepting: “drop the rope” or “pick up your road signs and carry them with you” (This will lead to better results than trying to push a beach ball underwater!).

- Experiencing private events is expected because we are human! So, we may as well experience them while doing things that matter to us and being the person we want to be (living a value-directed life) instead of missing out on life (Build a life that you will be happy to look back on when you are 80-years-old).

- A value is not something to achieve, it is something to always work towards (by setting and achieving goals). No matter how much you have strayed from your values, you can **always** choose to move towards them again! You can **always** go north on your compass.

- A goal is something you set and can achieve. When you reach your goals, you are living a value-directed life. Remember “*The best of intentions mean very little without behaviours to back them up*”.

- It is important to try and recognize when we are being “hooked” by our thoughts because “hooking thoughts” try to make it difficult for us to live a value-directed life. You tend to get hooked by the past and the future. When you catch yourself getting hooked, use defusion techniques and bring yourself back to the present moment (by using mindfulness exercises).

- Be gentle with yourself! You cannot control past events or things that may or may not occur in the future. You can only control how you behave **now**. Remember that **no one is perfect**. Do your best (practice makes progress).

- **Every day:** Work on your goals sheet, practice mindfulness, see if you can catch yourself “getting hooked”, and be gentle with yourself.

- **Every week:** If you achieved your goal, create a new goal! If you did not reach your goal, make the goal smaller (Remember even the smallest step is still a step).

- **Every month:** Do a new bull’s-eye sheet and take a look at your values. Is there a new value you would like to prioritize? Focus on whatever will bring you joy.
Appendix G
Assessment Results

Figure 1. Pre- and post-test results for each dimension of the DASS. DASS = Depression and Anxiety Stress Scale.

Figure 2. Pre- and post-test results for each dimension of the TS. TS = Thought Scale.