Group Dialectical Behaviour Therapy for Assertive Community Treatment Team Clients

by

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A thesis submitted to the School of Community Services in partial fulfillment of the requirements for the degree of Bachelor of Applied Arts in Behavioural Psychology

St. Lawrence College
Kingston, Ontario
Canada.
April, 2008
Dedication

I would like to dedicate this work to my beloved husband, David “Mitch” Mitchell, who has been a constant source of support and encouragement throughout this endeavour.
Abstract
The aim of the present AB Case Study was to examine whether modified Dialectical Behaviour Therapy (DBT) (1) could be successfully implemented for Assertive Community Treatment (ACT) team clients with severe persistent mental disorders and high comorbidity, (2) would be efficacious in reducing symptomology (suicidal behaviours, self-harm behaviours, and depression), and (3) would be efficacious in increasing mindfulness skills and Overall Participation Session Rating (PSR) scores. The implementation of DBT was examined at pre and post for clinical/substantive changes. The DBT program consisted of eight weekly two-hour sessions of mindfulness. The four study participants aged 37-44 years received mental health services from Frontenac Community Mental Health Services (FCMHS) ACT team, and met DSM-IV-TR criteria for Axis I and Axis II diagnoses (2000). Results indicated that modified DBT appeared successful for one participant when pre and post were compared. There was a reduction in depression, and an increase in Overall mean PSR performance. However, this was not true for the other 3 participants. Also, findings on suicidal behaviours, self-harm behaviours, and mindfulness skills could not be evaluated in the present study due to lack of data. Though there was limited data, the present study results for one participant, although preliminary, suggest that DBT might provide an effective treatment for ACT clients suffering with complex and severe mental disorders. However, in order to gain a clearer sense of DBT’s effectiveness, certain programmatic changes appear necessary.
Acknowledgements

This research was supported by St. Lawrence College. I would like to personally acknowledge Linda Simourd for her tireless efforts and continual support throughout the writing of this thesis. I would also like to thank the following individuals and organizations for their significant contribution to this study: Marie-Line Jobin, Mandy Locke, Anne Chande, Brent Dye, David Mitchell, Jessica Nickason, Colette McKinnon, Tony Eccles, Kenneth Thompson, Northshore ACT and FACT Teams at Frontenac Community Mental Health Services, and the Behavioural Psychology program at St. Lawrence College.
# Table of Contents

Dedication .................................................................................................................................... ii  
Abstract ....................................................................................................................................... iii  
Acknowledgements ....................................................................................................................... iv  
Table of Contents .......................................................................................................................... v  
List of Tables ................................................................................................................................ vii  
List of Figures .............................................................................................................................. viii  

Chapter I: Introduction ................................................................................................................... 1  
   Overview .................................................................................................................................. 1  
   Rationale .................................................................................................................................. 1  
   Purpose of Study ....................................................................................................................... 1  
   Hypotheses ............................................................................................................................... 1  

Chapter II: Literature Review ......................................................................................................... 2  
   Borderline Personality Disorder: Symptoms and Treatment ..................................................... 2  
   Dialectical Behaviour Therapy Skills Modules and Techniques ............................................... 3  
   Dialectical Behaviour Therapy’s Applicability across Diagnoses and Behaviours .................... 4  
   Dialectical Behaviour Therapy’s Applicability in Mental Health Settings ............................... 7  
   Summary .................................................................................................................................. 7  

Chapter III: Methodology ............................................................................................................... 9  
   Participants .............................................................................................................................. 9  
      Inclusion Criteria .................................................................................................................. 9  
      Characteristics of Participants ............................................................................................ 9  
   Design ..................................................................................................................................... 9  
   Dependent Variables ............................................................................................................... 10  
   Assessment Measures ............................................................................................................. 10  
      Semi-structured Interview ................................................................................................. 10  
      Questionnaires ................................................................................................................... 11  
      Ongoing Assessment Measures ....................................................................................... 11  
   Procedure ............................................................................................................................... 12  
      Ethics Review and Informed Consent Procedures ................................................................ 12  
      Intervention Procedures ................................................................................................. 12  
   Hypotheses ............................................................................................................................. 13  
   Analyses .................................................................................................................................. 13  

Chapter IV: Results ......................................................................................................................... 14  
   Participant 01 .......................................................................................................................... 14  
      Client Characteristics/Needs .............................................................................................. 14  
      Questionnaires ................................................................................................................... 14  
      Ongoing Assessment Measures ....................................................................................... 15  
   Participant 02 .......................................................................................................................... 16  
      Client Characteristics/Needs .............................................................................................. 16  
      Questionnaires ................................................................................................................... 16  
      Ongoing Assessment Measures ....................................................................................... 17  
   Participant 03 .......................................................................................................................... 19  
      Client Characteristics/Needs .............................................................................................. 19  
      Questionnaires ................................................................................................................... 20
List of Tables

Table 1: Client 01 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores ...............15
Table 2: Client 01 Pre and Post Treatment Beck’s Depression Inventory (BDI-II) Scores ........15
Table 3: Client 01 Participation Session Ratings (PSR) ..............................................................16
Table 4: Client 02 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores .............16
Table 5: Client 02 Pre and Post Treatment Beck’s Depression Inventory (BDI-II) Scores .......17
Table 6: Client 02 Participation Session Ratings (PSR) ..............................................................18
Table 7: Client 03 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores .............20
Table 8: Client 03 Pre and Post Treatment Beck’s Depression Inventory (BDI-II) Scores .......20
Table 9: Client 03 Participation Session Ratings (PSR) ..............................................................21
Table 10: Client 04 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores ..........23
Table 11: Client 04 Pre and Post Treatment Beck’s Depression Inventory (BDI-II) Scores ......23
Table 12: Client 04 Participation Session Ratings (PSR) .............................................................24
List of Figures

Figure 1: Graph of Client 02’s Overall mean PSR score per session ............................................19
Figure 2: Graph of Client 03’s Overall mean PSR score per session ............................................22
Figure 3: Graph of Client 04’s Overall mean PSR score per session ............................................24
Chapter I: Introduction

Overview
As services in community mental health programs diminish throughout Canada, communities are finding it more challenging to find adequate care for difficult, seemingly ‘untreatable’ clients. Many clients, particularly Assertive Community Treatment (ACT) team clients with severe persistent mental disorders, like those found in Axis I (i.e., major depression, obsessive-compulsive, bipolar, schizophrenia, and substance-related disorders) and Axis II (i.e., borderline and other personality disorders) can be extremely resistant to traditional treatment approaches (Allness & Knoedler, 2003). These clients often require extensive care by multidisciplinary teams as they have high rates of: challenging behaviours (suicidal, self-harm, poly substance abuse), comorbidity (several concurrent psychiatric diagnoses), treatment failure, and crisis over use.

One treatment approach that has shown some success in treating challenging and ‘untreatable’ clients within a variety of mental health settings is Dialectical Behavioural Therapy (DBT) (Linehan et al., 1999; Linehan et al., 2006; Low, Jones, Duggan, Power, & MacLeod, 2001; Marra, 2005; Schinagle, 2002; Smith & Peck, 2004; Verheul et al., 2003). DBT is a multi-component-stage approach that incorporates strategies from cognitive and behavioural therapies and Zen Buddhist practices (specifically mindfulness). Although originally developed by Linehan to treat chronically suicidal behaviours in clients who met the criteria for Borderline Personality disorder (BPD), DBT has now been found to be effective in treating clients with other challenging diagnoses and behaviours in a variety of settings (Berzins & Trestman, 2004; Linehan et al., 1999; Low et al., 2001; Marra, 2005; Sneed, Balestri & Belfi, 2003; Trupin, Stewart, Beach & Boesky, 2002).

Rationale
Though DBT has demonstrated effectiveness in reducing challenging behaviours for clients in a variety of settings, its effectiveness has not been evaluated in an existing DBT program offered by Frontenac Community Mental Health Services (FCMHS) Assertive Community Treatment (ACT) team. FCMHS ACT is a community mental health program that provides a variety of treatment services (i.e., individual and group therapy, crisis service, housing, budgeting skills, etc.) to clients diagnosed with serious complex persistent mental disorders.

Purpose of the Study
The purpose of the present study was to assist in expanding the content in an existing ACT DBT group, as well as objectively assessing the programs efficacy.

Hypotheses
The primary hypotheses were that the utilization of a modified DBT group program would: (1) reduce suicidal behaviours, (2) self-harm behaviours, and (3) increase mindfulness skills in ACT clients. Secondary hypotheses were also included in the study. The first was that the DBT program would reduce depression. The second was that the DBT program would increase Overall Participation Session Ratings (PSR) scores. It was further hypothesized that those with higher PSR scores would demonstrate the most benefit from the program. In addition, ancillary hypotheses were generated post-hoc on two critical Beck Depression-II items—Pessimism and Suicidal Thoughts or Wishes. It was hypothesized that scores on both of these items would decrease (pre-post testing).
Chapter II: Literature Review

The present literature review focuses primarily on DBT and its relevance in treating the significant issues of BPD. The effectiveness and applicability of DBT across diagnoses, settings, and cultures is also examined. Further, this literature review explores limitations of past research and provides a rationale for the present study.

**Borderline Personality Disorder: Symptoms and Treatment**

The American Psychiatric Association Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, 2000) defines BPD as a chronic mental disorder that is characterized by pervasive patterns of instability, emotional dysregulation, and marked impulsivity that begins by early adulthood and is present in a variety of contexts. Clients with a diagnosis of BPD tend to exhibit high rates of challenging therapy interfering behaviours (especially suicidal and self-harm behaviours), have high use of crisis services, and overall have high rates of treatment failure. According to Linehan et al. (2006), finding effective treatments to address the significant issues of the borderline individual has been a difficult task. This lack of success has frequently been attributed to treatment approaches that do not effectively address BPD therapy interfering behaviours such as emotional dysregulation, deliberate-self harm, and chronic parasuicidal and suicidal behaviours (Linehan, 1993a; Linehan, 1993b; Linehan et al., 2006; Low et al., 2001).

According to Davidson, Neale, Blankstein and Flett (2005) several clinical approaches have been used in the treatment of clients diagnosed with BPD. One approach has been pharmacotherapy, which is generally determined by a concurrent Axis I diagnosis. For example, Davidson et al. (2005) stated that tranquilizers can be used to assist with reducing anxieties and phobias, while antidepressants may be used to assist with reducing depressive symptoms. However, they also stated that pharmacotherapy has shown to have modest effects in treating BPD symptoms and should be used with caution. This caution is due to the findings that clients with a diagnosis of BPD have a high rate of drug abuse and suicidality.

A second therapeutic approach has been Otto Kernberg’s psychodynamic theory called Object-Relations Psychotherapy. This theory operates on the assumption that it is a client’s weak ego that makes it difficult for the BPD client to tolerate dichotomies. For example, a patient may instantly split between viewing a person as good to viewing them as evil; this occurs particularly when a person is distressed. The goal of Object-Relations Psychotherapy is to assist the client via a directive approach that interprets defensive behaviour while providing the client with concrete ways to behave more adaptively.

Finally, a third therapeutic approach has been Marsha Linehan’s DBT. This therapy combines cognitive and behavioural strategies (problem solving and social skills training) with acceptance and empathy. Its main goals are to help the client learn to modulate their emotions and behaviours, tolerate distress, and trust themselves. Although Davidson et al. (2005) identified pharmacotherapy, objects-relations psychotherapy, and DBT for the treatment of BPD, DBT is the only psychological treatment supported as a “probable efficacious treatment” for clients with BPD by the Division 12 Task Force (Chambless et al., 1998). No other treatments for BPD are listed in either the category of “well-established” or “probable efficacious treatment”.

DBT was originally designed by Linehan to address the clinical needs of chronically suicidal and self-injurious women who exhibited behaviours that were often highly resistant to intervention efforts (Linehan1993a; Linehan, 1993b; Marra, 2005). When many of these women were assessed for a psychiatric condition, it was found that they often met the criteria for BPD. After years of delivering therapy to these clients, Linehan determined that their resistance to
treatment interventions was due to strict cognitive and behavioural therapies that did not validate and accept them (Hayes, Follette, & Linehan, 2004; Linehan, 1993a; Marra, 2005). To counteract this resistance, Linehan developed a cognitive-behavioural stage model called Dialectical Behaviour Therapy (Linehan, 1993a). This therapeutic approach was able to address the significant therapy interfering behaviours of the BPD individual, while still providing validation and acceptance (Linehan, 1993a; Linehan, 1993b; Schinagle, 2002; Smith & Peck, 2004). The approach has demonstrated its effectiveness in increasing emotional regulation, validation, positive therapeutic relationships, staff support, and client autonomy. The therapeutic approach also prioritizes target behaviours that interfere with receiving therapy such as suicidal behaviours, self harm behaviours, and crisis behaviours. Often, these behaviours utilize large amounts of service and can exhaust therapists and hospital staff (Linehan et al., 2006). Along with addressing therapy interfering behaviours, the DBT model has successfully treated a variety of socially important and critical issues for BPD clients such as substance use (Dimeff, Rizvi, Brown & Linehan, 2000; Linehan et al., 1999; Van den Bosch, Verheul, Schippers & Van den Brink, 2002), treatment attrition, bingeing and/or purging (Telch, Agras & Linehan, 2001), and violence and anger (Evershed et al., 2003).

**Dialectical Behaviour Therapy Skills Modules and Techniques**

The DBT model includes four skills modules: core mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness (Linehan, 1993a; Marra, 2005). Marra’s skills manuals (2004; 2005) include a fifth module called ‘meaning making’ which assists clients in creating meaning in their lives. However, the present paper will not address meaning making, but will strictly focus on Linehan’s four skill modules and common techniques/strategies.

Mindfulness practice was founded primarily in Zen meditation practices and was incorporated into DBT to assist clients in learning how to allow their experiences (e.g., distressing thoughts) without suppressing or avoiding them (Linehan, 1993a). The mindfulness practice consists of a set of skills (behavioural and psychological versions of meditation) that help the client intentionally observe, describe and participate in reality—the here and now. Each skill is to be practiced nonjudgmentally, in-the-moment, and with effectiveness. Throughout the mindfulness skills practice, the client is taught to ‘radically accept’ (not approve) each moment as it is, perfect and complete, and not to evaluate it as good or bad. According to Linehan, the client will experience freedom and wisdom when he/she learns how to radically accept the present circumstance. It is through ‘radical acceptance’ that the client is able to see the truth of the moment and make appropriate informed changes to move forward. For example, being mindful involves intentional awareness of one’s behaviour and environment. It is this mindfulness practice that helps the client observe painful consequences without judgment, and assists him/her with suggesting changes to destructive behaviours.

Distress tolerance is based on the premise that life can be painful and unavoidable. Trying to avoid or suppress this pain can often increase the intensity of pain and suffering. Distress tolerance skills focus on assisting the client with learning how to accept the moment or event nonjudgmentally while using several crisis strategies to effectively manage the moment. The strategies include: distracting, self soothing, improving the moment, and thinking of pros and cons.

Emotion regulation is based on the premise that the BPD individual has difficulty regulating their intense emotional labile moods. The goal of emotion regulation is to help the client understand that his/her destructive behaviours (i.e. suicidal behaviours, self harm, and crisis use) are an attempt (short-term) to escape or avoid painfully emotional situations (Linehan,
For example, a client may use substances as a behavioural solution to tolerate painful emotions (Linehan, 1993a). However, he/she may perceive the painful emotions as the major problem to be solved. Emotion regulation skills focus on assisting the client to: identify and label affect, identify obstacles to changing emotions, reduce vulnerability to emotional reactivity, increase positive emotional events, increase mindfulness to current emotion, take opposite action, and apply distress tolerance techniques. It is also important to apply mindfulness skills such as, acceptance, observing and describing accurately, and nonjudgmentalness when focusing on emotional responses to environmental events.

Interpersonal effectiveness skills assist the client in learning new ways to be socially effective. The module focuses on helping the individual learn how to get needs met, learn how to say no, and address interpersonal conflict while maintaining relationships and self-respect. According to Linehan, it is often challenging for the BPD individual to maintain relationships because of affect dysregulation. This affect dysregulation often leads him/her to fluctuate between extreme avoidance of the conflict to intense confrontation. Both of these extremes are generally dependent on the person’s emotional state, not on what the particular situation requires.

Throughout each of the modules, a wide range of techniques and strategies are used to purposely address the significant issues/problem behaviours that keep the BPD client coming in to receive crisis services (Hayes et al., 2004; Linehan, 1993a; Marra, 2004; Marra, 2005). DBT techniques include: cognitive reframing, dialectics, validation, and radical acceptance. These techniques assist the client in developing an awareness of their cognitions, considering alternative perspectives, and using opposing forces to help identify the truth. It also enables both the therapist and the client to accept reality without judgment as it is in that moment. For example, a dialectic strategy can help a client who suffers from intense emotional pain, by helping this client find a balance between acceptance and change—dialectically opposing forces—through encouraging change, while simultaneously accepting where the client is in the here and now (Marra, 2005). This approach is beneficial for both the client and the therapist(s) because it allows them to see each other in terms of gray, not black or white (good or bad; easy or difficult; extreme avoidance or intense confrontation). The DBT model also utilizes a reciprocal communication strategy, in which the therapist (skills trainer) is encouraged to create a positive therapeutic relationship by addressing the power differential (Linehan, 1993a). This is done by requiring that the therapist be vulnerable (i.e., show weaknesses and limitations) in front of the client. The demonstration of vulnerability by the therapist can often normalize behaviour, as well as model coping strategies without shame. At the same time, the model stresses the importance of interrelatedness and wholeness by attending to how the client and therapist positively and negatively reinforce (reciprocally influence) each other (Swales, Heard & Williams, 2000).

**Dialectical Behaviour Therapy’s Applicability across Diagnoses and Behaviours**

To further extend the literature and applicability of DBT, numerous studies have applied the DBT model to clients with BPD as well as other diagnoses, such as mood disorders, anxiety disorders, impulse-control disorders, addictive disorders, personality disorders, eating disorders, and complex comorbid disorders (Fox, 1998; Huffman, Stern, Harley, & Lundy, 2003; Marra, 2005). In all of the following studies, the implementation of DBT was found to have significant effects on a variety of diagnoses and behaviours. The following studies are relevant to the present research, in that ACT clients suffer from a variety of diagnoses and behaviours including substance use disorders, depression, eating disorders, and anger.
In regard to substance abuse (SA), Van den Bosch et al. (2002) conducted a study involving a DBT condition and a treatment-as-usual condition (TAU). Participants were female (n=58) aged 18 to 70, with a current diagnosis of BPD and with or without a comorbid Substance Use Disorder (SA). Participants were randomly assigned to the DBT condition (n=27) or the TAU control condition (n=31). The DBT condition consisted of a 12-month treatment program that followed Linehan’s skills training manual for treating BPD. The TAU condition consisted of ‘clinical management’ for 12 months from the original referral source. The original referral sources provided traditional ‘clinical management’ treatment at substance abuse treatment centers and psychiatric services in the greater Amsterdam area. Results indicated the DBT group had a lower attrition rate (37% vs. 77%) than the control condition, and greater reductions in self-mutilating behaviour, and self-damaging impulsive acts. However, there were no major differences on SA when DBT was compared to TAU at 18-month follow-up. Van den Bosch and colleagues indicated that SA was not effectively targeted in either condition, and additionally stated, that in future, SA needs to be a prioritized behavioural target on the DBT treatment hierarchy (considered equivalent to a self-harm behaviour).

Similarly, Linehan et al. (1999) conducted a study comparing a DBT condition and a TAU condition for SA. Participants were females, aged 18 to 45 with a current diagnosis of BPD and Substance Use Disorder and/or Polysubstance Use Disorder. Participants were randomly assigned to the DBT condition with replacement medications (n=12) or the TAU condition (n=16). The DBT condition consisted of a modified DBT program that included a dialectical stance on substance use—a synthesis of abstinence, radical acceptance, nonjudgmental problem solving and relapse prevention—and replacement medications that assisted participants in decreasing their stimulant or opiate dependence. For eight months of the study, DBT participants were provided methadone for opiate dependence, or methylphenidate for illicit stimulant dependence. For the first four months, the drug replacement was used for drug maintenance, and during the second four months the drug replacement was tapered until the client was completely weaned from the medication. The TAU condition consisted of alternative substance abuse and/or mental health programs provided in the community. Drug replacement was not used on the TAU participants. Results indicated there were no significant differences between the two conditions at pre-treatment, either demographically, diagnostically, or in regard to primary substance abused. As well, during treatment there were no significant differences on number of hours of individualized treatment, but DBT participants received significantly more group psychotherapy. Findings from the study indicated that subjects assigned to DBT had a reduction in borderline symptoms and drug abuse when assessed at four, eight, twelve, and sixteen months, as well as demonstrated lower drop out rates when compared to TAU. Similar findings were indicated by Dimeff et al. (2000) using a modified version of DBT (similar to Linehan et al., 1999) for two methamphetamine-dependent women with BPD. Results indicated that at 6 months both women were abstinent from use of methamphetamine. Although there was a small sample size, the modified DBT approach demonstrated promising results in targeting substance use, specifically methamphetamine addiction.

In a study on eating disorders, Telch et al. (2001) compared a DBT condition and a wait-list control condition. Female participants aged 30 to 59 with a Binge Eating disorder (BED; Eating Disorder Not Otherwise Specified—EDNOS) were randomly assigned to either the DBT condition (n=22) or the wait-list condition (n=22). As in the previous studies, the DBT condition was modified to incorporate the behaviour of interest. In the case of this study, it was binge eating. The wait-list participants did not receive any treatment for their binge eating during the
study. Results from the study indicated that at the end of the 20-week DBT treatment, 89% of the participants in the DBT condition were abstinent (no binge eating in the past 4 weeks) vs. 12.5% in the control condition. Further, DBT participants demonstrated significant improvement on measures of binge eating and eating pathology, but no significant changes on measures of weight, mood, or affect regulation. Additionally, abstinent rates dropped to 67% at the 3-month follow-up, and to 56% at the 6-month follow-up. Similar results were found in the wait-list participants (n=10) who agreed to DBT treatment after the study was completed. At the end of the treatment 90% were abstinent, at 3-month follow-up 80% were abstinent, and at 6-month follow-up 67% were abstinent. Overall this study demonstrated that DBT is an efficacious treatment for binge eating disorder (BED), although the treatment effect decreased overtime post-program.

In chronically depressed older adults, Lynch, Morse, Mendelson, and Robins (2003) compared the efficacy of DBT plus medication (MED + DBT) to medication-only (MED). Participants aged 60 and over with a current episode of unipolar Major Depressive Disorder were randomly assigned to the MED +DBT condition (n=17) or the MED condition (n=17). The DBT+MED condition consisted of 28 two-hour weekly skills training sessions, 28 weekly half-hour phone consultations, plus medication and clinical management via anti-depressant medication. The MED condition consisted of only medication and clinical management. Results of the study indicated that the MED +DBT group had significant decreases on mean self-rated depression scores, higher remission at post treatment (MED +DBT =71% and MED=47%) and 6-month follow-up (MED +DBT =75% and MED=31%), and showed significant improvement on dependency and adaptive coping. Similar findings were reported by Lynch et al. (2007) using a sample of older adults with co-morbid personality disorder and depression. Both studies concluded that the DBT skills training plus the medication regime holds clinical promise for older adults suffering from Major Depressive Disorder.

Finally, Evershed et al. (2003) conducted a study comparing a DBT condition to a TAU condition on targeting anger and violence for male forensic patients diagnosed with BPD. Participants for the DBT condition (n=8) were selected from the personality disorder unit of a high security psychiatric hospital, while participants for the TAU condition were selected from the other six wards of the psychiatric hospital. The DBT condition used a modified version of DBT that consisted of a focus on patient need. For example, violent behaviour was added to suicidal and therapy interfering behaviours, telephone consultation was changed to skills coaches, and skills group materials were altered to make them more feasible in the forensic setting (i.e., going for a walk is not always possible). The TAU group consisted of other treatments available within the hospital except DBT. All study participants were assessed for BPD characteristics using the Personality Assessment Inventory. No significant differences were found between groups at pre-treatment, except that the DBT group participants had been in hospital longer. Participants in both conditions were assessed at pre-, mid-, and post-treatment for frequency and seriousness of violence-related behaviors. Results indicated no significant change in frequency of violence in either condition; however, the DBT group had greater reductions in the seriousness of violence (53% reduction versus 22% reduction). On measures of anger and hostility, DBT participants (pre-post change) either remained stable or improved while participants in the TAU condition deteriorated. Overall, the study was able to demonstrate the effectiveness of DBT for reducing anger, hostility, and seriousness of violence-related incidents. Furthermore, post-program, participants in the DBT group continued to utilize the skills materials (i.e., diary cards) and created an autonomous self-help group to maintain gains. One
confound to this study was that the intervention group was selected from the personality disorder unit of the hospital, whereas the TAU group was selected from the other psychiatric units.

**Dialectical Behaviour Therapy’s Applicability in Mental Health Settings**

The DBT model has also been applied in numerous mental health settings. This can be confirmed by the long list of treatment settings in which DBT has successfully been incorporated. These include settings such as: inpatient psychiatric units (Bohus et al., 2004; Low et al., 2001; Swenson, Sanderson, Dulit, & Linehan, 2001), outpatient psychiatric units (McQuillan et al., 2005), forensic units (Berzins and Trestman., 2004; Evershed et al., 2003; Nee & Farman, 2005; Trupin et al., 2002), community mental health services (Fox, 1998), private practice (Wagner, 2005), psychiatric emergency room services (Sneed et al., 2003), and general hospital inpatient and outpatient units (Huffman et al., 2003). In all of these studies, the implementation of DBT was found to have significant effects on the clients and their behaviours.

McQuillan et al. (2005) for example, demonstrated that an intensive three-week DBT program designed for crisis treatment was tolerated by psychiatric outpatients (attrition rate was 82%), and had significant effect on self-report ratings for both the Beck Depression Inventory and the Beck Hopelessness Scale. However, no improvements were observed on outpatient ratings for the Social Adaptation Self-Evaluation Scale.

Fox (1998) applied the DBT model in a community mental health setting. He found the DBT model was effective in treating a variety of seriously ill “difficult” clients who were high utilizers of care. As well, it reduced service use and costs. According to Fox, the total cost savings after implementation was $375,000. The reasons given for this reduction were decreases in: inpatient hospital days, partial hospital days, crisis bed days, and face-to-face contacts with emergency services.

**Dialectical Behaviour Therapy’s Applicability across Cultures**

Lastly, the DBT model has been replicated with positive results outside of the United States in numerous countries. These countries include: Canada (McMain, Korman, & Dimeff, 2001), Germany (Bohus et al., 2004), Netherlands (Van den Bosch et al., 2002; Verheul et al., 2003), Switzerland (McQuillan et al., 2005), and the United Kingdom (Evershed et al., 2003; Palmer et al., 2003; Swales et al., 2000). This suggests that DBT has the capability to be utilized across cultures, while maintaining clinical efficacy.

**Summary**

In summary, empirical research has shown that DBT is efficacious across a range of diagnoses, settings, and cultures. Most importantly, it offers an efficacious method for treating difficult behaviours such as suicidal behaviours, self-harm behaviours, and over use of crisis use. DBT offers many advantages to its implementation. These include: fostering positive therapeutic relationships, creating supportive treatment environments, and providing a structured stage approach that can be systematically assessed. As well, this therapeutic approach has been shown to decrease: inpatient care, attrition, service costs, and staff burnout. Although its effectiveness has been demonstrated, it still has not been adopted by the majority of mental health care settings across Canada. The FCMHS ACT program has recently taken steps to implement a DBT treatment group for its clients who struggle with behaviours similar to those outlined in this literature review. These include: suicidal behaviours (suicidal ideation and attempts), self-harm behaviours (cutting, bingeing, purging), substance abuse, and depression. The ACT DBT program, however, is in its infancy with respect to treatment structure, content, and evaluation components. The present study was designed to address the current program limitations, assess
the effectiveness of the DBT program intervention, and more globally extend the literature on the use of DBT.
Chapter III: Methodology

Participants

Inclusion criteria. Participants in the present study were Assertive Community Treatment (ACT) team clients of Frontenac Community Mental Health Services (FCMHS) who met the following criteria: (1) they had been diagnosed with a DSM-IV-TR (2000) Axis I and/or Axis II diagnosis, (2) they were 18 years of age, (3) they resided in Frontenac County, and (4) they were currently receiving individual support services from ACT. Participants were also pre-screened to ensure they were of adequate mental and emotional stability to function within a group treatment context, and were able to participate in self-monitoring/skill development processes. Exclusions were ACT clients who were potentially violent or extremely psychotic, and ACT clients who were unable to work in a group format.

Characteristics of participants. At pre-treatment, eight ACT clients were referred by an ACT psychiatrist and/or an ACT staff member for consideration into the DBT program. Of the eight program candidates, seven met the program inclusion criteria. Of these, one opted for individual DBT and two consented to participate in the program, but declined to participate in the study. This resulted in a program of six participants, but only four participated in the study. It should be noted that ACT clients were not excluded from the DBT group if they did not wish to participate in the study.

The four study participants consisted of three females and one male, ages 37 to 44 (M=41.5); all were Caucasian. Appendix A provides a brief description of each study participant. Current psychopathology of study participants included: Major Depression (50%), Schizoaffective disorder (50%), Bipolar (25%), Eating disorder (50%), Obsessive-Compulsive Disorder (25%), Substance Abuse or dependence (75%), Borderline Personality disorder (75%), and Dependent Personality disorder and traits (50%). All four participants had received psychological treatment in the past. Three participants had started, but never completed previous DBT treatment. Participants at pre-group assessment were displaying a variety of issues such as: interpersonal chaos, emotional dysregulation, impulsiveness, confusion about self, cognitive dysregulation, and problems with finding meaning in their lives (i.e. reasons to live).

Design

Although treatment was administered in a group format, given the small sample size, an AB Case Study design was utilized to assess treatment effectiveness. This process included pre and post interviews and testing that involved a semi-structured interview and questionnaires, as well as eight weekly two-hour treatment sessions. Each DBT session was delivered by a Behavioural Psychology Student and co-facilitated by a Psychiatrist trained in administering DBT group sessions. DBT strategies found in Linehan’s skills manuals (1993a; 1993b), and excerpts from Linehan’s symposium (July, 2007) were utilized. At each session participants were given DBT Diary Cards to record personal data. During treatment, participants also accessed their regular ACT services. These included: weekly individual meetings with their ACT team, telephone consultation when needed, pharmacological intervention, and ancillary services (i.e., vocational services, community integration, and tutoring, etc.). Co-facilitator debriefings were also conducted after each session. Debriefing included: discussing session process, client progress, and client behaviours; conducting Participant Session Ratings (PSR); and addressing client-therapist interactions and current emotions.
**Dependent Variables**

Dependent variables were determined via client file information, a pre-treatment semi-structured interview, and questionnaires. Behaviours targeted for change were: suicidal behaviours, self-harm behaviours, and mindfulness behaviours. Suicidal behaviours were defined as suicidal ideation (self-reported thoughts about engaging in suicidal behaviour) and/or suicidal attempts (accidental or deliberate). Deliberate-self harm behaviours were defined as excessive alcohol or drug use, binging/purging, cutting, burning, and/or inserting objects into the skin. Mindfulness was defined as increased exposure to emotions, and reduction in avoidance and escape behaviours.

**Assessment Measures**

Participants were assessed at pre-treatment, during, and after completing 8 weeks of treatment. Three types of assessment measures were used: a semi-structured interview, questionnaires, and ongoing assessment measures. The semi-structured interview and questionnaires were delivered by the Behavioural Psychology Student. Information was subsequently shared with the ACT staff and the Psychiatrist to determine program suitability and possible treatment targets. Ongoing measures were assessed by the Behavioural Psychology Student and the Psychiatrist.

**Semi-structured interview.** To help determine if participants were a good fit for group therapy, a semi-structured interview was used to assess clients’ readiness and ability to participate in a group setting, as well as participate in the present study. A copy of the interview questions can be found in Appendix B. During the interview, clients were asked to provide background information, discuss presenting problems, and sign informed consent forms. Information provided during the interview was compared to available client case files to evaluate potential discrepancies with client self-reports. If the participant met the program criteria and was a good fit for the group treatment, they were administered questionnaires. Program candidates were then advised if they met the criteria for participation in the group. All participants that appeared interested in attending the DBT group and consented to participate were included into the study.

Following the interview, a FCMHS client note and a Stimulus-Organismic Variables-Responses-Consequences (SORC) functional analysis were completed for each participant. The FCMHS client note outlined the purpose of the interview, the description of the interview, the assessment, and the plan of action. To maintain client confidentiality, participants’ client notes were not appended to the present document, but they were utilized to assist with the description of the participants, and the SORC analysis. The SORC analysis was used to determine the stimulus (antecedent conditions), the organismic variables, the responses (target behaviours), and the consequences of each participant’s problem behaviours (Farmer & Nelson-Gray, 2005). It also assisted in determining possible functions of the behaviours, as well as assisted in determining the intensity of suicidal behaviours and self-harm behaviours. Further, the SORC analysis assisted in evaluating client’s suitability for inclusion in the DBT group treatment program. A SORC analysis of each member can be found in Appendix C. Overall, the SORC analyses determined that the study participants demonstrated difficulty in regulating emotions, behaviours, cognitions, and interpersonal relationships. Participants displayed: pervasive patterns of instability and dysregulation, fear of abandonment, chronic feelings of emptiness, unstable self-image, highly reactive-intense emotional experiences, impulsive behaviours (e.g., sex, substance use, binge eating), and self-destructive behaviours (e.g., suicidal, self-harm). It appeared that the impulsive behaviours and self-destructive behaviours (i.e., suicidal behaviours,
self harm, and crisis use) were an attempt (short-term) to escape or avoid painfully emotional thoughts, feelings, and situations (i.e., feelings of emptiness). These are all consistent problem areas that are targeted for change through DBT (Linehan, 1993a; 1993b).

**Questionnaires.** Two pre-post measures (paper and pencil questionnaires) were utilized. They included:

1. **Paulhus Deception Scale (PDS).** This questionnaire assesses Impression Management (IM) and Self-Deceptive Enhancement (SDE) (Paulhus, 1998). IM “is the tendency to give inflated self-descriptions to an audience”, while SDE “is the tendency to give honest but inflated self-descriptions” (Paulhus, 1998, p.1). This measure was used in the present study to assist in determining the quality of client’s self-report during the interview and their self-ratings on other measures. The PDS has demonstrated high internal validity (Cronbach’s alpha .85 for general population), face validity, and convergent validity for both the IM and the SDE.

2. **The Beck Depression Inventory—Second Edition II (BDI-II).** This questionnaire assesses the severity of depressive symptoms for adults and adolescents 13 years or older (Beck, Steer & Brown, 1996). The BDI-II was used in the present study to assess the participant’s overall severity of depression, as depressive affect was one of the treatment targets. Given difficulties in accessing two other measures, due to administration issues (see Discussion section), post hoc, two items on the BDI-II were used as a proxy measure of potential suicidal risk. The BDI-II manual recommended that Item 2 (Pessimism) and Item 9 (Suicidal Thoughts or Wishes) be specifically observed for a response rating of ‘2’ or ‘3’ to assess potential suicidal risk. These scores indicated a higher sense of pessimism and a greater desire to kill oneself. For example, a score of ‘2’ on the pessimism scale is equivalent to the statement “I do not expect things to work out for me”, while a score of “2” on the suicidal thoughts or wishes scale is equivalent to the statement “I would like to kill myself”. The BDI-II has demonstrated high internal consistency with a coefficient alpha of .92 for outpatients, high test-retest reliability of .93, high construct validity (.93, p< .001), and high predictive validity (0.95).

**Ongoing assessment measures.** To help determine changes in target behaviours during treatment, ongoing assessment measures were utilized and consisted of:

1. **DBT Participant Session Ratings (PSR).** These ratings assessed each participant on their in-group behaviour (in-session effectiveness) for every session attended and helped determine the client’s understanding of DBT mindfulness concepts and strategies (see Appendix D). Ratings were predominantly 5-point Likert scales (1 to 5; poor to excellent) pertaining to components of group effectiveness. They included ratings on: attentiveness, participation, comprehension, insight, honesty, behaviour, and attitude. DBT Participation Session Ratings (PSR) scores were evaluated for each client to determine if there was change over time. In addition to evaluating each of these domains, an Overall (mean) PSR score was computed for each participant per session attended. This Overall score assisted in evaluating the client’s in-session effectiveness and understanding of DBT mindfulness skills. The participant session ratings also evaluated completion of homework (rated 0 to 3, or N/A; 0 being none, and 3 being fully completed), and completion of the diary card (rated as a yes, no, or N/A). The ratings were determined jointly by the co-facilitators after each session.

2. **DBT Diary Card.** The DBT card was designed to enable clients to track targeted behaviours such as suicidal ideation, self-harm, substance use, and programmatic skills (i.e., mindfulness) on a daily basis. The DBT card was based on a modification of Linehan’s Dialectical Behavior Therapy Skills Diary Card (1993b). A copy of the DBT diary card can be found in Appendix E.
**Procedure**

**Ethics review and informed consent procedures.** Given that the present study involved the use of human subjects, the study was approved by the St. Lawrence College Research and Ethic Board. ACT staff, including the management at FCMHS were also apprised of the study and agreed to the component modification of their existing DBT program and the data collection. The program modification was an additional five sessions of mindfulness, making it a total of eight sessions, compared to the previous DBT program which was only three. This change was suggested by the ACT DBT program staff, and followed the recommendations from Wolpow (2000).

Participants were informed at the pre-group assessment and reminded at the first session about the limits of confidentiality, personal rights, qualifications/limits of competence of the treatment facilitators, risks and benefits of the treatment, interpersonal boundaries, lateness and absences, group process and structure, group commitment, and rules and regulations (see Appendix F for Informed Consent form). Also, client’s had an opportunity to ask questions, and sign consent forms at pre-group assessment. The DBT skills training rules for group therapy were modified from Linehan’s skills training manuals (Linehan, 1993a; 1993b) and can be found in Appendix G. To ensure participant confidentiality, each client’s data was assigned a numeric code. No client names or distinguishing information was used in coding information.

**Intervention procedures.** As noted previously, DBT consists of four primary modules (i.e., mindfulness, emotional regulation, interpersonal effectiveness, and distress tolerance). However, the present study was time limited and could only evaluate the first module, which was mindfulness. The other three modules will be delivered by ACT staff following completion of the mindfulness module.

For the present study, intervention consisted of an eight-session treatment program that was delivered weekly for two hours by the Behavioural Psychology student and the ACT staff. The focus of these sessions was psychosocial skills training in mindfulness practice. The mindfulness module taught skills in balancing “emotion mind” (labile) and “reason mind” (logical) to achieve the goal of “wise mind” (calm and centered). Mindfulness skills were taught and practiced in group to improve the client’s own mindfulness. The mindfulness practices assisted the client in increasing their exposure to emotions, while reducing avoidance and escape behaviours. The mindfulness skills included: the ‘what’ skills (observing, describing, participating), the ‘how’ skills (non-judgmentally, one-mindfully, effectively), radical acceptance, turning the mind, and willingness.

The mindfulness treatment also included a variety of skills training procedures, such as: skill acquisition, skill strengthening, skill generalization, dialectical strategies, problem-solving strategies, change procedures, stylistic strategies, and case management strategies (Linehan, 1993a; Linehan, 1993b; Marra, 2005). The skill acquisition procedures consisted of: psychoeducation, role-plays, instructions, homework, and modeling. Skill strengthening involved the use of behavioural rehearsal, response reinforcement, feedback, and coaching. Skill generalization included in vivo behavioural rehearsal assignments. Dialectical strategies involved synthesizing opposing forces to create balance within the group (e.g., good guy vs. bad guy, or content vs. process). Problem-solving strategies included: behavioural analysis, insight strategies, solution analysis, didactic strategies, orienting strategies, commitment strategies, validation strategies, and acceptance strategies. Change procedures involved the use of contingency procedures (contingency management and observing limits), and exposed-based procedures. Cognitive modification procedures included: cognitive and emotional restructuring,
and contingency clarification. Stylistic strategies involved two strategies: reciprocal communication and irreverent communication. Finally, case management strategies involved the use of: consultation-to-the client, crisis strategies (suicidal behaviour), and relationship strategies (relationship problem solving). The major teaching strategy used in each session to deliver the mindfulness skills was brief psychoeducation, followed by prompting, reinforcement, modeling, and coaching of the desired behaviour by the facilitators. The two-hour session followed the outline in Linehan’s skills training manual; a break down of the sessions can be found in Appendix H (1993, p 59-103).

**Hypotheses**

The primary hypotheses of the present study were that the modified DBT program consisting of additional mindfulness sessions would: (1) reduce suicidal behaviours, (2) reduce self-harm behaviours, and (3) increase mindfulness skills. Given the brevity of the treatment (an 8-week mindfulness program), and the obvious challenge of finding change on suicidal behaviours and self-harm behaviours with such a short period of time, more proximal (secondary) variables were also examined. These included depression and session ratings. It was hypothesized that depression would decrease. It was hypothesized that Overall Participation Session Ratings (PSR) scores would increase. In addition, ancillary hypotheses were generated post-hoc on two critical Beck Depression-II items—Pessimism and Suicidal Thoughts or Wishes. It was hypothesized that scores on both of these items would decrease (pre-post testing).

**Analyses**

Four sets of analyses were conducted to assess the data. (1) A SORC analysis was completed to identify relevant treatment targets for each participant. (2) Pre-post testing was completed to analyze clinical/substantive change (e.g., depression range; severe to moderate) and trends on dependent variables. This approach has been deemed more relevant to the present exploratory case study design. (3) Post-hoc testing was completed to assess change on suicidal potential for each participant. (4) In session ratings were completed for each participant after each session to assess change on Overall PSR ratings.
Chapter IV: Results

The principle hypotheses of this study were that DBT would: (1) decrease suicidal behaviours, (2) decrease self-harm behaviours, and (3) increase mindfulness skills. Unfortunately, the researcher was unable to evaluate these primary hypotheses. Reasons for this will be explored in the Discussion section of this paper, but one primary difficulty was an inability to access DBT diary cards. Despite these setbacks, notable effort was made to recoup some data for analyses. These included exploration of the secondary and ancillary hypotheses such as changes on depression, suicide potential, and Participation Session Ratings scores.

Below individual data are presented pertaining to the semi-structured interview, the questionnaires, and the Participation Session Ratings (PSR) scores.

Participant 01

Client characteristics/needs. Client 01 was a 44 year-old male diagnosed with Schizoaffective disorder with Dependent Personality traits. Although he was found to be forthcoming and maintained engagement during the semi-structured interview, he was apprehensive about filling out the questionnaires. He appeared significantly concerned that the collection of data would be used to hospitalize him.

Findings from the interview indicated that Client 01 had thoughts about committing suicide 2-3 times/week, with a plan to jump off his balcony or off a highway overpass. It was determined that both of these methods were within his means. However, he reiterated that this was just ideation and he had no intention of following through. Nonetheless, one might question his stated intent because of the frequency of suicidal thoughts and the viability of his plans. As a precaution, the client was asked to contract with the facilitator to not commit suicide.

In terms of self-harm behaviours, no current self-harm was reported. However, Client 01 reported past issues with excessive alcohol and drugs use, and current thoughts of using them.

Client 01 stated that he was hospitalized 5 times within the past year. Reasons given for his psychiatric hospitalization were paranoid ideation, and severe depression. His longest reported stay was a couple of weeks.

During the interview it was also observed that Client 01 had significant difficulty listing personal strengths, but was able to determine personal treatment goals. They consisted of learning to have a more manageable life, and learning to self-administer positive reinforcement instead of punishment.

Questionnaires. Pre and post treatment scores on the PDS scale for Client 01 are illustrated in Table 1. Results of the PDS indicated that at pre-treatment Client 01 was ‘slightly above average’ in his Impression Management and ‘average’ in his Self-Deception Enhancement. Post program, Impression Management remained stable at ‘slightly above average’, while there was an increase in the Self-Deception Enhancement score from ‘average’ to ‘much above average’. This latter finding suggests post-program self-report data provided by Client 01 should be interpreted with caution as higher T-scores can indicate “faking, maladjustment, confusion, carelessness, and acquiescence” (Paulhus, 1998, p.10).
Table 1

<table>
<thead>
<tr>
<th>Client 01 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre</strong></td>
</tr>
<tr>
<td><strong>Raw Score</strong></td>
</tr>
<tr>
<td>IM</td>
</tr>
<tr>
<td>SDE</td>
</tr>
</tbody>
</table>

**Note.** IM = Impression Management; SDE = Self-Deceptive Enhancement

With respect to the BDI-II, Table 2 summarizes the pre and post scores on this measure. The scores indicated no clinical improvement from pre to post. That is, Client 01 remained in the ‘severe’ depression range.

Table 2

<table>
<thead>
<tr>
<th>Client 01 Pre and Post Treatment Beck’s Depression Inventory (BDI-II) Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre</strong></td>
</tr>
<tr>
<td><strong>Item 2</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

The suicide risk rating as assessed by Items 2 and 9 remained the same across pre and post testing (1 out of 6). This score did not indicate the need for closer scrutiny. However, the post SDE score from the PDS suggests this may be an underestimate of his true score. This appeared consistent with pre-program clinical indices of frequent suicide ideation and the means to act upon this ideation.

**Ongoing assessment measures.** Client 01 attended 25% of the sessions (2 out of 8). He was absent for the second session due to a psychiatric hospitalization, and officially withdrew from DBT by Session 5. Table 3 illustrates the DBT Participation Session Ratings (PSR) scores. The client’s Overall mean PSR scores assisted in evaluating client’s in-session effectiveness. For the initial session, his Overall session performance was rated as slightly ‘above-average’, and in Session 3, his Overall session rating decreased to ‘average’. Although these represent minimal data, they suggest a minor decrease in in-session performance. Inspection of the specific components indicated a slight decrease on ratings of Comprehension (pre – above-average; post – average), Insight (pre – above average; post – average), Behaviour (pre – above-average; post – average), and Attitude (pre – above-average; post – average). No homework was submitted by Client 01, as homework requirements commenced only after Session 2. Also, clinical observations were limited by attendance.
### Table 3

**Client 01 Participation Session Ratings (PSR)**

<table>
<thead>
<tr>
<th>Session</th>
<th>Overall Mean PSR Score</th>
<th>HW Score</th>
<th>DBT Card</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.6</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>A (hospital)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>Withdrawed</td>
</tr>
</tbody>
</table>

Note. HW = homework (rated 0-3, or n/a); DBT card completed rated as yes, no or n/a; A = absent; P = present

In terms of the DBT Cards, no analysis was completed due to non-completion of his diary cards and his withdrawal from the program.

### Participant 02

**Client characteristics/needs.** Client 02 was a 37 year-old female diagnosed with Schizoaffective disorder, Borderline Personality disorder, Substance Abuse disorder and dependence, Eating disorder, and Dependent Personality disorder. Client 02 appeared to be forthcoming, and was pleasant throughout the semi-structured interview. Findings from the interview indicated that Client 02 had no thoughts of suicide, and no concerns with crisis use. Nevertheless, she also reported being hospitalized twice in 2007 for depression and anxiety, and being hospitalized in the last two years for an overdose. Further, she stated that she engages in several self-harm behaviours, such as, daily substance use (specifically alcohol and marijuana), and daily bingeing and starving. She also reported engaging in cutting episodes at least twice in the last year, but no recent cutting. Client 02’s personal treatment goal was to improve her coping skills.

**Questionnaires.** Pre and post treatment scores on the PDS scale for Client 02 are illustrated in Table 4. Results of the PDS indicated that at pre-treatment Client 02 was average in her Impression Management and Self-Deception Enhancement. This suggests likely adequate self-disclosure and self-awareness. Post-program there was a slight increase in scores indicating modestly increased Impression Management and Self-Deception Enhancement.

### Table 4

**Client 02 Pre and Post Treatment Paulhus Deception Scales (PDS) Scores**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>T Score</td>
</tr>
<tr>
<td>IM</td>
<td>7.8</td>
<td>54</td>
</tr>
<tr>
<td>SDE</td>
<td>2.1</td>
<td>49</td>
</tr>
</tbody>
</table>

Note. IM = Impression Management; SDE = Self-Deceptive Enhancement
With respect to the BDI-II, Table 5 summarizes the pre and post scores on this measure. The total scores indicated clinical improvement from the severe range (pre) to the moderate range (post). Even factoring in the modest response style increment, there appears to be clinical improvement in depressive symptoms.

Table 5

<table>
<thead>
<tr>
<th>Item 2</th>
<th>Item 9</th>
<th>Total</th>
<th>Depression range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>35</td>
<td>severe</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>moderate</td>
</tr>
</tbody>
</table>

The suicide risk rating as assessed by Items 2 and 9 yielded a total score of 1 (out of 6) at pre-program and 2 (out of 6) at post-program. This is not suggestive of a high suicide potential.

These psychometric changes are consistent with clinical observations. For example, as the program progressed the client presented as more energetic, more self-confident, more hopeful and less extreme in her dichotomous thinking. Furthermore, she was able to modulate her emotions and utilize the mindfulness skills in real life situations. This was demonstrated by her role-modeling within the group, and her self disclosures of her mindfulness skills use in her everyday situations with family and friends.

**Ongoing assessment measures.** Client 02 attended 63% of the sessions (5 out of 8). Her attendance was sporadic in the initial sessions with illness and psychiatric hospitalization, but by Session 5 there was continuous attendance for 3 sessions followed by absence due to illness again.

Table 6 illustrates the DBT Participation Session Ratings (PSR) scores, and Figure 1 graphs Overall mean PSR scores across sessions. Visual analyses of Figure 1 indicated that Client 02 showed a predominantly upward trend in Overall mean PSR scores per session (Appendix I). That is, for the initial sessions attended, Client 02’s Overall mean session performance was rated as slightly ‘above-average’. By Session 5, her Overall mean session rating increased to ‘above-average’, and by her last session the rating was in the ‘excellent’ range. Together these suggest improved in-session performance over the course of treatment.
Table 6

Client 02 Participation Session Ratings (PSR)

<table>
<thead>
<tr>
<th>Session</th>
<th>Overall Mean PSR Score</th>
<th>HW Score</th>
<th>DBT Card</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.7</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td>yes</td>
<td>A (flu)</td>
</tr>
<tr>
<td>3</td>
<td>3.6</td>
<td>n/a</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>yes</td>
<td>A (hospital)</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>n/a</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>3</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>7</td>
<td>4.9</td>
<td>3</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td>yes</td>
<td>A (sick)</td>
</tr>
</tbody>
</table>

Note. HW = homework (rated 0-3, or n/a); DBT card completed rated as yes, no or n/a; A = absent; P = present

Inspection of the specific session rating components indicated notable improvement on ratings of Insight (pre – average; post – excellent), and Honesty (pre – average; post – excellent). Clinical observations recorded in the Specific Comment section of the rating sheets were consistent with this pattern of scores. For example, over time she improved in her awareness of how her thoughts, feelings and emotions contributed to her self-harm behaviours, as well as their effect on her ability to cope with daily stressors (i.e., roommates). Furthermore, she improved in her use of the mindfulness skills, and was able to utilize the skills to better cope with everyday living. During her last session, she disclosed to the group that she was pursuing further treatment in a residential treatment facility for her addictions, and would continue practicing her DBT skills.
In terms of the DBT card, Client 02 was the only study participant to complete the diary cards. Further, she was the only one willing to reveal her diary cards to the facilitator for treatment or data collection purposes. Unfortunately, due to administrative issues, the review of her diary card did not occur until after her last session. At that point, it was learned she had been unclear about the operational definitions of the suicidal and self-harm behaviours, and her perception of the intensity ratings was also skewed. That is, she was initially unaware that her binging/starving and substance abuse were considered self-harm behaviours. As well, it was observed that she was exhibiting several co-occurring self-harm behaviours that did not warrant the low score she was assigning to the intensity rating.

Despite the inability to analyze this DBT card data, the client’s willingness to record daily, and willingness to share the information for self-improvement demonstrated a high level of client motivation. Anecdotally, when hospitalized (Session 4) she continued recording on scraps of paper. After she was counseled on the proper scoring method at the post-testing session, she self-reported a strong realization of the density and intensity of her self-harm behaviours. This also served as the impetus for her to pursue residential substance abuse treatment and she was hopeful in regard to its efficacy, and restoring some balance in her life.

**Participant 03**

**Client characteristics/needs.** Client 03 was a 38 year-old female diagnosed with Major Depressive disorder, Substance abuse, and Borderline Personality disorder. During the semi-structured interview, she presented as unkempt and flat in both mood and affect (facial, vocal). Findings from the interview indicated that Client 03 had daily thoughts about committing
suicide, but had no plans to follow through with any of her suicidal ideations. Further, she reported that she had never attempted suicide.

In terms of self-harm behaviour, Client 03 reported that she engaged in excessive use of substances. She also reported that she engaged in risky sexual behaviours. In the past year, Client 03 had been hospitalized twice for extreme feelings of depression and anxiety. One of the hospitalizations was due to an accidental overdose of pain medication. During the interview, Client 03 reported that her personal treatment goals were to improve her cognitions and coping skills.

**Questionnaires.** Pre and post treatment scores on the PDS scale for Client 03 are illustrated in Table 7. Results of the PDS indicated that at pre-treatment Client 03 was slightly ‘below average’ in her Impression Management and ‘average’ in Self-Deception Enhancement. This suggests likely adequate self-disclosure and self-awareness. Post program there was a decrease in the Impression Management score indicating forthright responding. Self-Deception Enhancement remained in the average range. Table 7

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>T Score</td>
</tr>
<tr>
<td>IM</td>
<td>4</td>
<td>44</td>
</tr>
<tr>
<td>SDE</td>
<td>3</td>
<td>53</td>
</tr>
</tbody>
</table>

*Note. IM = Impression Management; SDE = Self-Deceptive Enhancement*

With respect to the BDI-II, Table 8 summarizes the pre and post scores on this measure. The scores indicated no clinical improvement from pre to post. Depression remained in the severe range and there was minimal actual change (total pre 35, total post 33). Table 8

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Item 2</td>
<td>Item 9</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The suicide risk rating as assessed by Items 2 and 9 remained the same across pre and post testing (total was 2 out of 6). This score did not indicate the need for closer scrutiny. These findings support her self-report that she would not follow through with a suicide attempt.

**Ongoing assessment measures.** Client 03 attended 75% of the sessions (6 out of 8). A valid reason was provided for the first missed session, however no notice or explanation was provided for the second session missed.

Table 9 illustrates the DBT Participation Session Ratings (PSR) scores, and Figure 2 graphs Overall mean PSR scores across sessions. Visual analyses of the graph indicated that Client 03 showed a slight downward trend in Overall mean PSR scores per session (Appendix I).
As demonstrated in Figure 3, the initial 4 sessions attended, Client 03’s Overall mean session performance were rated as slightly ‘below-average’ to ‘average’. By Session 5, her Overall mean session rating increased to ‘above-average’. However, by her last session her PSR rating had decreased significantly to ‘poor’. Nevertheless, on the whole, there was improved in-session performance over the course of treatment, with a sharp decrease in the last session. Following Session 8, it was determined that she had consumed a large amount of medication prior to the session.

Table 9

Client 03 Participation Session Ratings (PSR)

<table>
<thead>
<tr>
<th>Session</th>
<th>Overall Mean PSR Score</th>
<th>HW Score</th>
<th>DBT Card</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.6</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>3.1</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>3.3</td>
<td>n/a</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>0</td>
<td>no</td>
<td>P</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>0</td>
<td>no</td>
<td>P</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
</tbody>
</table>

Note. HW = home work (rated 0-3, or n/a); DBT card completed rated as yes, no or n/a; A = absent; P = present
Overall Mean PSR Score

Figure 2. Graph of Client 03’s Overall mean PSR score per session.

Inspection of the specific components from Session 1 to Session 5 indicated an increase on ratings of Attentiveness (pre – below-average; post – above average), Comprehension (pre – below-average; post – above average), and Insight (pre – below-average; post – above average). Clinical observations recorded in the Specific Comment section of the rating sheets were consistent with this pattern of scores. For example, over time she improved in her awareness of how her thoughts, feelings, and emotions contributed to her misery. Furthermore, she improved her use of the mindfulness skill, and was able to utilize these skills to better cope with ruminating thoughts. The exception was of course her last session. During this session, she was observed to be distracted, passive, sedated, and non-participative.

In terms of the DBT Cards, no analysis was completed due to non-completion of her diary cards.

**Participant 04**

**Client characteristics/needs.** Client 04 was a 39 year-old female diagnosed with Bipolar with depressed mood, Obsessive-Compulsive disorder, Anorexia Nervosa, Substance Abuse and dependence (cocaine, opiates, benzodiazepines, Tylenol), and Borderline Personality disorder. She appeared distraught during the semi-structured interview, specifically when she completed the questionnaires.

Findings from the interview indicated that Client 04 had thoughts about committing suicide. She reported that she had recently been hospitalized for a near fatal suicide attempt. Client 04 did not provide any further information on intensity or severity of suicidal ideations, nor did she provide any information on self-harm behaviours or crisis use. Before Client 04 was
given the DBT Formal Interview (Appendix B), she expressed the need to end the interview so no other data were collected. However, she did provide a personal treatment goal which was to learn how to better cope with her suicidal thoughts and her life. To ensure the client would not commit suicide, she was asked and agreed to contract with the facilitator to not commit suicide.

**Questionnaires.** Pre and post treatment scores on the PDS scale for Client 04 are illustrated in Table 10. Results of the PDS indicated that at pre and post treatment Client 04 was ‘average’ in her Impression Management and ‘slightly below average’ in Self-Deception Enhancement. This suggests likely adequate self-disclosure and self-awareness.

Table 10

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>T Score</td>
</tr>
<tr>
<td>IM</td>
<td>7.4</td>
<td>53</td>
</tr>
<tr>
<td>SDE</td>
<td>0</td>
<td>42</td>
</tr>
</tbody>
</table>

Note. IM = Impression Management; SDE = Self-Deceptive Enhancement

With respect to the BDI-II, Table 11 indicated no clinical improvement from pre to post. Depression remained in the severe range.

Table 11

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Item 2</td>
<td>Item 9</td>
</tr>
<tr>
<td>IM</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

The suicide risk rating as assessed by Items 2 and 9 yielded a total score of 3 (out of 6) pre-program and 4 (out of 6) post-program. These scores identified her in the range of requiring close scrutiny for suicide potential.

**Ongoing assessment measures.** Client 04 attended 63% of the sessions (5 out of 8). Her attendance was continuous in the initial sessions, but she was absent in Session 5 due to psychiatric hospitalization, and returned for Session 6 while still in hospital. In hospital, she underwent detoxification.

Table 3 illustrates the DBT Participation Session Ratings (PSR) scores, and Figure 3 graphs the Overall mean PSR scores across sessions. Visual analyses of the graph indicated that Client 04 showed a downward trend in Overall mean PSR scores per session (Appendix K). That is, for the initial sessions, her Overall mean session performance was rated as ‘average’. By Sessions 4 and 6, her Overall mean session rating decreased to slightly ‘below average’. Together these suggest decreased in-session performance over the course of treatment. Following Session 4, it was determined that she had been consuming large amounts of pain medication over
the course of the program. Also, the day before Session 4, Client 04 had spent the day bingeing on cocaine.

Table 12

*Client 04 Participation Session Ratings (PSR)*

<table>
<thead>
<tr>
<th>Session</th>
<th>Overall Mean PSR Score</th>
<th>HW Score</th>
<th>DBT Card</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.3</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
<td>P</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>n/a</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>4</td>
<td>1.9</td>
<td>0</td>
<td>yes</td>
<td>P</td>
</tr>
<tr>
<td>5</td>
<td>A (hospital)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1.6</td>
<td>n/a</td>
<td>n/a</td>
<td>P (hospital)</td>
</tr>
<tr>
<td>7</td>
<td>A (hospital)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>A (hospital)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. HW = home work (rated 0-3, or n/a); DBT card completed rated as yes, no or n/a; A = absent; P = present

*Figure 3.* Graph of Client 04’s Overall mean PSR score per session.
Inspection of the specific session rating components indicated a decrease on ratings of Attentiveness (pre – average; post – poor), Participation (pre – above average; post – poor), Comprehension (pre – above-average; post – below-average), Honesty (pre – average; post – poor), and Attitude (pre – average; post – poor). Clinical observations recorded in the Specific Comment section of the ratings sheets were consistent with this pattern of scores. For example, over time she participated less, and appeared more cognitively impaired by her substance use. Also, as the sessions went on she appeared less receptive in group, even demonstrating open hostility towards the group members and facilitators. Post session facilitator debriefings in the latter sessions included consideration of involuntary withdrawal from the group.

In terms of the DBT cards, Client 04 completed several diary cards. Unfortunately, due to administrative issues, the review of her diary card did not occur. Further, she was not willing to reveal her diary cards to the facilitator for treatment or data collection purposes. Therefore, no analysis was completed. Despite the inability to analyze DBT card data, she demonstrated some level of client motivation by completing several diary cards. As well, Client 04 did discuss in earlier sessions that she was surprised about the quantity of substances she had been consuming. This suggested some increased self awareness.
Chapter V: Discussion

This AB Case study examined the effectiveness of group dialectical behaviour therapy with FCMHS ACT clients. These individuals had severe persistent mental disorders, and at the outset of treatment had been engaging in suicidal behaviours and/or self-harm behaviours. This was the organization’s first attempt at expanding the program content, and objectively assessing the program’s efficacy. This was a positive step forward, and was a constructive learning experience on multiple levels.

Unfortunately, the primary hypotheses proposed at the outset of the study could not be evaluated. Due to restricted access to data (e.g., incomplete diary cards) it could not be determined if the DBT program was able to (1) decrease suicidal behaviours, (2) decrease self-harm behaviours, or (3) increase mindfulness skills. However, secondary hypotheses and post-hoc suicidal potential analysis did provide some program evaluation information.

The present data indicated the program was not efficacious for Clients 01, 03, and 04. However, the program was associated with a reduction in the BDI-II score for Client 02, when pre and post were compared. As well, Overall mean PSR performance improved for Client 02 over treatment, from slightly ‘above-average’ to ‘excellent’. This data indicated that Client 02 was able to understand and integrate the DBT mindfulness skills in-group and out of session. This finding is consistent with the central goals of DBT, which are reducing suicidal ideation and depression through the use of DBT (Low et al., 2001). The main difference between Client 02 and the other participants appeared to be the level of motivation. This motivation was demonstrated in her persistence with recording diary card information even when hospitalized, her willingness to disclose information via her diary cards, her self-disclosure whilst in group, and her decision to pursue other relevant treatment (i.e., treatment for her polysubstance abuse) upon termination of this segment of the program. However, due to the lack of supporting data (i.e., DBT diary cards), it cannot be concluded that her reduction in BDI-II was due conclusively to DBT.

Limitations

There were a number of limitations to the present study; primary among them was the lack of data collection (as stated above). For a variety of practical reasons, it was not possible to collect the breadth of data initially expected. First, data from 2 measures assessing reasons for living (Reasons for Living Inventory; Linehan, 1983), and severity of borderline symptoms (Borderline Evaluation of Severity over Time; Blum, Pföhl, St. John, Monahan, & Black, 2002) could not be included in the present study due to administrative issues and lack of licensed consent. Extreme effort was made to include these measures. Second, differing therapist approaches to data collection made it challenging to be consistent in reinforcing client’s adherence to completing DBT diary cards or homework. The result was very limited data upon which to evaluate the program.

A second limitation was the limited compliance to the complete DBT model. That is, clients received only group treatment; no individual therapy was conducted. According to Linehan, one of the components for a DBT group program involves ongoing individual therapy with a primary therapist (Linehan, 1993b). The role of the primary therapist is to help individuals prioritize target behaviours hierarchically, and address any relevant issues (target behaviours) that are currently impacting the client’s ability to complete treatment. Information on client behaviours is gathered by the completion of the diary card each week, and assists the therapist in determining the focus of the individual session and overall treatment goals. In the present study, individual therapy would have assisted in: clarifying appropriate target behaviours, assessing
A third limitation was the length of the treatment. An 8-week program, coupled with the high needs nature of these clients made it difficult to have observable treatment change. It should also be noted, that only one module of the DBT program was evaluated—mindfulness. The DBT program will be continuing with the other three modules: emotional regulation, interpersonal skills, and distress tolerance. So, it is possible, that a decrease in DBT target behaviours (suicidal and self-harm) would be observed after the final three modules are delivered.

One final limitation was that the study had a small sample size (N=4), and no control group. The small sample and the absence of a control group mean that it is not possible to say conclusively that any changes observed were the result of the DBT program.

**Insights**

Despite these limitations, the present study also yielded notable insights. First is the complexity of administering group treatment to high need cases. That is, the complexity and severity of the clients’ issues (i.e., multiple concurrent diagnoses) made it challenging to adhere to the delivery of the DBT model and to collect data. For example, all participants had more than 1 psychiatric diagnosis, 3 of the 4 participants in the study were hospitalized for psychiatric symptoms during the course of treatment, and 3 of the 4 participants suffered from substance abuse issues. Given their high need status, hospitalizations were necessary at times which resulted in numerous absences from the 8-week program, and one client’s withdrawal (Client 01). This raises the issue of whether a group DBT program can be successively applied to this population, or whether further modifications are needed. Overall, further study is needed to answer this question.

The second insight was that loose participant selection may have been a factor in limiting the successful implementation of the DBT program. In the present study, there were clients that were permitted to join the group that were not study participants. None of these clients were interviewed or received questionnaires to determine their suitability. In essence, if they expressed an interest in attending they were accepted in the program. Problems arose within sessions as one non-study client was not able to follow the material. This was due to a cognitive impairment and intense anxiety. Further, the client had a high need for attention and required a high level of reassurance. Unfortunately, group DBT sessions are not structured to allow for much individual focus (Linehan, 1993a; 1993b). This resulted in the disruption in the flow of the sessions, and may have affected therapeutic milieu for the clients and therapists. This lends support for including a participation selection process that includes an interview, prescreening testing, and assessment measures. Adoption of this process might also enable formal identification of clients that need alternative treatments (i.e., individual DBT versus group DBT).

**Recommendations for Future Research and Delivery**

A major strength of the present study was that it yielded several suggestions for administering DBT group treatment within this agency and for future research. First, a more intensive participation selection process component may be needed to evaluate client’s suitability for inclusion in a DBT treatment program. To assist in determining suitability, additional assessment measures (i.e., questionnaires, inventories or tests) may be needed to evaluate client motivation,
cognitive ability, and client target needs. For example, a substance abuse questionnaire (like the Substance Abuse Subtle Screening Inventory-Third Edition; Miller, Roberts, Brooks, Lazowski, & the SASSI Institute, 1997) may assist the agency in determining the intensity and severity of the client’s substance use, the client’s impairment, and the treatment needs of the client. Furthermore, assessment measures could be used to assess change over time and could be used to tap more immediate treatment targets (e.g., substance use, bingeing/purging).

Second, the implementation of an individual DBT treatment component could be useful in assisting ACT staff in targeting appropriate behaviours, and monitoring client change over time. It could also provide another setting in which the client can practice and generalize learned skills.

Third, further modifications of the program may be required. Taking into consideration the high comorbidity of ACT clients, other treatment modalities should be considered, either in conjunction with the DBT group program, or individually. These modalities may include: pre-treatment individual sessions; a condensed DBT program designed for crisis treatment, similar to McQuillan et al. (2005); and/or the addition of DBT material on behaviours such as substance use, bingeing/purging, etc. For example, 3 of the 4 participants had issues with substance abuse. Therefore, a substance abuse DBT component similar to Dimeff et al. (2000) may assist in successfully targeting this client need.

Finally, inclusion of a component that assesses therapist adherence to the DBT model may assist in determining if therapists are adhering to the model. This component would provide supervision and opportunities for the therapists to receive feedback/guidance on their implementation. The result would be increased integrity of the treatment program and provide a truer test of the efficacy of DBT with this population.

Conclusions

In summary, the findings are preliminary, but the results from Client 02 suggest that DBT might provide an effective treatment for ACT clients who are suffering with complex and severe disorders. Given the small sample size and brevity of treatment, the strength of the present study was that it enabled the organization to take a step back to evaluate the approach it had been taking with their DBT program. Furthermore, it provided the clients and agency staff with a better understanding of the importance of data collection in assisting in the delivering of DBT. The lessons learned in this present study have also provided an opportunity to further bolster the FCMHS DBT group program. Nevertheless, more research needs to be completed with this high needs population to determine if DBT is in fact a suitable effective treatment in decreasing suicidal behaviours, self-harm behaviours, and depression. In future, eliminating some of the confounding variables of the present study may give a purer sense of its effectiveness with this population.
References


Linehan, M. (July, 2007). Mindfulness, radical acceptance, and willingness: Integrating DBT
skills into clinical practice. Symposium conducted at the New England Educational Institute 24th Annual Cape Cod Summer Symposia, Cape Cod, USA.


Sneed, J., Balestri, M., & Belfi, B. (2003). The use of dialectical behavior therapy strategies in


Appendices

Appendix A: Description of DBT Study Participants

**Client 01:** was a 44 year old male diagnosed with Schizoaffective disorder with Dependent Personality traits. According to file information, his main issues at time of referral were: depressed mood, problems sleeping, suicidal ideation, persecutory delusions, relationship issues, anger management, and problems with primary support group.

**Client 02:** was a 37 year old female diagnosed with Schizoaffective disorder, Borderline Personality disorder, Substance Abuse disorder and dependence, Eating disorder, and Dependent Personality disorder. According to file information her main issues at time of referral were: depressed mood, history of very serious suicidal attempts, impulsive behaviours, alcohol and drug abuse, negative self-talk, emotional dysregulation, bingeing, sleep apnea, anger, and problems with primary support group.

**Client 03:** was a 38 year old female diagnosed with Major Depressive disorder, Substance abuse, and Borderline Personality disorder. According to file information her main issues at time of referral were: low mood, emotional dysregulation, preoccupation with abuse history, cutting behaviours, impulsive behaviours, negative self talk, history of overdosing, and problems with social isolation, finances, and leisure time.

**Client 04:** was a 39 year old female diagnosed with Bipolar with depressed mood, Obsessive-Compulsive disorder, Anorexia Nervosa, Substance Abuse and dependence (cocaine, opiates, benzodiazepines, Tylenol), and Borderline Personality disorder. According to file information her main issues at time of referral were: obsessive-compulsive behaviours, anxiety, and depressive symptoms, polysubstance abuse, non-compliance with medications, history of suicidal attempts and ideation, cutting behaviour, numerous hospitalizations, and emotional dysregulation.
Appendix B: DBT Formal Interview

Client Name/Code:                                                  Gender:       Date of Birth/Age:
Date of Interview:                                                Persons Present:
Location of Interview:                                             

Presentation (affect and mood, general appearance):

Presenting Issues (possible target behaviours): which affects you most?

1. Suicidal behaviours:
   Do you ever think of ending your life?

   Have you ever tried to commit suicide?

   How often do you think about suicide?

   What sorts of things do you think about doing? Do you have any plans to follow through?

2. Deliberate Self Harm behaviours:
   Have you ever engaged in self harm (overdose, cutting, burning, and picking skin, bingeing/purging, drinking to excess)?

3. Crisis Use behaviours:
   In the last year how many times have you been hospitalized for mental health issues?

   What symptoms were you presenting at the time of admission? What brought you into hospital?

   What is the longest duration that you stayed in hospital?

   How often do you use crisis services (this includes emergency visits, ACT services, and crisis lines)?

4. Other.
   What other issues or concerns do you have that may not have been addressed so far?

Client Strengths
Please tell me five strengths about yourself? What are you good at?

What would you like to work on in the DBT group? And what would you like to gain from treatment?
Appendix C: SORC Functional Analyses

Client 01:

S: Stimulus/Antecedent Conditions
- **Antecedent stimuli:** Verbal and nonverbal expressions of hostility by girlfriend; arguments with girlfriend; thinking about past mistakes; fears (of past, present and future); feelings of hopelessness and anger; persecutory delusions related to his diagnoses of schizophrenia; severe depression; emotional dysregulation; missed medication; economic and occupational problems; negative thoughts and feelings about self.
- **Establishing Operations:** environmental events that resulted in feelings of depression, hopelessness, and anxiety; environmental events that resulted in intense anger.

O: Organismic Variables
- **Learning History:** Long history of excessive alcohol and substance use (states that he has abstained for several years, but still thinks about using it to escape from his life and his thoughts); long history of delusions related to his diagnosis of schizophrenia; one year history of emotionally abusive relationship; long history of suicidal attempts and ideation.
- **Physiological-biological factors:** Anxious, impulsive, and depressed mood temperaments; sleeping problems; persecutory delusions and psychotic thoughts; schizophrenia; dependent personality traits.

R: Response (Target Behaviour)
- Suicidal ideation (2 to 3 times per week, generally mild to moderate in intensity). Behaviour would typically persist until relief was found.
- Admission to hospital (5 times in the last year).
- Thinking about using drugs and alcohol to escape or avoid the situation or thought.

C: Consequences
- **Immediate positively reinforcing consequences:** Attention from emergency staff at hospital.
- **Immediate negatively reinforcing consequences:** Girlfriend’s termination of verbal displays of hostility or disagreement; reduction in anxiety, impulsive and depressed mood or symptoms; reduction in negative thoughts and feelings.
- **Slightly delayed positive reinforcing consequences:** Receives therapy from hospital staff; communication and expression of anger and hurt to girlfriend, with this communication subsequently acknowledged and responded to by girlfriend through her provision of physical displays of affection and words of reassurance.
- **Slightly delayed negatively reinforcing consequences:** Spends several days (or weeks) in hospital which allows him to avoid arguments or confrontations with girlfriend; reduction or elimination of feelings of guilt and sense of inner badness; reduction or elimination of thoughts and recollections related to past difficult events.
Client 02:

S: Stimulus/Antecedent Conditions
- **Antecedent stimuli**: Verbal and nonverbal expressions of hostility by family; arguments with family; thinking about past mistakes; fears (of past, present and future); feelings of hopelessness and anger; severe depression; emotional dysregulation; missed medication; economic and occupational problems; negative thoughts and feelings about self.
- **Establishing Operations**: environmental events that resulted in feelings of depression, hopelessness, and anxiety; environmental events that resulted in intense anger.

O: Organismic Variables
- **Learning History**: past history of very serious suicidal attempts, impulsive and unpredictable behaviours; long history of abusing drugs and alcohol; long history of chaotic and abusive interpersonal relationships.
- **Physiological-biological factors**: Anxious, impulsive, and depressed mood temperaments; sleeping problems (sleep apnea); psychotic thoughts; schizophrenia; borderline personality disorder, drug and alcohol addiction.

R: Response (Target Behaviour)
- Marijuana use (daily).
- Alcohol use (amount unknown).
- Bingeing (daily).
- Cutting episodes (couple of times a year).
- Admission to hospital (at least twice a year).

C: Consequences
- **Immediate positively reinforcing consequences**: attention from hospital and ACT staff.
- **Immediate negatively reinforcing consequences**: Family’s termination of verbal displays of hostility or disagreement; reduction in anxiety, impulsive and depressed mood or symptoms; reduction in negative thoughts and feelings.
- **Slightly delayed positive reinforcing consequences**: Receives therapy from hospital staff; communication and expression of anger and hurt to family, with this communication subsequently acknowledged and responded to by family through their provision of physical displays of affection and words of reassurance.
- **Slightly delayed negatively reinforcing consequences**: Spends several days (or weeks) in hospital which allows her to avoid arguments or confrontations with family members; reduction or elimination of feelings of guilt and sense of inner badness; reduction or elimination of thoughts and recollections related to past difficult events.
Client 03:

S: Stimulus/Antecedent Conditions
- **Antecedent stimuli:** Verbal and nonverbal expressions of hostility by family; arguments with family; thinking about past mistakes; fears (of past, present and future); feelings of hopelessness, loneliness, boredom and anger; severe depression; emotional dysregulation; missed medication; economic and occupational problems; social isolation; negative thoughts and feelings about self.
- **Establishing Operations:** environmental events that resulted in feelings of depression, hopelessness, and anxiety.

O: Organismic Variables
- **Learning History:** past history of very serious suicidal attempts, impulsive and unpredictable behaviours; long history of abusing drugs and alcohol; long history of chaotic and abusive interpersonal relationships; long history of risky sexual behaviours; long history of cutting.
- **Physiological-biological factors:** Anxious, impulsive, and depressed mood temperaments; sleeping problems; major depression; borderline personality disorder, drug and alcohol addiction.

R: Response (Target Behaviour)
- Suicidal ideation (daily generally mild to moderate in intensity). Behaviour would typically persist until relief was found.
- Admission to hospital (2 times in the last year; once for an accidental overdose on Oxycontin).
- Drug use
- Cutting

C: Consequences
- **Immediate positively reinforcing consequences:** Attention from emergency staff at hospital.
- **Immediate negatively reinforcing consequences:** Girlfriend’s termination of verbal displays of hostility or disagreement; reduction in anxiety, impulsive and depressed mood or symptoms; reduction of negative thoughts and feelings.
- **Slightly delayed positive reinforcing consequences:** Receives therapy from hospital staff; communication and expression of anger and hurt to girlfriend, with this communication subsequently acknowledged and responded to by girlfriend through her provision of physical displays of affection and words of reassurance.
- **Slightly delayed negatively reinforcing consequences:** Spends several days (or weeks) in hospital which allows him to avoid arguments or confrontations with girlfriend; reduction or elimination of feelings of guilt and sense of inner badness; reduction or elimination of thoughts and recollections related to past difficult events.
Client 04:

S: Stimulus/Antecedent Conditions
- **Antecedent stimuli:** Verbal and nonverbal expressions of hostility by family and roommates; arguments with family and roommates; thinking about past mistakes; fears (of past, present and future); feelings of hopelessness, loneliness and anger; severe depression; emotional dysregulation; missed medication; migraines; social isolation; negative thoughts and feelings about self.
- **Establishing Operations:** environmental events that resulted in feelings of depression, hopelessness, and anxiety; environmental events that resulted in intense anger.

O: Organismic Variables
- **Learning History:** past history of very serious suicidal attempts, impulsive and unpredictable behaviours; long history of abusing drugs and alcohol; long history of chaotic and abusive interpersonal relationships.
- **Physiological-biological factors:** Anxious, impulsive, and depressed mood temperaments; sleeping problems; psychotic thoughts; bipolar; major depression; anorexia, obsessive compulsive disorder, borderline personality disorder, drug (cocaine, opiates, benzodiazepines) and alcohol dependence; hypothyroidism, migraines.

R: Response (Target Behaviour)
- Drug use (crack cocaine use 2 to 3 times a month; Tylenol use 20 to 30 pills daily)
- Cutting (daily)
- Suicidal ideation (daily, generally mild to severe in intensity). Behaviour would typically persist until relief was found.
- Suicidal attempt (at least 2 times this year; once for a Seroquel overdose)
- Admissions to hospital.

C: Consequences
- **Immediate positively reinforcing consequences:** Attention from emergency staff at hospital.
- **Immediate negatively reinforcing consequences:** Reduction in anxiety, impulsive and depressed mood or symptoms. Reduction of negative thoughts and feelings.
- **Slightly delayed positive reinforcing consequences:** Receives therapy from hospital staff and ACT staff.
- **Slightly delayed negatively reinforcing consequences:** Spends several days (or weeks) in hospital which allows her to avoid arguments or confrontations with family and roommates; reduction or elimination of feelings of guilt and sense of inner badness; reduction or elimination of thoughts and recollections related to past difficult events.
Appendix D: DBT Participant Session Ratings

To be filled out on each participant for each session

Name: 
Session #: 
Date: 

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Below Average</td>
<td>Average</td>
<td>Above Average</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Attentiveness
Participation
Comprehension
Insight
Honesty
Behaviour
Attitude

Overall Score

Homework completed: rate 0 to 3 (0 = none, 1 = 1/3, 2 = 2/3, and 3 = fully completed)

DBT card completed: Y = yes and N = no

Specific comments:
## Appendix E: DBT Diary Card

**Dialectical Behaviour Therapy Diary Card**

<table>
<thead>
<tr>
<th>Date</th>
<th>Alcohol</th>
<th>Over-the-counter Medications</th>
<th>Prescription Medications</th>
<th>Street/illicit Drugs</th>
<th>Suicidal Ideation (0-5)</th>
<th>Misery (0-5)</th>
<th>Self-Harm Ugres (0-5)</th>
<th>Action Yes/No</th>
<th>Used Skills (0-7)*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># Specify</td>
<td># Specify</td>
<td># Specify</td>
<td># Specify</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Skills Rating:
- 0 = Not thought about or used
- 1 = Thought about, not used, didn't want to
- 2 = Thought about, not used, wanted to
- 3 = Tired, but couldn't use them
- 4 = Tried, could do them, but they didn't help
- 5 = Tried, could use them, helped
- 6 = Didn't try, then used them, but they didn't help
- 7 = Didn't try, then used them, helped

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

39
<table>
<thead>
<tr>
<th>INSTRUCTIONS: Circle the days you worked on each skill.</th>
<th>Reflections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wise Mind</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>2. Observe: just notice</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>3. Describe: put words on</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>4. Nonjudgmental stance</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>5. One-mindfully: in-the-moment</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>6. Effectiveness: focus on what works</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>7. Willingness</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>8. Turning the mind</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>9. Half smile</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>10. Objective effectiveness: DEAR MAN</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>11. Relationship effectiveness: GIVE</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
</tr>
<tr>
<td>12. Self-respect effectiveness: FAST</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>13. Reduce vulnerability: PLEASE</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>14. Build MASTERY</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>15. Build positive experiences</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>16. Opposite-to-emotion action</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<td>17. Distract</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<td>18. Self-soothe</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<td>19. Improve the moment</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<td>20. Pros and cons</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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<tr>
<td>21. Radical acceptance</td>
<td>Mon Tues Wed Thurs Fri Sat Sun</td>
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Appendix F: Informed Consent Form

Dear Client,

I am a student in the Bachelor’s Degree in Behavioural Psychology [BPSYC] program at St. Lawrence College. This four-year degree program is based on a behavioural framework, which has been proven to be effective in developing life skills with a wide range of clients in institutional and community settings. The behavioural approach increases the client’s desirable behaviours through teaching, practice and encouragement. This course focuses on the application of the basic principles of behavioural counselling.

I am currently enrolled in an Applied Thesis course. An applied thesis is an intervention that includes a very detailed report. The development of the intervention will include an assessment, data collection and an intervention. This client-focused intervention will be developed in collaboration with you, the agency’s staff, and team members.

The applied thesis project has been approved by Frontenac Community Mental Health Services and by Dr. Ann Chande, ACT Psychiatrist, DBT Co-Leader/Supervisor.

The benefits of participating in the applied thesis are that you may be able to gain skills to help reduce life threatening behaviours, increase regulation (emotional, behavioural, cognitive and interpersonal), gain autonomy, and tolerate distress. The risk of participating in the applied thesis is that you may experience heightened emotional distress while practicing DBT skills. However, any sign of distress will be addressed in group or on an individual basis following the session. In the event that the intervention appears to be troubling to a client, removal from the group and individual remediation/counselling would occur by relevant staff. It should be noted that the current treatment will be a modified/increased structuring of an existing FCMHS DBT group program. As well, the proposed treatment will augment other client services and will not result in exclusion from other FCMH services. No aversive technique will be utilized; this is strictly an awareness and skill based program. The group will be co-facilitated by an experienced program staff familiar with the clients and experienced in both DBT and group processes.

I would like your permission to implement the intervention/procedures described above. The intervention will be developed under the supervision of the Agency Supervisor and the College Supervisor. All information collected will be kept strictly confidential. Upon request, we will gladly share a copy of a brief report of the intervention.

If you agree to participate in the project, please complete the form at the bottom of this letter and return it to me as soon as possible. Participation in this project is voluntary and you may withdraw at anytime.

I sincerely appreciate your cooperation. If you would like to receive more information about the applied thesis or have additional questions or concerns, please contact my College Supervisor, Linda Simourd, Psychologist, XXX-XXX-XXXX.

Sincerely,

Paulene Edwards
BPSYC Student

I understand and consent to the information on the previous page.
Name: ______________________

**NOTE:** all information identifying you will be removed from any reports to protect confidentiality

_____ I consent [for client’s name] to participate in the intervention/project conducted by Paulene Edwards.

_____ I do NOT consent [for client’s name] to participate in the intervention/project conducted by Paulene Edwards.

_____ I consent for the data collected as part of this intervention/project to be put in a report in the college library.

_____ I consent for the data collected as part of this intervention/project to be presented at a conference.

_____ I consent for the data collected as part of this intervention/project to be published in a peer reviewed journal or professional publication.

Client/Guardian Signed:____________________
Date: __________________________

Witness Signed:____________________
Date: __________________________

BPSYC Student Signed:____________________
Date: __________________________
Appendix G: DBT Skills Training Group Rules

I agree to the following group rules:

1. I will continue to attend all of my regular appointments with my ACT Team.

2. I will maintain my wellness to the best of my ability by taking my medications as prescribed.

3. I will keep information obtained during the sessions as well as the names of the people in the group confidential. Any infraction will lead to termination for the remainder of the contract.

4. If I am to be late or miss a session, I will call ahead of time. It is expected that absence from sessions may only be accepted due to extraordinary cause. Group is to be notified if the participant is anticipating a need to leave the group early.

5. I am not to come to sessions under the influence of drugs or alcohol. This is also not a valid excuse for missing sessions.

6. I will not bring items that could be used to harm myself or others to the sessions.

7. I will not discuss immediate or past self-harm behaviours with other group members outside of sessions.

8. I will not form private relationships with another group member outside the sessions that cannot be discussed in the group.

9. Sexual partners may not be in the group together. If such a relationship occurs during the course of the group, one person in the pair will have to drop out.

10. I agree to commit to the skills training group so that I can learn new skills and to also facilitate others learning experience. I understand that disruptive behaviours like swearing, monopolizing the group, withdrawing, or lack of participation are all considered therapy interfering behaviours and therefore unacceptable.

11. I understand that completion of my practice assignments is necessary for the acquisition of skills and that non-completion of the weekly practices is seen as therapy interfering behaviour.

_________________________  _____________________________
Date       Signature
Appendix H: DBT Sessions

Session 1: Orientation to skills training
I. Members are welcomed to group and each member including facilitators introduces themselves.
II. Review consent forms. Review DBT skills training group rules.
   a) get each participant to agree to rules;
   b) discuss any rules not on list;
   c) discuss what an excused/unexcused session is.
III. Give general goals (therapy/skills training for clients).
IV. Review Handout I: Goals of Skills Training.
   a) general goal of skills training: refine skills in changing behavioural, emotional, and thinking patterns associated with problems in living that are causing misery and distress;
   b) specific goal: discuss relationship of target behaviours to specific skills training;
   c) get feedback from participants on whether or not each behavioural pattern is characteristic of them (interpersonal chaos, labile affect, impulsiveness, confusion about self, self-harm, cognitive and emotional dysregulation).
V. Discuss format of skills training: order, length, and purpose.
VI. Conduct format of skills training: order, length, and purpose.

Session 2-7 format:
I. Discuss any question from the previous week’s content.
II. Review DBT skills training rules (Session 2 only); check in, briefly review content of previous session.
III. Review diary cards and how to fill out (Sessions 2 and 3 only); review homework.
IV. Introduce, discuss, and practice new skills.
V. Summarize key points; review and incorporate skills from previous sessions.
VI. Develop practice commitments and discuss pros and cons.
VII. Discuss skill generalization.
VIII. Conduct module wind-down exercise.

Session 8 Format: Final Treatment Session
I. Discuss any questions from the previous weeks.
II. Check in; briefly review content of previous session.
III. Review homework.
IV. Overview whole group process.
V. Review skills that have been taught over the sessions.
VI. Discuss plans for generalization and maintenance.
VII. Say good-bye.
VIII. Conduct therapy wind-down exercise.
Appendix I: Graph of Client 02’s Overall Mean PSR Score per Session
Appendix J: Graph of Client 03’s Overall Mean PSR Score per Session
Appendix K: Graph of Client 04’s Overall Mean PSR Score per Session