Effectiveness of a 20-Week Dialectical Behaviour Therapy (DBT) Skills Only Group on Participants’ Emotion Regulation Skills and Frequency of Self-Injurious Behaviour (SIB)

by

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Abstract

Individuals with traits of borderline personality disorder can be high volume health care and mental health service users and may present with concurrent crises and minor episodes of SIB. These individuals present with severe emotional and behavioural issues that require immediate and effective treatment. According to relevant empirical literatures, the use of DBT skills decreases the frequency of SIB and increases the ability to regulate emotions in individuals with borderline traits. Therefore this thesis tested the effects that participation in a 20-week, condensed DBT Skills Only therapy group would have on participant’s frequency of SIB and emotion regulation skills. Four individuals with borderline traits, including affective instability and SIB participated in this study. Dependent variables were assessed via pre and post-assessment measures, including the Difficulties in Emotion Regulation Scale (DERS) and the Borderline Symptoms List (BSL-23). In addition to these measures, each participant completed weekly diary cards that recorded the number of skills they used throughout the week. Statistical analysis indicated that utilization of DBT skills resulted in a decrease in SIB as well as an increase in emotion regulation. Due to the lack of research supporting DBT skill use as a stand-alone treatment it is highly recommended that future research compare the effectiveness of participation in a standard, full-DBT group with that of a condensed, Skills Only DBT group.
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Chapter I: Introduction

Borderline personality disorder (BPD) is an intrusive mental disorder that manifests itself in individuals through impairments in personality and interpersonal functioning (American Psychiatric Association, 2013). BPD is also characterized by negative affect, impulsivity, and antagonism (American Psychiatric Association, 2013). Furthermore, individuals with BPD often face challenges maintaining intimate relationships (National Institute of Mental Health [NIMH], n.d.). A study by Glenn and Klonsky (2009) found that emotion regulation is responsible for a unique variance present in BPD, even after controlling for established signs of negative emotionality. Their results support the idea that emotion dysregulation is a central trait of BPD. As a result of this emotional dysregulation, individuals with BPD or BPD traits may experience emotions that they have a difficult time managing effectively. According to a study by Brown, Comtois, and Linehan (2002), individuals with BPD use self-injurious behaviour (SIB) to deal with undesired and overwhelming emotional experiences. Some people display traits of BPD; this means that the individual does not meet the criteria to be diagnosed with BPD, but that he or she exhibits some of the symptoms associated with the illness. Therefore, teaching individuals diagnosed with or displaying traits of BPD how to cope with otherwise overwhelming emotional situations may reduce the frequency of SIB as an emotional coping mechanism.

Dialectical Behaviour Therapy (DBT) was developed by Marsha Linehan to help treat individuals diagnosed with BPD. Specifically, DBT was created to help individuals engaging in SIB or suicidal behavior who also met the criteria for BPD (Read, 2013). A full DBT program lasts 1 year and includes an individual therapy component, a group-based skills training component, phone coaching, and therapist consultation groups (Read, 2013). DBT consists of four modules: mindfulness, emotion regulation, interpersonal effectiveness, and distress tolerance. The skills in each module help individuals focus on the present moment, learn how to control their emotional reactions, interact effectively with other people, and distract from situations that are especially emotionally distressing.

Individuals with BPD can be high-volume health care and mental health service users and may present with concurrent crises and minor episodes of SIB. With limited group sizes and the availability of DBT programs to the public, wait-times to enter these programs can be up to one-year. For an individual in crisis, waiting this long can have a devastating effect on his or her life. A literature review examining the quality of life of individuals with BPD found that exhibiting BPD traits can seriously impair an individual’s quality of life (Ishak et al., 2013). However, in the same study, it was found that participating in treatment for BPD significantly improves quality of life for individuals with BPD traits. Due to the fact that BPD can have such a negative impact on an individual’s life, and that this population can achieve a higher quality of life through treatment, it is highly beneficial to this population to receive treatment as quickly as possible. By condensing the full DBT program to a 20-week DBT skills only group, more clients will be able to receive treatment in a shorter period of time.

According to CAMH (2009), some therapists are hesitant to work with people who have BPD due to their stigma of being resistant to therapy, their intense mood swings, their suicidal gestures, and other perceived emotionally manipulative behaviour. All of these traits can frustrate a therapist and are common in individuals with BPD. By having a condensed form a therapy for individuals with BPD traits, therapists with higher thresholds for working with this population will be able to work with more clients in a shorter time.

Individuals with BPD traits are not the only population that would benefit from the...
utilization of a DBT Skills Only group with them, mental health services would also benefit from a potential reduction in service use by this population. According to Mental Health Canada (n.d.), individuals with BPD account for 20% of psychiatric hospitalizations. If individuals with BPD traits had more outpatient care opportunities that they could access in a timelier manner than they can now, they may be able to learn skills to help them regulate their emotional reactions and reduce how often they engage in SIB. This would help reduce the likelihood that they are admitted to a psychiatric hospital for intensive care. A DBT Skills Only group could help alleviate some of the pressure that individuals with BPD traits put on the mental health system for immediate and intense care.

**Overview**

This project entails a literature review, a method section, a results section, and a discussion/conclusion section. The literature review evaluates/summarizes previous research, prior literature reviews, and theoretical articles, etc. It also contrasts and compares the views and opinions of various professionals on the topic of using DBT skills as a stand-alone treatment for people exhibiting traits of BPD. It discusses a range of effective techniques and issues that clients with BPD traits have experienced. The methods section summarizes the methodology of this thesis project. This includes an overall description of the participants, selection procedures, the format of the study design, a description of how data was analyzed, a detailed description of program procedures, and a description of the psychological measures being used in this project. The results section focuses on reporting the findings from this project. Pre and post-measures are included, as well as a statistical analysis of the data. In addition, a visual analysis is presented and described in this section. The conclusion/discussion section includes interpretation of the data and meaningful conclusions that have been made based on the data collected. The data is evaluated considering the context of the current literature provided in the literature review. This section also discusses the strengths and weaknesses of this project, as well as how the findings will impact agency practices. Further recommendations for similar projects in the future are made in this section as well.

**Hypothesis**

This study seeks to examine the effects of a condensed 20-week DBT Skills Only group on emotional regulation and the frequency of SIB in individuals with BPD or BPD traits. The premise of this thesis is that individuals who participate in the 20-week DBT Skills Only group will evidence higher scores concerning emotional regulation and a lower frequency of SIB than they did prior to participating in this group.

**Chapter II: Literature Review**

Individuals with BPD experience highly intense emotional reactions to everyday stimuli including relationships, the physical environment, and their own thoughts (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004). Clients diagnosed with BPD do not possess adequate coping skills to deal with these intense emotional reactions (Linehan, 1993). An individual with BPD may become very distraught for a long period of time over a seemingly minor life event that the majority of individuals cope with readily. The individual with BPD may resort to cutting, burning, or hitting him or herself in an attempt to deal with these overwhelming emotional responses. The DSM-5 includes chronic feelings of emptiness, affective instability, and intense anger as symptoms of BPD; all of these symptoms suggest irregularities in emotional functioning (American Psychiatric Association, 2013).
Motivation to Engage in SIB

Many people ponder why someone would deliberately hurt themselves, and while there are many individual differences in the function of SIB, there do tend to be some broad motivational categories that researchers have identified in individuals who experience the urge to engage in SIB. Brown et al. (2002) treated seventy-five female participants who were diagnosed with BPD and exhibited parasuicidal behaviour. Parasuicidal behaviour includes any SIB or suicide attempts not resulting in death. The purpose of this study was to ascertain the motivation for individuals with BPD to engage in SIB. Researchers used the Parasuicidal History Interview (PHI) to assess parasuicidal behaviours, which included a 29-item list of reasons for the participants to choose from, and an unstructured interview in which individuals were encouraged to disclose all reasons for parasuicidal behaviour (Brown et al., 2002). The researchers distinguished between motivation for suicide attempts and non-suicidal SIB. The pattern in parasuicidal reasoning found in this study accurately categorized 80 percent of parasuicidal cases. Reasons for SIB included wanting to “express anger, punish oneself, regain normal feelings, and distract oneself” (p. 200). Underlying all of the aforementioned reasons for engaging in SIB is emotional dysregulation, which is a common trait among individuals with BPD.

Klonsky (2007) performed a review of the existing literature surrounding functions of SIB. The literature provides strong empirical evidence pointing to the desire to mitigate negative affect and self-punishment as reasons for engaging in SIB. Research also illustrated modest support for inter-personal influence, quelling experiences of dissociation, anti-suicide, sensation-seeking, and interpersonal boundary functions for SIB.

Chapman, Gratz, and Brown (2006) developed the Experiential Avoidance Model (EAM) based on empirical evidence that individuals engage in SIB in order to escape from unwanted emotional experiences, or in other words, to help regulate their emotions. The EAM was developed around the theory that SIB is maintained through negative reinforcement via escape/avoidance from unwanted emotional experiences. Therefore, when individuals are experiencing emotional pain they can escape the pain by engaging in SIB, or individuals may feel an emotionally overwhelming episode coming on, and engage in SIB to prevent it from occurring.

Sadeh et al. (2014) completed a study in which the Inventory of Statements About Self-Injury (ISAS) was used to assess motivation to engage in SIB for youth and young adults diagnosed with BPD. Their results showed that individuals with BPD engage in SIB to serve intrapersonal functions, such as emotion regulation and to punish oneself, as opposed to interpersonal functions, such as connecting with others or to establish independence. The authors found that BPD emotional dysregulation symptoms were associated with intrapersonal functions of SIB, but not interpersonal functions of SIB.

Emotion Dysregulation

Neacsiu et al. (2014) conducted a study to test the effects of a condensed DBT treatment model on emotional dysregulation as well as anxiety and depression severity. The treatment model used in this study was a Dialectical Behaviour Therapy Skills Training (DBT-ST), in which participants were able to learn the various skills present in the full DBT program. Authors of the study adamantly believe that to help provide clients with the most effective treatment in the shortest amount of time, interventions that target transdiagnostic mental health issues should be used. They identify one transdiagnostic issue as emotion regulation; emotional dysregulation
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can impede treatment, and over 85% of diagnoses in the DSM involve issues with emotion regulation.

Participants included 44 men and women who were accepted into the program through a screening process (Neacsiu et al., 2014). These individuals were over 18, had high Difficulties in Emotion Regulation Scores (DERS) scores, and met criteria for at least one current depressive/anxiety disorder. Exclusionary criteria included individuals who: scored above 2.5 of the Borderline Symptoms List 23 (BSL-23), met the full criteria for BPD, were at a high risk for suicide, were mandated to psychological treatment, were homeless, could not attend group, received more than five sessions of outpatient DBT, could not speak English, met criteria for bipolar disorder or psychotic disorder, and scored 70 or less for verbal IQ. Outcome measures used in this study included: Difficulties with Emotion Regulation Scale (DERS), which is described below; the DBT Ways of Coping Checklist (DBT-WCCL), which is a 59-item self-report measuring assessing the frequency of adaptive and maladaptive skills used to manage difficult situations over the past 6 months; the Patient Health Questionnaire (PHQ-9), which is a 9-item self-report to measure depression severity, and the Overall Anxiety Severity and Impairment Scale (OASIS), which is a 5-item measure of general anxiety over the past week (Neacsiu et al., 2014).

Each participant paid to attend weekly 2-hour group therapy sessions for 16-weeks. Participants could join at weeks 1, 2, and 9 of the curriculum. Each participant received group treatment and only met once individually with the therapist in a private orientation session where a crisis plan was established. Each participant was randomly assigned to either the Dialectical Behaviour Therapy Skills Training (DBT-ST) group, or the Activities Based Support (ASG) group. The DBT-ST group was modified from the full DBT skills group program in two ways: first, it was shortened from 24 to 16 weeks, and second, due to financial restrictions the group co-leader was not a trained DBT therapist. ASG therapy focused on a client-centered, supportive strategy. Sessions included reviewing participants’ activities over the past week, a support-building activity, and an open group discussion about topics participants chose each week (Neacsiu et al., 2014).

Results from this study indicate that those in DBT-ST improved significantly and more quickly with respect to emotion regulation compared to those in ASG. Longitudinal analysis found that participants in the DBT-ST group maintained their skills use compared to participants in the ASG group (Neacsiu et al., 2014). Individuals in the DBT-ST group also increased their goal-directed behaviour and use of regulation strategies in emotionally charged situations considerably more than ASG participants. Increases on DERS scores were maintained at 2-month follow-up in the DBT-ST group. After treatment, individuals in the DBT-ST group reported lower depression scores relative to their ASG group counterparts. The use of DBT skills mediated the relationship between the DBT-ST condition and change in depression severity. Participants in both the ASG and DBT-ST groups experienced a significant decrease in anxiety severity, however DBT-ST participants improved significantly faster (Neacsiu et al., 2014). DBT-ST participants reported a significant decrease in anxiety from pretreatment to the end of the study, whereas the ASG group did not. Clients attended two thirds of the DBT-ST sessions and half of the ASG sessions on average. At the end of treatment, clients in the DBT-ST group attributed significantly greater improvement in their depression/anxiety to treatment than clients in the ASG group did.

The findings from this study suggest that a condensed DBT Skills Only group may be a promising transdiagnostic intervention for emotion regulation (Neacsiu et al., 2014). Targeting
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emotion regulation can have a positive effect on anxiety and depression severity. More research examining the use of DBT-ST as a stand-alone intervention is needed. Additional emphasis on mindfulness and psychoeducation about emotions may be useful. Findings from this study support the notion that the direct teaching and practice of skills is more effective than general discussion and support regarding the increase of skill use (Neacsiu et al., 2014). Skill use explained 62% of the variance in mediating the differential improvement in emotion dysregulation between conditions. It may also be informative to compare the retention of skill use between participants of a condensed DBT Skills Only Group to that of participants in a full DBT program, as opposed to an alternative therapy.

An additional study by Stepp, Epler, Jahng, and Trull (2008) consisted of having outpatient participants join a DBT program and monitor their skill use on weekly diary cards. The measurement tool used in this study was the Personality Assessment Inventory – Borderline Features Scale (PAI-BOR), which was administered at the onset of treatment as well as following the completion of each module. Participants also completed diary cards on a weekly basis. This allowed researchers to examine the effects of learning each module on individual skill attainment related to skills taught in each module. For example, after the emotion regulation module was completed, researchers were able to see if emotion regulation skills increased. Their results showed that as DBT skill use increased so did individual skills related to emotion regulation such as being able to identify problems, being able to identify affective instability, and resisting the urge to self-harm.

A study by McQuillan et al. (2005) examined the effects of a condensed three-week DBT skills group on outpatients in crisis who had a diagnosis of BPD. They found that the condensed DBT skills group was effective at producing statistically significant improvements with respect to the scores on depression and hopelessness measures. Participants in this study attended two weekly individual counseling sessions, and four sessions each week for the three-week duration of treatment. This condensed approach resulted in a low client dropout rate, as well as significant improvements in scores on the Beck Depression Inventory (BDI), as well as the Beck Hopelessness Scale (BHS), and this approach allowed therapists to deliver an effective treatment to a large number of participants in a short amount of time. Numerous studies have illustrated the positive effect that participating in DBT-based groups has on participants’ emotion regulation scales across a variety of populations. Many studies have been completed which examine DBT skill use as the mechanism for therapeutic change within DBT based programs.

**DBT Skill Use as a Mechanism for Therapeutic Change**

Neacsiu, Shireen, and Linehan (2010) completed a study that examined whether or not an increase in DBT skill use was the mechanism for change in clients who exhibited suicidal behavior, depression, and anger control. One hundred and eight women were included in this study, all of whom reported using DBT skills 50% of the time prior to entering treatment. Participants were placed in one of the four conditions: full DBT condition (n=52), community treatment by experts (CTBE; n=11), community-based non-behavioural treatment by therapists (TAU n=11), or a comprehensive validation therapy combined with a 12-step program (CVT + 12 Step, n=12). The DBT condition was standard DBT, which included a group-based skills teaching component, phone coaching, and individual therapy. The CTBE condition included psychotherapy from community therapists. The TAU condition included alternative substance abuse and/or mental health counsellors/case managers or programs in the community. The CVT + 12 Step condition entailed a manualized approach that includes the primary acceptance-based strategies used in DBT with participation in a 12-step program. Participants stayed in each
condition for the duration of one year. Measures included the DBT ways of coping checklist (DBT-WCCL), the Suicide Attempt and Self Injury Interview (SASII), the Hamilton Rating Scale for Depression (HRSD), and the State-Trait Anger Expression Inventory (STAXI). The researchers used a mixed-effects model to analyze repeated measures data (Neacsiu et al., 2010). Their results indicated that clients in the DBT group reported a higher increase in DBT skill use following treatment than clients in the other three conditions. Neacsiu et al. (2010) asserted that all control conditions had similar effects on variations of skill use over time, which lead researchers to combine all control conditions into one condition (control condition) for the statistical analysis. Following the year of treatment, participants in the DBT condition exhibited a 15.33% increase in DBT skill use (as measured using the DBT-WCCL), compared to participants in the control group who exhibited a 4.66% increase in skill use. Furthermore, at four-month follow-up, clients in the DBT condition continued to exhibit the same level of DBT skill use as they did at the end of treatment (Neacsiu et al., 2010). The skill use of participants in the control condition decreased 5% from the level it was at the end of treatment, which represents a decrease in skill use to less than at the onset of treatment. According to Neacsiu et al. (2010), the significant mediation effect present in this study reflects the fact that an increase in DBT skill use fully mediated the relationship between time spent in treatment and a decrease in suicide attempts. The results also indicated the DBT skill use was a partial mediator for anger and depression treatment outcomes.

Some limitations to this study include the fact that DBT skill use was examined based on participation in a standard DBT group, as opposed to a condensed DBT Skills Only group. By using data from 2 year-long therapy groups, it is difficult to discern the impact that the length of treatment had on treatment outcomes. This study also failed to examine the direct effect of DBT skill use on emotion regulation. While it examined the effects on anger and depression, the measures used did not encompass the multitude of other emotions that individuals can experience. It is difficult to determine the effect that DBT skill use has on anxiety, for example. Furthermore, the fact that the participants exhibited DBT skill use at the onset of this study may have contributed to their level of skill use following treatment. Due to the fact that this study used self-report measures, it is possible that participants either over or under-reported skill use. Another limiting factor concerning data collection is that participants were asked to retrospectively record their skill use, which may have resulted in data discrepancy. Suggestions for future studies include having participants record their data on a daily basis to increase accuracy, and to replicate the findings of this study using alternative sample types and statistical techniques. Researchers also suggested determining whether or not extraneous variables had an impact on treatment outcomes using a causal inferences approach.

Instead of examining the effects of participation in a full DBT program on DBT skill use, Soler et al. (2005) completed a study in which sixty patients, diagnosed with BPD, participated in a 3-month single blind randomized controlled trial. Participants attended 13 weekly 2-hour sessions, either in the DBT Skills Group or Standard Group Therapy (SGT). Soler et al. (2005) found that the DBT skills training group resulted in fewer dropouts (34.5%) than SGT (63.4%), and that it was more effective than SGT at improving depression, anxiety, irritability, anger, and affect instability. The researchers also noted that the DBT Skills Group is cost effective and allows for straightforward implementation. In contrast to the aforementioned study completed by Neacsiu et al. (2010), in which they observed the effects of DBT skill use on participants’ SIB, this study illustrates the effects that participating in a DBT Skill Group has on emotion regulation.

Gibson, Booth, Devenport, Keogh, and Owens (2014) completed a study in which the
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effects of a brief DBT skills based group called the Living in Distress (LTD) program were evaluated compared to treatment as usual. This study evaluated the effects that a DBT Skills Group has on both emotion regulation and frequency of SIB, as opposed to one or the other. At 3-month follow-up the LTD produced greater reductions in self-harm and greater improvements in emotion regulation than treatment as usual. The findings of this study provide further support for the use of a condensed-DBT skill based group to be utilized in treatment to improve emotion regulation skills and decreasing the frequency of SIB in which individuals with traits of BPD engage. In support of this notion, Valentine et al., (2014) identified 17 trials employing a treatment including DBT skills training as a stand-alone treatment; their analysis uncovered preliminary evidence that supports the use of DBT skills training for clients with a range of behavioural issues. However, due to methodical limitations of the published studies, Valentine et al. (2014) were hesitant to draw strong conclusions about the efficacy of skills training as a stand-alone treatment, indicating that more research is required.

Verheul et al. (2003) compared treatment as usual with DBT for patients with BPD in a study in which treatment attrition, suicidal, SIB, and impulsive behaviours were measured. Treatment as usual included clients attending a maximum of two sessions per month with a mental health professional. The results indicated that DBT had a strong impact on the reduction of SIB and impulsive behaviours in participants with a history of SIB compared to treatment as usual (Verheul et al., 2003).

While various articles examine the effects of DBT Skills Groups on emotion regulation and SIB compared to treatment as usual (TAU), a common limitation to these studies is the fact that the effects on outcome measures are not compared for participants in a DBT Skills Group to those of participants in a full DBT program. This would provide insight into whether or not time spent in DBT Skills groups is a precipitating factor for success.

Outcome Measures

There have been many assessment tools developed to measure the frequency and type of SIB as well as one’s ability to regulate his or her emotions. This section contrasts and compares several measures that have been developed and tested, and discusses which assessment tools are most appropriate for use in this study. The Difficulties in Emotion Regulation Scale (DERS) was created to comprehensively assess emotion dysregulation, with items chosen to reflect various dimensions of emotion regulation. To determine construct validity, Gratz and Roemer (2004) compared the DERS scores with scores from the Negative Mood Regulation Scale, which is commonly used to measure emotion regulation. Correlations between scores were positive and statistically significant, which suggested that the construct validity of the DERS was high. To determine predictive validity, the scores on the DERS were compared with the frequency of deliberate self-harm and partner abuse; results indicated that DERS had high predictive validity. According to Gratz and Roemer (2004), the DERS had high internal consistency (α = 0.93), and its subscales had sufficient internal consistency (Cronbach’s α >0.8). They also found that the DERS had good test-retest reliability over a period of 4–8 weeks (rT =0.88, p < 0.01). A weakness of the DERS was that because emotion regulation has such a multifaceted definition, its six factors were subject to individual interpretation (Gratz & Roemer, 2004).

Nelis, Quoidbach, Hansenne, and Mikolajczak (2011) conducted a study in which the aim was to validate the newly developed Emotion Regulation Profile-Revised (ERP-R), which uses vignettes to measure emotion regulation differences in individuals. Each scenario focuses on a different emotion, including both positive and negative emotional experiences. There are eight
possible responses an individual can choose to best describe her reaction in each vignette, and four are considered appropriate or adaptive to the situation. Their results showed that reliability was good ($\alpha = 0.84$), and that the two factors examined (down regulation of negative emotions and up regulation of positive emotions) presented satisfactory internal consistencies ($\alpha = 0.83$, and 0.79). Regarding criterion validity, the ERP-R accurately predicted positive state affects, but not negative state affects. Gross and John (2003) developed an assessment tool called the Emotion Regulation Questionnaire (ERQ), which is a 10-item scale devised to assess an individual’s ability to regulate his or her emotions through two emotional regulation processes: cognitive reappraisal and expressive suppression. Individuals provide their answers on a 7-point Likert scale, which ranges from 1 (strongly disagree) to 7 (strongly agree). Research into the psychometric properties of the ERQ indicates that there is satisfactory internal consistency of the cognitive reappraisal scale ($\alpha = 0.81$), as well as the expressive suppression scale ($\alpha = 0.73$), and that the ERQ has adequate construct validity (Enebrink, Björnsdotter & Ghaderi, 2013).

The DERS is being used over other assessment tools for emotion regulation because of its high internal consistency, its good test-retest reliability, and level of appropriateness for the variables being considered in this study. The ERP-R’s vignette format is time consuming, and may result in subjective interpretations of each scenario. The ERQ focuses on two specific processes of emotion regulation, which are not being directly tested in this study.

The shortened Borderline Symptom List 23 (BSL-23) is a self-rating measurement tool used to assign numerical value to borderline-typical manifestation. Bohus et al. (2007) assessed the psychometric properties of the BSL-23, and found that the BSL-23 had a high internal consistency (Cronbach’s $\alpha = 0.97$). A test-retest reliability of $r= 0.8$ ($p<0.001$) was obtained after one week. The BSL-23 also includes a supplemental sub scale for assessing behaviour; individuals record the frequency of SIB they engaged in or suicidal ideations they experienced.

Other measures have been developed to measure SIB, including the Impulsive and Self-Harm Questionnaire, which explores various impulsive and self-destructive behaviours, as well as suicide attempts. However, this measure has had limited clinical exposure, and therefore psychometric properties cannot be confidently defined (Sansone & Sansone, 2010). The Deliberate Self-Harm Inventory (DSHI) has been created to explore the frequency, severity, and duration of each SIB that respondents engage in; however, the DSHI was developed specifically for behaviour related to suicide attempts, which is not a focus of this study (Sansone & Sansone, 2010). The Self Harm Inventory (SHI) is a one-page assessment of SIB that is free of charge and takes five minutes to complete. The SHI was also developed to detect borderline personality symptomatology. Latimer, Covic, Cumming and Tennant (2009) examined the psychometric properties of the SHI using the Rasch model, and their results indicated that the SHI showed adequate fit to the Rasch model with no modifications required. The Rasch model is a psychometric model for analyzing categorical data, in which answers to questions are measured as a function of a trade-off between the respondent’s abilities and the difficulty of the item.

While there are other assessment tools that have been developed to measure SIB, the BSL-23 is being used due to its good test-retest reliability, adequate internal consistency, and because it measures variables appropriate to this study. The Impulsive and Self-Harm Questionnaire remains to be clinically validated, and the DSHI considers behaviour related to suicide attempts, which are not being examined in this study. The SHI examines the lifetime prevalence of SIB in individuals, whereas this study is concentrating on the participants’ frequency of SIB.
Summary

The hypothesis that this thesis tests is that utilizing the skills component of DBT for individuals with BPD or BPD traits increases skills related to emotion regulation and reduces the frequency of SIB (as determined by scores on the relevant measures). The literature review suggests that the cause of SIB in individuals with BPD is a lack of emotion regulation skills. Multiple studies show the causal relationship between DBT skill acquisition and an increase in participants’ ability to regulate their emotions. Therefore, by teaching DBT skills to individuals who exhibit traits, their ability to regulate emotions will increase and in turn their frequency of SIB will decrease. The Difficulties in Emotion Regulation Scale (DERS) will be used to measure participants’ ability to regulate emotions, and the Borderline Symptoms List 23 (BSL-23) will be used to measure participants’ frequency of SIB. The DERS has been demonstrated to be an effective measurement tool regarding emotion regulation, and the BSL-23 has been shown to be a successful measurement concerning BPD symptomatology and SIB. Both the DERS and BSL-23 are more appropriate than other similar measures for measuring their respective variable in this study. Therefore, these psychological measurements will be useful in measuring emotion regulation as well as the frequency of SIB.

Chapter III: Method

Participants

Participants included three Caucasian females and one Caucasian male, ranging in age from 19 to 33 (M = 27.3). Appendix A contains a brief description of each participant. Each participant either self identified or was identified with mood regulation issues by a family physician. Participants were accepted into the program through the agency’s triage process. While there were not specific objective inclusionary or exclusionary criteria for admission into the DBT Skills Only group, a subjective process of inclusion and exclusion was followed by each crisis worker. A social worker or nurse from the agency completed an intake assessment with each participant, which included an examination of the client’s history including hospital visits, previously used services, and diagnoses to determine whether participants would benefit from participation in the DBT Skills Only group. At pre-group assessment, participants were exhibiting various problem behaviours, including SIB, substance abuse, and symptoms of depression and anxiety. Clients who exhibited BPD traits, had a low risk of suicide, and who had a strong history of group therapy attendance were considered optimal participants for this study. Clients who exhibited more severe SIB, or had a tendency to exhibit more severe problem behaviours (i.e., suicide attempts, severe SIB that results in hospitalization, a history of being hospitalized for problem behaviour), and clients who exhibited severe psychotic symptoms or violent behaviour toward others were not accepted into the DBT Skills Only group. Clients selected to join the group received a phone call, in which a DBT facilitator discussed possible barriers and needs in regards to success in therapy. Examples included transportation issues, extra support the agency may be able to provide, and previous issues the client had in group settings. These participants were currently in the DBT Skills Only group. Five participants were chosen to participate in this study because of their vigilance in DBT skill card completion. One potential participant was not included in this study because he did not complete his weekly diary cards. One participant of the group declined to consent to participation in the study; therefore four participants were used in this study.
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

Setting and Apparatus

This study was conducted at a community mental health agency. Clients were allowed staggered entry into the group to ensure the group was always full and that a high volume of clients are being seen in a timely fashion; the group always consists of seven members, plus the two facilitators.

The group therapy sessions took place at an on-site conference room at Lanark County Mental Health (LCMH). Materials required for the group therapy sessions included a private room for the group to meet, a table, nine chairs, nine pens/pencils, DBT skills handouts, DBT skills worksheets, diary cards, and binders to hold group therapy documents for each client. A training package based on Marsha Linehan’s *Skills Training Manual for Treating Borderline Personality Disorder* was provided to each group facilitator, which includes copies of rules for the therapy group, instructions on how to fill out diary cards, copies of DERS and BSL-23, copies of diary cards, DBT skills handouts, and DBT skills worksheets to be provided to all participants at each session.

Ethics Review and Informed Consent

Due to the fact that the present study included human participants, the study was submitted for review and subsequently approved by the Research and Ethics Board at St. Lawrence College. Because this project is serving as a pilot project for a larger research project at the placement agency, agency staff involved in the project were informed of the content of this project, including statistical assessment procedures.

Verbal and written consent were obtained from all participants. Consent was obtained from all participants using the agency consent form (Appendix B), as well as a consent form created specifically for the purposes of this study (Appendix C). Each client received a copy of the informed consent and it was explained in detail. All participants were explicitly made aware of their right to withdraw from the study at any point without it affecting the services they receive from the agency, and that all data related to the individual’s participation in the study would be destroyed if she chose to withdraw. Participants were also made aware that their pre and post-measure data may be used for research purposes, and that no identifying information would be shared. Informed consent and questionnaires are kept in a locked filing cabinet at the agency, and only therapists on the DBT team have access to them. Information stored on computers is password protected, and will be stored for 7 years after the study.

Intervention Procedures

Sessions occurred 2 hours each week for 20 weeks. Sessions included instructions on how to fill out diary cards, and education about DBT skills. Skills training procedures involved several methods of skill training, including: skill acquisition, skill strengthening, and skill generalization. Skill acquisition includes instructions, homework, psychoeducation, roleplaying, and modeling. Skill strengthening involves coaching, praise for correct responding, facilitator feedback, and behavioural rehearsal. Skill generalization consists of behavioural rehearsal of skills in either real world or imaginary scenarios. DBT consists of four groups of skills: interpersonal effectiveness, mindfulness, distress tolerance, and emotion regulation. The Skills Only group includes a fifth module, entitled walking the middle path, which is covered for 3 weeks as opposed to five. The mindfulness module is learned for one week between each of the other modules. The first skill group that individuals learn is mindfulness, as this skill is a prerequisite for the other skills to be learned. The order that the rest of the skills groups are learned is as follows: distress tolerance, emotion regulation, and interpersonal effectiveness.
mindfulness module focuses on teaching clients how to be aware of their thoughts, emotions, physical sensations, and actions – in the present moment – without judging or criticizing oneself (McKay, Wood, & Brantley, 2007). The distress tolerance module focuses on teaching clients how to respond to highly emotionally overwhelming situations with healthy coping skills instead of harmful coping skills. The emotion regulation module focuses on teaching clients how to respond to reactions to primary and secondary emotions in different and effective ways. The interpersonal effectiveness module incorporates social skills training, assertiveness training, listening skills, and negotiation skills. The module on walking the middle path focuses on teaching dialectic strategies, such as finding a synthesis between two opposing viewpoints (i.e., I’m right and you’re wrong would change to we are both right and we are both wrong). Each skill group is focused on for 4 weeks, and has skills-specific handouts and homework (refer to Program Outline in Table 1, or the more detailed Program Outline in Appendix D). The first half of each session is spent reviewing homework that group members have completed from the previous session, and the second half of each session consists of learning new skills. Each group member is encouraged to share her homework in order to report her progress to the group, motivate her to practice the skills, and receive feedback from group facilitators and other group members. If group members report that they did not complete the homework, the facilitator uses this as an opportunity to explore any roadblocks to homework completion. Participants are made aware that if they miss five group sessions in total they will be removed from the group.

Table 1

<table>
<thead>
<tr>
<th>Week</th>
<th>DBT Skill Taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mindfulness</td>
</tr>
<tr>
<td>2</td>
<td>Mindfulness</td>
</tr>
<tr>
<td>3</td>
<td>Distress Tolerance</td>
</tr>
<tr>
<td>4</td>
<td>Distress Tolerance</td>
</tr>
<tr>
<td>5</td>
<td>Distress Tolerance</td>
</tr>
<tr>
<td>6</td>
<td>Distress Tolerance</td>
</tr>
<tr>
<td>7</td>
<td>Mindfulness</td>
</tr>
<tr>
<td>8</td>
<td>Walking the Middle Path</td>
</tr>
<tr>
<td>9</td>
<td>Walking the Middle Path</td>
</tr>
<tr>
<td>10</td>
<td>Walking the Middle Path</td>
</tr>
<tr>
<td>11</td>
<td>Emotion Regulation</td>
</tr>
<tr>
<td>12</td>
<td>Emotion Regulation</td>
</tr>
<tr>
<td>13</td>
<td>Emotion Regulation</td>
</tr>
<tr>
<td>14</td>
<td>Emotion Regulation</td>
</tr>
<tr>
<td>15</td>
<td>Mindfulness</td>
</tr>
<tr>
<td>16</td>
<td>Interpersonal Effectiveness</td>
</tr>
<tr>
<td>17</td>
<td>Interpersonal Effectiveness</td>
</tr>
<tr>
<td>18</td>
<td>Interpersonal Effectiveness</td>
</tr>
</tbody>
</table>
Whenever a new participant joined the group he or she was asked to arrive at the agency 30-minutes prior to the first session. During this time a group facilitator reviewed group guidelines (Appendix E), and provided each new participant with the BSL-23 (Appendix F) and DERS (Appendix G). The DERS was used to establish pre and post-study measures of each participant’s ability to regulate her emotions. The BSL-23 was used to establish pre and post-study measures of the frequency of SIB that each participant displays.

Throughout the group process, participants completed weekly diary cards (Appendix H) denoting how often they practice DBT skills in their daily lives (i.e., using emotion regulation techniques during an emotionally overwhelming episode). The diary cards acted as an adherence measure, to assess participants’ use of DBT skills taught in group therapy.

Counselling techniques that underlie all of the skill modules include: change procedures, problem solving strategies, stylistic strategies, and cognitive modification. Behavioural change procedures included contingency management and graduated exposure strategies. Problem solving consisted of systematic instruction, validation and acceptance strategies, as well as chain behaviour analysis. Stylistic strategies consisted of validation-based communication and shared communication. Cognitive modification involved contingency explanation, and emotional/cognitive restructuring via thought change records.

Participants received binders at the first therapy session containing DBT skills informative handouts to accompany DBT skill worksheets that participants bring home to complete as between-session homework. Participants were expected to be responsible for their binders, including bringing their binders to each session. Diary cards included the frequency of emotionally overwhelming situations experienced and specification of which DBT skills the participant used to cope. Verbal reinforcement was given to participants if they demonstrated the ability to comprehend and use DBT skills outside of the group setting. Participants’ ability to comprehend and use DBT skills was assessed via the diary cards provided to each participant. Once participants completed the 20-week DBT skills program they were presented with a graduation certificate.

**Measures**

The Difficulties in Emotion Regulation Scale (DERS) was used to measure participants’ ability to regulate emotions, and the shortened Borderline Symptoms List 23 (BSL-23) was used to measure participants’ frequency of SIB. The BSL-23 is available in Appendix F and the DERS is available in Appendix G.

The DERS is a 36-item instrument in which individuals respond on a Likert scale (1 = almost never, 2 = sometimes, 3 = about half the time, 4 = most of the time, and 5 = almost always). Total scores can range from 36 to 180, with higher scores reflecting greater problems with emotion regulation. The DERS also contains 6 subscales to help guide treatment, which include non-acceptance, goals, impulse, awareness, strategies, and clarity. The DERS was administered in a room with only a group facilitator and individual participant present; it was administered prior to participation in the DBT Skills group, and following participation in the
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

DBT Skills group. In Gratz and Roemer’s (2004) development of the DERS they calculated that the average overall score for women was 78 and for men was 80 from a clinical sample of participants. Therefore, scores higher than these reflect a lack of ability to regulate emotion compared to the average individual.

The BSL-23 contains 23 items, which individuals respond to on a scale from 0-4 (0 = not at all, 4 = very much so). The total score is calculated by summing all items on the scale and dividing the sum by the total number of questions answered by the responder (Bohus et al., 2007). Subscales on the BSL-23 include: self-perception, affect regulation, self-destruction, dysphoria, loneliness, intrusions, and hostility. A higher score on the BSL-23 indicates more BPD traits, and a higher frequency of SIB. The BSL-23 is administered before participants began the DBT Skills group and after they have completed the group. The BSL-23 was administered in a room with only a group facilitator and the individual participant present.

Each participant also completed a diary card on a weekly basis to record the frequency of skills she used during the week. Group facilitators explained how to fill out the card to each participant at the onset of therapy and collected, but did not share with the group, completed diary cards from each participant every week. Following graduation from the DBT Skills group, participants were provided with a client satisfaction survey developed by the agency.

Statistical Analyses and Design

The t-statistic for a repeated measures research design was used to test the hypothesis that teaching DBT skills to individuals who display BPD traits increases their ability to regulate emotions, and reduces the frequency of SIB from pre- to post-treatment. Due to the fact that the population standard deviation is unknown, the estimated standard of error was used instead. The estimated $d$ was calculated in order to measure the mean difference between treatments. In order to discern the percentage of variance in scores explained by the treatment effect, $r^2$ was calculated and interpreted.

A quasi-experimental within subject research design was used to measure how participation in the DBT Skills Only group affects participants’ ability to regulate emotions and frequency of SIB in regards to emotionally overwhelming situations. This design consists of two levels, one being measurements of the participants’ emotion regulation skills and the other being measurements of the participants’ frequency of SIB. The quasi-independent variable in this study was the use of DBT skills, and the dependent variables in this study are the individual’s ability to regulate emotions, and the frequency of SIB based on her scores on the measures.

Emotionally overwhelming situations are defined as any period in time where an individual feels that she cannot deal with an emotion; an inability to function in regular daily activities due to an emotional response; engaging in excessive crying, yelling (at self or others), hitting (objects, others, or self), or self-injurious behaviour (defined below) in response to an emotional reaction.

Self injurious behaviour (SIB) includes the following behaviours: cutting oneself with objects, pulling hair, using any object to break the skin, biting, burning, carving, pinching, hitting one’s head, interfering with wound healing, ingesting poisonous substances, rubbing skin on coarse surfaces, hitting one’s legs, excessively scratching, or digging at one’s skin, engaging in binge eating, inducing vomiting, engaging in knowingly high risk behaviour (e.g., driving too fast), substance abuse, and displaying sexually promiscuous behaviour.
Emotional regulation is defined as the ability to monitor, assess, and change emotional reactions to internal or external stimuli; for example being able to identify one’s anger toward someone, assess why one feels that way, and alter a negative response (such as yelling) to a productive response (such as discussing feelings).

The DBT Skills Only Group is run by two agency counsellors who have been trained in DBT. They follow Marsha Linehan’s *Skills Training Manual for Treating Borderline Personality Disorder*, and therefore have no other treatment integrity measurements in place.

**Chapter IV: Results**

The primary hypothesis was that utilizing the skills component of DBT for individuals with BPD or BPD traits would: (1) increase individual skills related to emotion regulation and (2) reduce the frequency of SIB that individuals engage in (as determined by scores on the relevant measures). What follows is individual data from the outcome measures and diary cards used in this study, as well as the statistical analysis of the data.

**Outcome Measures**

All four participants were administered the DERS and BSL-23 prior to their first session in the DBT Skills Only Group and following their final session in the therapy group. Pre and post-treatment scores for each participant on the DERS are visually represented in Figure 1 and Appendix K. Pre and post-treatment scores for each participant on the BSL-23 are provided in Table 2 and are visually represented in Figure 2 and Appendix L.

![Graph showing Pre- and Post-Group scores on DERS](image)

*Figure 1. The above graph provides a visual representation of participants’ Pre and Post-Intervention scores on the Difficulties in Emotion Regulation Scale (DERS).*
Table 2

*Participant Data from the Borderline Symptom List (BSL-23)*

<table>
<thead>
<tr>
<th>Participant</th>
<th>Pre</th>
<th>Post</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.10</td>
<td>1.30</td>
<td>-0.80</td>
</tr>
<tr>
<td>2</td>
<td>1.80</td>
<td>0.60</td>
<td>-1.20</td>
</tr>
<tr>
<td>3</td>
<td>1.20</td>
<td>0.50</td>
<td>-0.70</td>
</tr>
<tr>
<td>4</td>
<td>2.10</td>
<td>0.20</td>
<td>-1.90</td>
</tr>
</tbody>
</table>

**Participant 1.**

*Difficulties in Emotion Regulation (DERS)*. Participant 1’s total score on the DERS increased by 1 point from baseline following the intervention (Pre=101; Post=102). Her score reflected a decrease of 4 points on the Nonacceptance of Emotional responses subscale, and a decrease of 3 points the Lack of Emotional Clarity subscale following intervention. Her scores increased by 1 point in the Difficulties Engaging in Goal Directed [Behaviour] subscale, 1 point on the Impulse Control Difficulties subscale, and 6 points on the Lack of Emotional Awareness subscale. Her score remained the same for the subscale of Limited Access to Emotion Regulation Strategies subscale. As mentioned earlier, Gratz and Roemer (2004) determined that average scores on the DERS are 78 for women and 80 for men, and that scores higher than these indicate a lack of ability to regulate emotion compared to the average individual. Participant 1’s scores of 101 (Pre) and 102 (Post) signify that participant 1 has a considerable amount of difficulty regulating emotions, and that this did not decrease throughout the course of treatment.

*Borderline Symptom List 23 (BSL-23)*. Participant 1 scored 2.1 on the BSL-23 pre-treatment and 1.3 post-treatment, which is a decrease of -0.8. Her Overall Personal State Rating increased.
from 50% pre-treatment to 70% post-treatment. She reported engaging in SIB 4-6 times per week at pre-treatment, which decline to once a week post-treatment.

**Participant 2.**

_Difficulties in Emotion Regulation (DERS)._ Participant 2’s total score on the DERS decreased by 31 points from baseline following the intervention (Pre=130; Post=99). Her score reflected a decrease of 1 point on the Nonacceptance of Emotional responses subscale, 6 points on the Difficulties in Engaging in Goal Directed [Behaviour] subscale, 10 points on the Impulse Control Difficulty subscale, 1 point on the Lack of Emotional Clarity subscale, 8 points on the Limited Access to Emotion Regulation Strategies subscale, and 3 points in the Lack of Emotional Clarity subscale following intervention. While Participant 2 saw a considerable decrease in her score on the DERS, her pre-score was 62 points higher than what is considered average by Gratz and Roemer (2004), and her post-score was 31 points higher than the average. This indicates that although this participant saw significant treatment gains, her post-treatment DERS score still indicated difficulties with emotion regulation.

_Borderline Symptom List 23 (BSL-23)._ Participant 2 scored 1.8 on the BSL-23 pre-treatment and 0.6 post-treatment, which is a decrease of 1.2. Her Overall Personal State Rating increased from 50% pre-treatment to 80% post-treatment. She reported engaging in SIB once per week at pre-treatment, which did not change post-treatment.

**Participant 3.**

_Difficulties in Emotion Regulation (DERS)._ Participant 3’s total score on the DERS decreased by 55 points from baseline following intervention (Pre=132; Post=77). Her scores reflect the following decreases on the DERS subscales: 10 points on the Nonacceptance of Emotional Responses subscale, 7 points on the Difficulties Engaging in Goal Directed [Behaviour] subscale, 11 points on the Impulse Control Difficulties subscale, 4 points on the Lack of Emotional Awareness subscale, 13 points on the Limited Access to Emotion Regulation Strategies subscale, and 10 points on the Lack of Emotional Clarity Subscale. Participant 3’s total score on the DERS decreased considerably throughout treatment, however her post-score indicated that she continued to struggle with her ability to regulate emotions following treatment.

_Borderline Symptom List 23 (BSL-23)._ Participant 3’s total score on the BSL-23 decreased by 0.7 points following intervention (Pre=1.2; Post=0.5). Participant 3 did not complete the Overall Personal State Rating or SIB subcategory of the BSL-23 post-treatment.

**Participant 4.**

_Difficulties in Emotion Regulation (DERS)._ Participant 4’s total score on the DERS decreased by 66 points following the intervention (Pre=123; Post=57). The decrease in his total score reflects the following decreases on the subscales of the DERS: 10 points on the Nonacceptance of Emotional Responses subscale, 11 points on the Difficulties Engaging in Goal Directed [Behaviour] subscale, 5 points on the Impulse Control Difficulties subscale, 9 points on the Lack of Emotional Awareness subscale, 22 points on the Limited Access to Emotion Regulation Strategies subscale, and 13 points on the Lack of Emotional Clarity subscale. Participant 4’s DERS score pre-treatment indicated that he was having significant difficulty regulating his emotion compared to the average person. His post-treatment score decreased by 66 points to 57 and represented an above average ability to regulate his emotions compared to the average person.
**Borderline Symptom List 23 (BSL-23).** Participant 4’s total score on the BSL-23 decreased by 1.9 points following intervention (Pre=2.1; Post=0.2). Participant 4 did not complete the Overall Personal State Rating or SIB subcategory of the BSL-23 post-treatment. Figure 2 and Appendix L provide graphical representation of the pre and post-intervention DERS scores for all participants.

**Diary Cards, Treatment Adherence, and Skill Use**
Use of DBT Skills was assessed via diary cards that were collected by the group facilitator every week. Participants circled whether or not they had used each DBT skill during the past week. A copy of the diary card can be seen in Appendix H. To assess frequency of skill use, the average number of skills each participant completed each week was calculated. The number of diary cards completed by participants ranged from 16 to 20 (M=18.0, SD=2.0). In order to determine participant treatment adherence the number of diary cards that each participant completed was divided by 20, which was the participants’ total number of weeks in therapy.

**Participant 1.** Participant 1 had a treatment adherence rating of 80% (16/20). Visual analysis indicated that there is a strong increasing trend with high variability in regards to DBT skill use. This means skill use increased significantly throughout treatment for this individual, and that the amount of DBT skills used and their frequency changed often throughout the course of treatment. The data is presented in a scatterplot in Figure 3, and in a scatterplot with trend lines in Appendix O.

![Figure 3. Above is a scatterplot graph providing a visual representation of Participant 1’s skill use throughout treatment. Graphical representation of the same data with trend lines is presented in Appendix O.](image-url)
Participant 2. Participant 2 had a treatment adherence rating of 80% (16/20). Visual analysis of the data indicates that there is no trend in the data with high variability in DBT skill use. This analysis means that there was no increase in the frequency or amount of DBT skills used and that the frequency and amount of skills used throughout treatment changed frequently. Visual representation of the data is provided in Figure 4, as well as in a scatterplot with trend lines in Appendix O.
**Participant 3.** Participant 3 had a treatment adherence rating of 100% (20/20). Visual analysis of the data signified that there is a steady increasing trend with moderate variability in DBT skill use. This indicates that DBT skill use steadily increased throughout the course of treatment for participant 3 and that the frequency and amount of skills used varied moderately. The data is presented in a scatterplot in Figure 5, and in a scatterplot with trend lines in Appendix O.

![Graph showing DBT skill use for Participant 3](image)

*Figure 5. Above is a scatterplot graph providing a visual representation of Participant 3’s skill use throughout treatment. Graphical representation of the same data is provided with trend lines in Appendix O.*

**Participant 4.** Participant 4 had a treatment adherence rating of 100% (20/20). Findings from visual analysis of the data illustrated that there was a slight increase in the trend of the data and that there was moderate variability in DBT skill use. In other words, DBT skill use increased slightly for this participant throughout the course of treatment, and that amount and frequency of skill use varied moderately. The data is presented in a scatterplot in Figure 6, and in a scatterplot with trend lines in Appendix O.
Overall, participants used an average of $M=23.95$ DBT skills per week throughout the course of their treatment (range = 16.5-29.3, SD=5.58). On average, participants used mindfulness skills the most frequently ($M=11.19$, $SD=2.92$), distress tolerance skills ($M=7.19$, $SD=1.45$), interpersonal effectiveness skills ($M=4.19$, $SD=2.83$), and emotion regulation skills ($M=3.00$, $SD=2.39$). Refer to Table 3 for a summary of participant DBT skill use throughout treatment. Tables containing detailed individual skill use can be seen in Appendix N.

**Summary of Individual DBT Skill Use Throughout Treatment**

<table>
<thead>
<tr>
<th>Type of Skill Use</th>
<th>Participant 1</th>
<th>Participant 2</th>
<th>Participant 3</th>
<th>Participant 4</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Skill Use</td>
<td>29.30</td>
<td>23.10</td>
<td>26.90</td>
<td>16.50</td>
<td>23.95</td>
<td>5.58</td>
</tr>
<tr>
<td>Mindfulness</td>
<td>8.90</td>
<td>13.05</td>
<td>14.30</td>
<td>8.50</td>
<td>11.19</td>
<td>2.92</td>
</tr>
<tr>
<td>Interpersonal Effectiveness</td>
<td>6.60</td>
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<td>2.85</td>
<td>1.05</td>
<td>4.19</td>
<td>2.83</td>
</tr>
<tr>
<td>Emotion Regulation</td>
<td>6.20</td>
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<td>3.00</td>
<td>2.39</td>
</tr>
<tr>
<td>Distress Tolerance</td>
<td>7.50</td>
<td>9.10</td>
<td>6.30</td>
<td>5.85</td>
<td>7.19</td>
<td>1.45</td>
</tr>
</tbody>
</table>

Figure 6. Above is a scatterplot graph providing a visual representation of Participant 4’s skill use throughout treatment. Graphical representation of the same data with trend lines is provided in Appendix O.
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

**Statistical Analysis**

Descriptive statistics for the DERS are presented in Table 4 and for the BSL-23 in Table 5.

Table 4

*Summary of Results from the DERS*

<table>
<thead>
<tr>
<th></th>
<th>$M$</th>
<th>$SD$</th>
<th>$N$</th>
<th>$MD$</th>
<th>$t$-score</th>
<th>Estimated</th>
<th>$r^2$</th>
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<tbody>
<tr>
<td>Pre</td>
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<td>-2.54</td>
<td>1.27</td>
<td>0.68</td>
</tr>
<tr>
<td>Post</td>
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<td>21.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
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<td>29.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5

*Summary of Results from the BSL-23*

<table>
<thead>
<tr>
<th></th>
<th>$M$</th>
<th>$SD$</th>
<th>$N$</th>
<th>$MD$</th>
<th>$t$-score</th>
<th>Estimated</th>
<th>$r^2$</th>
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<td>0.42</td>
<td>4</td>
<td>-1.15</td>
<td>-7.77</td>
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**Repeated Measures t-Test for the DERS.** A repeated measures $t$-test was used to test the relevant hypotheses. The null hypothesis was that there is no decrease in the scores on the DERS after participation in the DBT Skills Only Group. The alternative hypothesis states that there will be a decrease in scores on the DERS after participation in the DBT Skills Only Group. Statistical analysis of the data concluded that participation in the DBT Skills Only Group scores decreased on the DERS by an average of $M= 37.75$ ($21.0$). The treatment effect was statistically significant $t(3)= -2.54$, $p <.05$, $r^2 =0.68$. The estimated $d$ was calculated to be 1.27, which represents a large effect size.

**Repeated Measures t-Test for the BSL-23.** The null hypothesis for the second $t$-test was that there is no decrease in the scores on the BSL-23 after participation in the DBT Skills Only Group. The alternative hypothesis for this test was that there was a decrease in scores on the BSL-23 after participation in the DBT Skills Only Group. Statistical analysis of the data concluded that participants in the DBT Skills Only Group scores decreased on the BSL-23 by an average of $M= 1.15$ ($0.47$). The treatment effect was statistically significant $t(3)= -7.77$, $p<.01$, $r^2 =0.95$. The estimated $d$ was calculated to be 2.11, which represents a large effect size.

**Chapter V: Discussion**

**Thesis Summary**

As was mentioned in the literature review, emotional dysregulation is responsible for a unique variance present in BPD (Glenn & Klonsky, 2009). It is not surprising that individuals with borderline traits identify difficulty with emotion regulation as a chief complaint of their mental health struggles. Difficulty with emotion regulation has also been identified as a
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transdiagnostic mental health issue (Neacsiu et al., 2014). This means that various mental health diagnoses may benefit from participation in therapies that specify emotion regulation as a treatment target. The purpose of this thesis project was to evaluate the effect that participation in a 20-week long DBT Skills Only therapy group had on the frequency of SIB as well as the ability to regulate emotions in individuals with borderline traits. These aspects of behaviour were targeted due to participants’ desire to improve these behaviours, as well as information in the literature review. Triage services in the agency referred participants to this skills training group due to difficulties with functioning in the community, including interpersonal/family conflicts, and difficulty obtaining or maintaining employment. Participants were also referred due to a reported reduced quality of living due to affective instability. DBT skills were taught to participants in order to help increase their ability to regulate their emotions and increase their quality of life. As indicated in the literature review, increased use of DBT skills is associated with an increased ability to regulate emotions (Neacsiu et al., 2014). At the time of this thesis, the DBT Skills Only group had been running at the placement agency for approximately three years. This thesis evaluates the effect that this existing program has on its target population. The following individual benefits were expected to occur from participation in this therapy group: a reduction in SIB and an increase in emotional regulation skills. In addition, this project served as a pilot investigation for a larger research project at the agency.

To evaluate the outcome of the hypothesis a pre and post-testing procedure was utilized with two self-report measures. All four participants were successful in completing both pre and post-questionnaires, however, participants 3 and 4 did not complete the subscale of the BSL-23 indicating frequency of SIB post-intervention.

Other group participants were considered inappropriate for this study due to an inability to complete weekly diary cards, which provided a measure of treatment adherence for each participant as well as indicated the amount of skills used by each individual on a weekly basis. Participants 1 and 2 completed 16/20 weekly diary cards, and participants 3 and 4 completed all 20 weekly diary cards.

The results from the DERS support the hypothesis that participation in a condensed DBT Skills Only group increases emotional regulation skills in individuals with borderline traits. Three out of four participants scored lower on the DERS (indicating less emotion dysregulation) post-intervention. Participant 1’s DERS score increased by 1 point post-intervention, however the mean difference of scores for the DERS was -37.75, s=21.0, indicating that problems with emotion regulation decreased for most participants following the intervention.

The results from the BSL-23 provided partial support of the hypotheses that participation in a condensed DBT Skills Only group would reduce the frequency of SIB in individuals with borderline traits. Statistical analysis of the data indicated that participants scores on the BSL-23 decreased by an average of M= 1.15 (0.47). The treatment effect was statistically significant t(3)=-7.77, p<.01, r²=0.95. The estimated d was calculated to be 2.11, which represents a large effect size. However participants 3 and 4 did not complete the subscale indicating the frequency of SIB on the BSL-23 post-intervention. Item number 5 on the BSL-23 asks about the frequency of thoughts of self-harm. For participant 3 the frequency of thoughts about self-harm decreased from a score of 2 pre-intervention, which indicates the respondent thought of suicide several times during the past week, to a score of 0 post-intervention, indicating no thoughts of suicide in the past week. Participant 4 reported a score of 1 on this question pre-intervention, indicating he
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had suicidal thoughts once or twice in the past week, and he reported a score of 0 post-intervention.

Data collected from weekly diary cards provided a measure of treatment adherence and weekly DBT skill use. Participants reported using an average of 23.95 DBT skills per week throughout the course of their 20-week intervention. The self-reports on individual skill use provided insight into which skills participants used most frequently. On average, participants used mindfulness skills the most frequently ($M=11.19$), then distress tolerance skills ($M=7.19$), followed by interpersonal effectiveness skills ($M=4.19$), and finally emotion regulation skills ($M=3.00$). The low frequency of emotional regulation skill use is surprising, considering emotion regulation was a target behaviour of this intervention, as well as a chief complaint of all participants prior to group therapy. The high use of mindfulness skills is likely due to the frequency of mindfulness skills being taught throughout the group. Mindfulness skills are practiced at the beginning of every session and are the main focus on a session every 4 weeks. The high frequency of mindfulness skill use is therapeutically beneficial to clients, as it helps participants focus on the present moment, a skill that facilitates learning other DBT skills (McKay, Wood, & Brantley, 2007). Participant 1’s diary card data showed a strong increasing trend with high variability for DBT skill use. Participant 2’s diary card data illustrated no relationship with high variability for DBT skill use. Participant 3’s diary card data showed a steady increasing trend with moderate variability concerning DBT skill use. Participant 4’s diary card data illustrated a slightly increasing trend with moderate variability for DBT skill use.

The evaluation of the effects of a condensed DBT Skills Only group provides preliminary evidence to support the hypotheses that participation in this group reduces the frequency of SIB and increases the ability to regulate emotions in individuals with borderline traits. In contrast to studies that provide evidence of the therapeutic efficacy of a full DBT program for individuals with borderline traits, this study provides further evidence of the benefits that individuals with borderline traits can experience through DBT skills as a stand-alone treatment. The results from this study illustrate the positive effects that DBT skill use has on emotion regulation and frequency of SIB for individuals with emotion regulation difficulties.

Participant 1 reported the highest average skill use out of all participants (29.3/week), with her data showing a strong increasing trend. She saw a 0.8 decrease on her score on the BSL-23, and she saw an increase of 1 point on the DERS. These results indicate that as participant 1’s skill use increased, her frequency of SIB decreased and her ability to regulate her emotion decreased slightly.

Participant 2 reported using an average of 23.1 skills per week, with no trend in the data. Her DERS score decreased by 31 points, but still remained high compared to the average (Gratz & Roemer, 2004), and her BSL-23 score decreased by 1.2 points. In other words, participant 2 did use DBT skills at a high rate, but did not show an increase in DBT skill use as treatment progressed. Her frequency of SIB decreased and her ability to regulate her emotions increased.

Participant 3 reported using an average of 26.9 skills per week, with a steady increasing trend in the data. Her score on the BSL-23 decreased by 0.7 points and her score on the DERS decreased by 55 points, but remained 11 points higher than the average, as determined by Gratz and Roemer (2004). Participant 3 had a high rate of skill use that was increasing throughout treatment and as skill use increased so did her ability to regulate her emotions. Participant 3 did not complete the sub-scale of the BSL-23 that indicated frequency of self-harm, however her score on the BSL-23 decreased, signifying a decrease in the presence of borderline traits.
Participant 4 reported using an average of 16.5 skills per week, with a slightly increasing trend in the data. Participant 4 saw the greatest treatment gains based on his scores on the relevant measures. His score on the BSL-23 decreased by 1.9, and his score on the DERS decreased from being significantly over the average developed by Gratz and Roemer (2004) to being lower than the average score. This reflects a higher than average ability to regulate emotions. Participant 4 exhibited the lowest rate of skill use throughout treatment, yet made the greatest gains on the assessment measures used.

The difference in the rate of skill use and gains made on the assessment measures for each participant may have to do with variables that were not measured in this study. For example, Participant 1 reported the highest rate of skill use, but saw the lowest gain on the DERS. Extraneous variables, such as family problems, financial difficulties, health challenges, for example, could have influenced her ability to regulate her emotions at the time of the post-assessment. The higher rate of skill use in the other participants could be reflective of previous experiences with learning DBT skills in these participants compared to Participant 4. A result that was common to all participants was the decrease in scores on the BSL-23 while using DBT skills. While not all participants’ data showed increasing trends in DBT skill use, there were no decreasing trends. Therefore illustrating that use of DBT skills on a weekly basis is effective at decreasing borderline traits. Three out of four participants saw increases in their ability to regulate their emotions as they used DBT skills.

Strengths

This thesis was formulated on a strong empirical foundation, which illustrated the efficacy of DBT skill use on decreasing SIB and increasing the ability to regulate emotions. All aspects of the therapy group were based on a standardized program format created by Marsha Linehan after years of research and reformulation. Therefore this skills training group was based on best practices for this population. Participation of group facilitators in weekly meetings was another strength of this thesis. This allowed facilitators to address specific issues they were having in group with participants and to experience outside perspectives from other professionals to help keep participants on track in group sessions. Weekly diary cards provided a constant measure of treatment adherence, helping to illustrate how much participation in the group was impacting each individual’s life outside of group sessions. Another strength of this thesis was the breadth of behaviours and skills that were assessed throughout participation in the group. Assessment measures recorded information on a variety of relevant variables to illustrate the extent to which participation in the group affected individual behaviour and skills.

Limitations

The main limitations to this study was the small sample size, and a resistance on the part of potential participants to completing weekly diary cards. Despite statistically significant findings, illustrating the effectiveness of the DBT skills Only group with a larger sample size would produce stronger support for use of DBT skills as a stand-alone treatment. As with previous studies, comparing the effects of participation in a full DBT group with the effects of participation in a condensed DBT Skills Only group would be informative. However, due to the time constraints of this placement that was not possible. In addition, the fact that participants who completed diary cards were chosen for the study might have skewed participant results. Choosing participants who completed diary cards may also have resulted in choosing participants who were more motivated for therapeutic change. This motivation may have influenced their progress in skill acquisition throughout therapy. Another limitation of this study is the use of self-report measures as a primary means of collecting data. Participants may not have recorded
their behaviour accurately, and some participants did not complete all data collection measures. Participants also may have altered their responses so that they were more socially desirable and reflected a greater degree of therapeutic improvement than actually occurred. The fact that there was no control group for this study decreases the confidence that changes on the relevant measures was the direct result of participation in the skills training group.

**Multilevel Challenges to Service Implementation**

**Clients.** A challenge to implementing the DBT Skills Only group with this population was moving at a pace that was effective for every participant. It is difficult to find a balance between keeping the pace of learning slow enough so all members are able to learn each skill thoroughly and quickly enough so that all members are interested an engaged in skill acquisition. One solution was to continually adapt learning strategies so that participants who have more knowledge of the skills could participate in teaching participants who had not acquired the skills yet. This provided an opportunity for participants to learn as well as to model the use of skills. Another challenge at the client level was ensuring that participants of the group felt validated and supported. Individuals with borderline traits can pick up on subtle behavioural expressions, thus it is essential to be aware of these expressions and ensure that they are communicating validation, understanding, and support. At some points throughout facilitation of the group, participants became offended at aspects of facilitators behaviour that facilitators were unaware of. By encouraging participants to communicate their feelings on a regular basis, facilitators were able to become aware of the impact of their behaviour on participants and can work through interpretations of interpersonal behaviour with participants (either privately or in group).

**Program.** The main challenge at the program level was the time constraint of the practicum. The DBT Skills Only group runs for 20 weeks, which meant that it was not possible to observe any of the participants for the entirety of their participation in group. Due to the time it takes to practice and acquire the skills within each module, the group could not be shortened for the purpose of this thesis. Time constraints impacted the ability to present as a constant co-facilitator of the group and the ability to create a therapeutic rapport with clients.

**Organization.** Conducting a pilot research project at a public mental health agency presented several obstacles. It was difficult to obtain comprehensive records of completed assessments for participants not currently in the program. Many mental health professionals have a large caseload, and it can be difficult to remember to obtain documentation for all clients. Due to the fact that this was an existing program at the agency the placement student could not make any changes to treatment delivery or content. Another challenge in implementing this study was that triage services and not facilitators of the program make referrals to the DBT Skills Only group. This resulted in some clients of the agency participating who were not appropriate for the group. Some participants who were inappropriate for the group had negative impacts on the experiences of other participants, causing them to miss sessions or drop out of the group completely.

**Society.** Working with individuals with borderline traits and implementing a DBT Skills Only group presents challenges at the societal level as well. Individuals with borderline traits exhibit challenging behavioural issues. Individuals with BPD account for 20% of psychiatric hospitalizations. This has created a stigma for individuals with borderline traits as “challenging clients” in the mental health field. Many clients with borderline traits feel invalidated by mental health professionals who adopt this stigma toward them, which can negatively impact the therapeutic alliance. Clients who have had negative interactions with mental health professionals are especially hesitant to enter treatment and those who are willing to enter treatment come to
group sessions with a very guarded attitude that can impact the amount of information they feel comfortable sharing, as well as their participation in the session. It is vital that mental health professionals working with this specific population educate themselves about the stigma attached to clients with borderline traits and become aware of how this stigma can impact the quality of work that can be completed with this population. Another challenge at the societal level was the difficulty balancing ethical responsibilities while fostering a strong, trusting client-therapist relationship. Due to the ethical responsibilities facilitators had to report potential harm to self or others, some clients were hesitant to share aspects of their behaviour out of fear. Fostering a strong therapeutic relationship with this population takes considerable time and effort on the part of the therapist, who must establish him or herself as an understanding, validating, and trustworthy support who the client can confide in.

Contributions to the Behavioural Psychology Field

Researchers have established a strong foundation establishing DBT as a standardized therapy for individuals with BPD (Read, 2013). This study served to contribute to existing research indicating that DBT skills as a stand-alone treatment is effective at meeting treatment targets of individuals with borderline traits. This study has provided preliminary evidence that participation in a condensed DBT Skills Only group may be effective at reducing the frequency of SIB and increasing the ability to regulate emotions. Learning the skills taught in the DBT Skills Only group aids individuals in developing coping skills, interpersonal effectiveness skills, and in turn their overall ability to function in society. Furthermore, evidence that condensed DBT Skills Only groups are effective at treating transdiagnostic mental health issues, such as emotion regulation, are significant in practical terms. A condensed therapy group indicates that mental health professionals who have specific skills for working with this population can reach more clients in a shorter amount of time. Due to the high use of mental health services by this population, it is beneficial to utilize a service approach that reaches a large number of clients in a short amount of time. It is also important to note that the DBT Skills Only group is only appropriate for individuals who exhibit traits from the milder end of the BPD-spectrum, and that individuals who exhibit traits from the more severe end should receive more intensive treatment.

Recommendations for Future Research

Foremost, it is essential to contrast and compare the effect of participating in a DBT Skills Only group versus a full DBT skills group. More research in this area of the field will help distinguish which clients would benefit from participating in a shorter, condensed group and which clients require the full, year-long DBT program. This population experience symptoms that require intervention from mental health services, and by determining which clients require more extensive services mental health services can be appropriately allocated. Replication of this study with a larger population is also essential to provide a firmer evidence base for DBT skills as a stand-alone treatment.

Including an on-going measurement of the frequency of SIB would help provide a better picture of the impact that participation in the group has on the frequency of SIB. It is difficult to determine the impact of confounding variables on the frequency of SIB with only pre and post-measures.

Providing clearer instructions to participants when completing self-report measures is another recommendation for future research. Many participants miss aspects of the questionnaires because they are not aware that they are supposed to complete them.
Many participants in the group expressed that they would like to continue to practice the DBT skills learned after the group is done. Providing even shorter “refresher” DBT Skills Only groups would be of benefit to clients regarding maintenance of their acquired skills. This would allow participants to practice aspects of the skills that they missed the first time around, and would help them practice mastery of the previously learned skills.

A measurement of the individual’s overall quality of life should be included in subsequent research. As mentioned earlier, exhibiting borderline traits can deeply impact an individual’s quality of life. It would be informative to observe the impact that participation in a DBT Skills Only group has on participant’s overall quality of life.

A final recommendation for future research is to continue to tailor sessions to participant needs. For example, if participants are having difficulty grasping an aspect of a certain skill it is advisable to spend the majority of that session focusing on that aspect of the skill, even if it was not in the plan for that session. Utilization of a variety of psychoeducation techniques throughout the group is encouraged to foster participant engagement and learning.

Peer support was a significant aspect of participation in the therapy group. All four participants assumed peer support roles for each other throughout the course of the DBT Skills program. During group sessions, participants provided emotional support when others shared their homework assignments, and interjected with suggestions on how to effectively utilize skills in specific scenarios.

Word Count: 13,587
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Appendix A

Participant Descriptions

Participant 1

Participant 1 is a 33-year-old female referred to the agency by her family physician due to her diagnosis of depression with psychotic features. This participant experiences high levels of paranoid ideation and often worries that she is “losing her mind”. She has experienced auditory and visual hallucinations in the past, but does not report experiencing them currently. She is legally blind as a result of retinal disease. This individual has a difficult time leaving her house, and has isolated herself from friends and family. She has attempted suicide once in the past and mentions that she currently has thoughts of suicide but no plan. This participant also has a history of engaging in SIB in the form of cutting herself, and engaging in substance abuse (alcohol and Gravol). Her source of income is currently ODSP.

Participant 2

Participant 2 is a 28-year-old female who self referred to take DBT after a psychiatrist suggested that it might be useful to her. This participant had two impaired driving charges prior to entering this study. This individual was also undergoing treatment for Lyme disease during her participation in this study. At her intake assessment to the mental health agency, this participant presented as irritable and angry with clear and intact thought processes. This participant stated that she has issues with her family relationships, and is currently living with her parents. She is receiving Employment Insurance (EI), and is not currently in school or employed. She also identified that she smokes marijuana on a daily basis and commonly engages in binge drinking.

Participant 3

Participant 3 was a 19-year-old female who was referred to the agency by a family physician who stated that she has been experiencing lability of mood, anger, and irritability for several years. This participant reported that she engages in binge drinking on a regular basis. This participant is not employed and is currently in high school. She reported having extensive conflict in her relationships with her friends and family, as well as intense emotional reactions, such as anger, and distorted thought patterns including low self-worth and feeling attacked or bullied. This participant reported a tendency to react impulsively to these situations. She also has a history of engaging in SIB, but does not have a history of suicide attempts. This participant reported experiencing increased irritability, a lack of motivation, feelings of worthlessness, and fatigue. She is waiting to hear about admission to University for next year, and is nervous about this transition. This participant has responded well to counselling in the past.
Participant 4

Participant 4 was a 29-year-old male who was referred to the agency from a local hospital emergency department due to concerns regarding his risk of harm to himself and others. Participant 4 was hospitalized on multiple occasions in the past due to concerns about his potential to harm himself or others. He had been experiencing a lot of interpersonal conflict in his household regarding his wife’s step grandson. Participant 4 has the following diagnoses: impulse control disorder, adjustment disorder with depressed mood (Axis I), Dependent and borderline traits (Axis II), problems with primary support group and social environment along with educational and occupational problems (Axis IV), and his GAF at discharge was 65. He is currently taking 250 mg Epival twice daily.
Appendix B

Agency Consent Form

TITLE: A Dialectical Behaviour Therapy (DBT) 20 Weeks Skills Group Evaluation for a Rural Adult Mental Health Agency

RESEARCHERS: ELISH PARKINSON, LEA ANNE MCCARTHY, TAMARA DERKZEN, COLIN VINCENT

DBT RESEARCH TEAM SUPERVISOR: DR. SHELLEY MCMAIN

Lanark County Mental Health Agency is completing a special project and we are asking for your assistance to complete this project. The information in this form is intended to help you understand the project so that you can decide whether or not you want to participate. Please read the information below carefully and ask all the questions you might have before deciding whether or not to participate.

WHAT IS THE PURPOSE OF THIS STUDY?

The purpose of the study is to find out how much benefit you are receiving from the DBT Skills Group, which will be evident through an increased skill to regulate yourself emotionally, tolerate distress, and keep your awareness more in the present.

WHAT WILL YOU NEED TO DO IF YOU TAKE PART?

You will need to complete three questionnaires before the first Skills Training module (approx. 15 min each) and these will be repeated every 10 weeks of completed treatment over the DBT 20-weeks of treatment. Skill Use Diary Cards will also need to be completed weekly as requested by the DBT group facilitator.

WHAT ARE THE POTENTIAL BENEFITS TO ME TAKING PART?

The potential benefits are that if you desire you can review the record of your personal DBT progress, presented in graph form, at the completion of your program. Your progress will be easier to see in visual form, and you may be pleasantly surprised with what has changed over your treatment time that is not as easily seen day to day.

WHAT ARE THE POTENTIAL BENEFITS TO OTHERS TAKING PART? (IF APPLICABLE)

The evaluation project will help the Agency see how effective the program is in helping their clients and where they can improve the program and its delivery, in order to be more effective for future DBT clients.

WHAT ARE THE POSSIBLE DISADVANTAGES AND RISKS OF TAKING PART?

The potential minimal risk is that upon viewing the recorded data you may experience feeling discouraged.

WHAT HAPPENS IF SOMETHING GOES WRONG?

The DBT treatment team as a whole will provide further support if required.
WILL MY TAKING PART IN THIS PROJECT BE KEPT PRIVATE?

Your questionnaires and behavioural data from the Diary Cards will be assigned a code number. Only the DBT team therapists will have access to the Name/Code sheet. The researcher, and college/agency supervisor will have access to numerically coded data. The Name/Code sheet and the data will be kept in a locked filing cabinet or under password if on a computer hard drive. Your individual results will only be discussed privately by you and your DBT Group Facilitator.

Individual data results will not be shown to the DBT group. Only group data will be shown to the group at the end of the study, and only if it would be seen by the DBT team to be a benefit to the group members.

DO YOU HAVE TO TAKE PART?

Please be assured that i) participation in the research project is not a condition of participation in the DBT group and ii) willing participants will not receive preferential treatment. You may withdraw at anytime during your DBT program treatment. It is up to you to decide whether or not to take part. If you do decide to take part, you will be asked to sign this consent form. If you do decide to take part, you are still free to withdraw at any time, without giving any reason, and without incurring any penalty.

CONTACT FOR FURTHER INFORMATION.

This project has been submitted for approval by the Research Ethics Board at Perth and Smith Falls Hospital. The project will be developed under the supervision of Dr. Shelley McMain.

We really appreciate your cooperation. If you have any additional questions or concerns, feel free to ask me, Eilish Parkinson, Lea Anne McCarthy, or Tamara Derkzen.
CONSENT

If you agree to participate in this project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. Any additional copy of your consent will be retained at the agency.

By signing this form, I agree that:

1  The study has been explained to me.

2  All my questions were answered.

3  Possible harm and discomforts and possible benefits (if any) of this study have been explained to me.

4  I understand that I have the right not to participate and the right to stop at any time.

5  I am free now, and in the future to ask any questions about the study.

6  I have been told that my personal information will be kept confidential.

7  I understand that no information that would identify me will be released or printed without asking me first.

8  I understand that I will receive a copy of this consent form.

I hereby consent to participate.

Participant/ Guardian Printed Name: __________________________________________

Signature: ______________________ Date: __________________

Researcher________________________ Date: __________________

Printed Name: __________________________
Appendix C
St. Lawrence College Consent Form
Informed Consent Document

Project Title:
Effectiveness of a 20-Week Dialectical Behaviour Therapy (DBT) Skills Only Group on Participants’ Emotion Regulation Skills and Frequency of Self-Injurious Behaviour (SIB)

Principal Investigator: Sarah Dawdy

Name of supervisor: Geris Serran

Name of Institution: St. Lawrence College

Name of part partnering institution/agency: Lanark County Mental Health

Invitation
You are being invited to take part in a research study. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at Lanark County Mental Health. As part of this placement I am completing a research project (called an applied thesis). I would like to ask you for your help to complete this project. The information in this form will help you understand my project. Please read the information carefully and ask all the questions you might have before you decide if you want to take part.

Why is this study being done?
My project is based on teaching Dialectical Behaviour Therapy (DBT) Skills to individuals who have trouble managing their emotions and who may use self-harm to deal with situations that they do not know how to handle in other ways. This program is meant to teach people how to deal with their emotions in better ways. The agency has a questionnaire to show group members how the skills they have learned from group have affected how handle their emotions. We believe that this program will be useful to people who have difficulty managing their emotions, and want to know which parts were the most helpful to you so we can ensure the program is effective now and in the future. We value your thoughts and opinions, and I am asking for your help with the program through your participation in the group and completion of the provided questionnaire.

What will you need to do if you take part?
If you choose to take part in the study, the forms you completed at the beginning and end of the program will be analyzed by myself, the research student. No information that would identify your name or any personal information will be shared in any part of my project. Data I will be using for my project will include the three questionnaires you completed before and after joining the group, as well as the diary cards that you completed each week.
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What are the potential benefits of taking part?

Potential benefits of you participating in the research project include learning how being in the program has affected your DBT Skill use, as well as your ability to manage your emotions, and how often you self-harm.

What are the potential benefits of this research study to others?

We may also use information from this project to help improve treatment for people who use self-harm to deal with overwhelming emotional experiences.

What are the potential disadvantages or risks of taking part?

The risks of you participating in this project are minimal, but may include experiencing psychological stress from sharing experiences in group or from completing emotion regulation exercises or questionnaires. If you experience the urge to self-harm while attending group and working through certain emotional issues, it is encouraged that you call the agency for support. If you miss a group session, group facilitators will follow-up on your absence to ensure you are reacting well to participating in the group. We strongly encourage confidentiality of all stories that group members share, but we cannot be guarantee it.

What happens if something goes wrong?

Everyone reacts differently, and if you do have any strong reactions to completing the DBT Skills exercises in group or at home, the questionnaires, or from sharing homework in group do not hesitate to discuss them with me, your counselor, or the group facilitator, Eilish Parkinson. If any group members break confidentiality we will automatically remove them from the study. If group members miss five group session in total, they will be removed from the group and may be able to join at a later time when they are able to attend regularly.

Will the information you collect from me in this project be kept private?

We will do everything in our power to ensure that any information identifying you as a participant in this study is kept strictly confidential, unless required by law. A code number will be used on any diary cards or questionnaires instead of your name. We will ensure that all information on the computer is password protected. You will not be identified by name in any reports, publications, or presentations resulting from this project. If you decide to withdraw at any time all information and data related to you will be destroyed and will not be used. Upon completion of the study, all consent forms and data collected during this project will be kept in a locked filing cabinet at Lanark County Mental Health.

Do you have to take part?

Your participation in this research project is voluntary. It is your responsibility to decide whether or not you are taking part in this research project. If you do decide to take part, you will be asked to sign this consent form. If you decide that you do not want to participate at any time during the project you are free to withdraw at any time, without giving a reason, and without facing any penalty or negative effects.
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

Contact for further information

This project has been approved by the research ethics board at St. Lawrence College. The project will be
developed under the supervision of Geris Serran, my supervisor from St. Lawrence College. I really
appreciate your cooperation and if you have any additional questions or concerns, feel free to contact
me by phone at 613-283-2170, or e-mail at sdawdy08@student.sl.on.ca. You may also contact my
College Supervisor, Geris Serran by e-mail at Geris.Serran@csc-scc.gc.ca, or you may also contact the
Research Ethics Board at reb@sl.on.ca.

Consent

If you agree to take part in this research project, please complete the following form and return it to me
as soon as possible. A copy of this signed document will be given to you for your own records. An
additional copy of your consent will be retained at the agency.

By signing this form, I agree that:

✔ The study has been explained to me.
✔ All my questions were answered.
✔ Possible harm and discomforts and possible benefits (if any) of this study have been
explained to me.
✔ I understand that I have the right not to participate and the right to stop at any time.
✔ I am free now, and in the future, to ask any questions I have about the study.
✔ I have been told that my personal information will be kept confidential.
✔ I understand that no information that would identify me will be released or printed
without asking me first.
✔ I understand that I will receive a signed copy of this consent form.

I hereby consent to take part.

Participant Name ___________________________ Signature of Participant ___________________________ Date ___________________________

Student Printed Name ___________________________ Signature of Student ___________________________ Date ___________________________
Appendix D

DBT Skills Only Group Program Outline

Week 1:

DBT SKILL: MINDFULNESS

1. Introductions
2. Group Rules & Expectations
3. Provide an explanation and rationale for mindfulness skill acquisition
4. Mindfulness Activity
5. States of Mind
7. Assign Homework

Week 2:

DBT SKILL: MINDFULNESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for mindfulness skill acquisition
5. Assign Homework

Week 3:

DBT SKILL: DISTRESS TOLERANCE

1. Mindfulness Activity
2. Review homework
3. Provide an explanation and rationale for distress tolerance skill acquisition
4. Crisis Survival Strategies: Distract and Self-Soothe
5. Assign Homework

Week 4:

DBT SKILL: DISTRESS TOLERANCE

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for distress tolerance skill acquisition
4. Crisis Survival Strategies: Improve the Moment and Pros and Cons
5. Assign Homework

Week 5:
DBT SKILL: DISTRESS TOLERANCE

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for distress tolerance skill acquisition
5. Guidelines for Accepting Reality: Half-Smiling Exercises
6. Guidelines for Accepting Reality: Awareness Exercises
7. Assign Homework

Week 6:

DBT SKILL: DISTRESS TOLERANCE

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for distress tolerance skill acquisition
5. Assign Homework

Week 7:

DBT SKILL: MINDFULNESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for mindfulness skill acquisition
4. Review States of Mind and “What” Skills
5. Assign Homework

Week 8:

DBT SKILL: WALKING THE MIDDLE PATH

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for dialectic skill acquisition
4. Behaviourism
5. Chain Analysis
6. Assign Homework

Week 9:
DBT SKILL: WALKING THE MIDDLE PATH

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for dialectic skill acquisition
4. Thinking mistakes
5. Validation
6. Assign Homework

Week 10:

DBT SKILL: WALKING THE MIDDLE PATH

1. Mindfulness Activity
2. Review homework
3. Provide an explanation and rationale for dialectic skill acquisition
4. Dialectics
5. Dialectics “How To” Guide
6. Dialectical Dilemmas
7. Assign Homework

Week 11:

DBT SKILL: EMOTION REGULATION

1. Mindfulness Activity
2. Review homework
3. Provide an explanation and rationale for emotion regulation skill acquisition
4. Goals of Emotion Regulation Training: Understand Emotions You Experience, Reduce Emotional Vulnerability, and Decrease Emotional Suffering
5. Myths About Emotions
6. Assign Homework

Week 12:

DBT SKILL: EMOTION REGULATION

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for emotion regulation skill acquisition
4. Model For Describing Emotions
5. Ways to Describe Emotions
6. What Are Good Emotions
7. Assign Homework

Week 13:
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

DBT SKILL: EMOTION REGULATION

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for emotion regulation skill acquisition
4. Reducing Vulnerability to Negative Emotions: How to Stay Out of Emotion Mind
5. Steps for Increasing Positive Emotions
6. Adult Pleasant Events Schedule
7. Assign Homework

Week 14:

DBT SKILL: EMOTION REGULATION

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for emotion regulation skill acquisition
4. Letting Go of Emotional Suffering: Mindfulness of Your Current Emotion
5. Changing Emotions by Acting Opposite to the Current Emotion
6. Assign Homework

Week 15:

DBT SKILL: MINDFULNESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for mindfulness skill acquisition
4. Review States of Mind and “How” Skills
5. Assign Homework

Week 16:

DBT SKILL: INTERPERSONAL EFFECTIVENESS

1. Mindfulness Activity
2. Review homework
3. Provide an explanation and rationale for interpersonal effectiveness skill acquisition
4. Situations for Interpersonal Effectiveness
5. Goals of Interpersonal Effectiveness
6. Assign Homework

Week 17:

DBT SKILL: INTERPERSONAL EFFECTIVENESS

1. Mindfulness Activity
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

2. Review homework
3. Repeat the explanation and rationale for interpersonal effectiveness skill acquisition
4. Factors Reducing Interpersonal Effectiveness
5. Myths About Interpersonal Effectiveness
6. Cheerleading Statements for Interpersonal Effectiveness
7. Assign Homework

Week 18:

DBT SKILL: INTERPERSONAL EFFECTIVENESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for interpersonal effectiveness skill acquisition
4. Options for Intensity of Asking or Saying No, and Factors to Consider in Deciding
5. Suggestions for Interpersonal Effectiveness Practice
6. Assign Homework

Week 19:

DBT SKILL: INTERPERSONAL EFFECTIVENESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for interpersonal effectiveness skill acquisition
5. Guidelines for Relationship Effectiveness: Keeping the Relationship
6. Assign Homework

Week 20:

DBT SKILL: MINDFULNESS

1. Mindfulness Activity
2. Review homework
3. Repeat the explanation and rationale for mindfulness skill acquisition
5. Hand out graduation certificates

Note: It is essential for group facilitators to provide a rationale for using each skill presented. For example, when presenting the concept of mindfulness the facilitator could provide the example of walking through a room mindlessly, or with the lights off and how hard it is to walk through the room without tripping. However, when you are mindful, or have the lights on, you can walk through the room a lot more effectively.
Appendix E

Group Guidelines

1. We encourage all members of the group to call for individual skills coaching. Please call between 8 am – 4 pm Monday to Friday (XXX-XXX-XXXX). If group leaders are not available, there will be a worker available to talk to you about skills use. Alternatively, a message can be left and we will return your call.

2. Members must not attend group sessions under the influence of drugs or alcohol.

3. Information shared during the group sessions (including names of other group members) must remain confidential. Group members must protect each other’s privacy.

4. In the interest of maintaining an environment conducive to learning, group members must not engage in sexual activity or excessive drug or alcohol use with each other outside of group.

5. All information shared in the group is confidential except under the following conditions: if we assess that you are a danger to yourself or others we will breach confidentiality and contact the crisis support services necessary.

6. If you are going to miss or be late please call ahead and leave a message with the receptionist. (XXX-XXX-XXXX)

7. Please turn off all cell phones during group sessions.

8. Please try to allow everyone to have an opportunity to share in the discussions. Side conversations can interfere with this.

9. We discourage the development of secretive relationships between group members outside the group as this excludes other group members.

10. We discourage discussion of past (even if immediate) suicidal behaviour with other members outside of group sessions. While we are not minimizing the impact of these events on you, they can unknowingly trigger painful memories for other members.

11. If you decide to call another member or facilitator for support when feeling in crisis, you must be willing to accept the help the other person is trying to provide.
Appendix F

Borderline Symptom List 23 (BSL-23)

Code: ___________ Date: ___________

Please follow these instructions when answering the questionnaire: In the following table you will find a set of difficulties and problems, which possibly describe you. Please work through the questionnaire and decide how much you suffered from each problem in the course of the last week. In case you have no feelings at all at the present moment, please answer according to how you think you might have felt. Please answer honestly. All questions refer to the last week. If you felt different ways at different times in the week, give a rating for how things were for you on average.

Please be sure to answer each question.

<table>
<thead>
<tr>
<th>In the course of last week...</th>
<th>not at all</th>
<th>a little</th>
<th>rather</th>
<th>much</th>
<th>very strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>It was hard for me to concentrate</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>I felt helpless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>I was absent-minded and unable to remember what I was actually doing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>I felt disgust</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>I thought of hurting myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>I didn’t trust other people</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>I didn’t believe in my right to live</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>I was lonely</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>I experienced stressful inner tension</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>I had images that I was very much afraid of</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>I hated myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>I wanted to punish myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>I suffered from shame</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>My mood rapidly cycled in terms of anxiety, anger, and depression</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15</td>
<td>I suffered from voices and noises from inside or outside my head</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>Criticism had a devastating effect on me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17</td>
<td>I felt vulnerable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18</td>
<td>The idea of death had a certain fascination for me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19</td>
<td>Everything seemed senseless to me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>I was afraid of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>21</td>
<td>I felt disgusted by myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>22</td>
<td>I felt as if I was far away from myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>23</td>
<td>I felt worthless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Now we would like to know in addition the quality of your overall personal state in the course of
the last week. 0% means **absolutely down**, 100% means **excellent**. Please check the percentage which comes closest.

<table>
<thead>
<tr>
<th></th>
<th>0%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
<th>40%</th>
<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Bad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Excellent</td>
</tr>
</tbody>
</table>

**BSL - Supplement: Items for Assessing Behavior**

**During the last week…**

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Once</th>
<th>2-3 times</th>
<th>4-6 times</th>
<th>Daily or more often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I hurt myself by cutting, burning, strangling, head-banging, etc.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>I told other people that I was going to kill myself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>I tried to commit suicide</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>I had episodes of binge eating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>I induced vomiting</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>I displayed high-risk behaviour by knowingly driving too fast, running around on the roofs of high buildings, balancing on bridges, etc.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>I got drunk</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>I took drugs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>I took medication that had not been prescribed to me or if had been prescribed, I took more than the prescribed dose</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>I had outbreaks of uncontrolled anger or physically attacked others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>I had uncontrollable sexual encounters of which I was later ashamed or made me angry</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Please double-check for missing answers

**WE THANK YOU VERY MUCH FOR YOUR PARTICIPATION!**

**PLEASE RETURN THE QUESTIONNAIRE TO YOUR THERAPIST**

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Appendix G

Difficulties in Emotion Regulation Scale (DERS)

Please indicate how often the following statements apply to you by writing the appropriate number from the scale below on the line beside each item.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>I am clear about my feelings.</td>
</tr>
<tr>
<td>2)</td>
<td>I pay attention to how I feel.</td>
</tr>
<tr>
<td>3)</td>
<td>I experience my emotions as overwhelming and out of control.</td>
</tr>
<tr>
<td>4)</td>
<td>I have no idea how I am feeling.</td>
</tr>
<tr>
<td>5)</td>
<td>I have difficulty making sense out of my feelings.</td>
</tr>
<tr>
<td>6)</td>
<td>I am attentive to my feelings.</td>
</tr>
<tr>
<td>7)</td>
<td>I know exactly how I am feeling.</td>
</tr>
<tr>
<td>8)</td>
<td>I care about what I am feeling.</td>
</tr>
<tr>
<td>9)</td>
<td>I am confused about how I feel.</td>
</tr>
<tr>
<td>10)</td>
<td>When I’m upset, I acknowledge my emotions.</td>
</tr>
<tr>
<td>11)</td>
<td>When I’m upset, I become angry with myself for feeling that way.</td>
</tr>
<tr>
<td>12)</td>
<td>When I’m upset, I become embarrassed for feeling that way.</td>
</tr>
<tr>
<td>13)</td>
<td>When I’m upset, I have difficulty getting work done.</td>
</tr>
<tr>
<td>14)</td>
<td>When I’m upset, I become out of control.</td>
</tr>
<tr>
<td>15)</td>
<td>When I’m upset, I believe that I will remain that way for a long time.</td>
</tr>
<tr>
<td>16)</td>
<td>When I’m upset, I believe that I will end up feeling very depressed.</td>
</tr>
<tr>
<td>17)</td>
<td>When I’m upset, I believe that my feelings are valid and important.</td>
</tr>
</tbody>
</table>

1: almost never 2: sometimes 3: about half the time 4: most of the time 5: almost always

(0-10%)  (11-35%)  (36-65%)  (66-90%)  (91-100%)
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

Almost never  Sometimes  About half the time  Most of the time  Almost always
(0-10%)  (11-35%)  (36-65%)  (66-90%)  (91-100%)

18) When I’m upset, I have difficulty focusing on other things.
19) When I’m upset, I feel out of control.
20) When I’m upset, I can still get things done.
21) When I’m upset, I feel ashamed at myself for feeling that way.
22) When I’m upset, I know that I can find a way to eventually feel better.
23) When I’m upset, I feel like I am weak.
24) When I’m upset, I feel like I can remain in control of my behaviors.
25) When I’m upset, I feel guilty for feeling that way.
26) When I’m upset, I have difficulty concentrating.
27) When I’m upset, I have difficulty controlling my behaviors.
28) When I’m upset, I believe there is nothing I can do to make myself feel better.
29) When I’m upset, I become irritated at myself for feeling that way.
30) When I’m upset, I start to feel very bad about myself.
31) When I’m upset, I believe that wallowing in it is all I can do.
32) When I’m upset, I lose control over my behavior.
33) When I’m upset, I have difficulty thinking about anything else.
34) When I’m upset I take time to figure out what I’m really feeling.
35) When I’m upset, it takes me a long time to feel better.
36) When I’m upset, my emotions feel overwhelming.

**SUBSCALE SCORING:**
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

1. Nonacceptance of emotional responses (NONACCEPT): 11, 12, 21, 23, 25, 29
2. Difficulty engaging in Goal-directed behavior (GOALS): 13, 18, 20R, 26, 33
3. Impulse control difficulties (IMPULSE): 3, 14, 19, 24R, 27, 32
5. Limited access to emotion regulation strategies (STRATEGIES): 15, 16, 22R, 28, 30, 31, 35, 36

Total score: sum of all subscales

**“R” indicates reverse scored item**
## EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

### Appendix H

#### Diary Card

<table>
<thead>
<tr>
<th>DBT Diary Card</th>
<th>How often did you fill out this card?</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daily 2-3 times Once</td>
<td>Check off the days that you used each skill</td>
</tr>
</tbody>
</table>

### Skills

<table>
<thead>
<tr>
<th>Mindfulness Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Wise Mind</td>
</tr>
<tr>
<td>2 – Observe, just notice</td>
</tr>
<tr>
<td>3 – Describe</td>
</tr>
<tr>
<td>4 – Participate: Enter into the experience fully</td>
</tr>
<tr>
<td>5 – Non-judgmental stance</td>
</tr>
<tr>
<td>6 – One Mindfully: In the moment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interpersonal Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 – Effectiveness: Focus on what works</td>
</tr>
<tr>
<td>8 – Object Effectiveness: DEAR MAN</td>
</tr>
<tr>
<td>9 – Relationship Effectiveness: GIVE</td>
</tr>
<tr>
<td>10 – Self-Respect Effectiveness: FAST</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>11 – Reduce Vulnerability: PLEASE</td>
</tr>
<tr>
<td>12 – Build MASTERY</td>
</tr>
<tr>
<td>13 – Build Positive Experiences</td>
</tr>
<tr>
<td>14 – Opposite to Emotion Action</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distress Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 – Distract: Adaptive Denial</td>
</tr>
<tr>
<td>16 – Self-Soothe</td>
</tr>
<tr>
<td>17 – Improve the Moment</td>
</tr>
<tr>
<td>18 – Pros and Cons</td>
</tr>
<tr>
<td>19 – Radical Acceptance</td>
</tr>
</tbody>
</table>
Appendix I

Summary of Participant Scores on the DERS

Table 4
Client 1 Pre and Post Treatment Difficulties in Emotion Regulation Scale (DERS) Scores

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Pre</th>
<th>Post</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>101</td>
<td>102</td>
<td>+1</td>
</tr>
<tr>
<td>Nonacceptance of Emotional Responses</td>
<td>18/30</td>
<td>14/30</td>
<td>-4</td>
</tr>
<tr>
<td>Difficulties in Goal Directed Behaviour</td>
<td>16/25</td>
<td>17/25</td>
<td>+1</td>
</tr>
<tr>
<td>Impulse Control Difficulties</td>
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Table 5
Client 2 Pre and Post Treatment Difficulties in Emotion Regulation Scale (DERS) Scores

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*Client 3 Pre and Post Treatment Difficulties in Emotion Regulation Scale (DERS) Scores*

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Table 7
*Client 4 Pre and Post Treatment Difficulties in Emotion Regulation Scale (DERS) Scores*

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Appendix J

Summary of Participant Data from the Borderline Symptom List (BSL-23)

Table 8

Participant Data from the Borderline Symptom List (BSL-23)

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Figure 1. The above graph provides a visual representation of participants’ Pre and Post-Intervention scores on the Difficulties in Emotion Regulation Scale (DERS).
Appendix L

Pre & Post Scores on the Borderline Symptoms List (BSL-23)

Figure 2. The above graph provides a visual representation of participants’ Pre and Post-Intervention scores on the Borderline Symptoms List (BSL-23).
Figure 7. The above graph provides a visual representation of participant 1’s pre and post-intervention scores on the DERS subscales.
Figure 8. The above graph provides a visual representation of participant 2’s pre and post-Intervention scores on the DERS subscales.
EFFECTIVENESS OF DBT SKILLS ON EMOTION REGULATION AND SIB

Figure 9. The above graph provides a visual representation of participant 3’s pre and post-intervention scores on the DERS subscales.
Figure 10. The above graph provides a visual representation of participant 4’s pre and post-Intervention scores on the DERS subscales.
Table 9

Participant 1’s Diary Card Use Throughout 20 Weeks of Treatment

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Note: - signifies that the participant did not complete the diary card that week.
### Table 10

**Participant 2’s Diary Card Use Throughout 20 Weeks of Treatment**

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*Note: - signifies that the participant did not complete the diary card that week.*
Table 11

Participant 3’s Diary Card Use Throughout 20 Weeks of Treatment

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Table 12

Participant 4’s Diary Card Use Throughout 20 Weeks of Treatment

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<td>8.50</td>
<td>1.05</td>
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Figure 11. Above is a scatterplot graph providing a visual representation of Participant 1’s skill use throughout treatment. There is a strong increasing trend with high variability in DBT skill use.
Figure 12. Above is a scatterplot graph providing a visual representation of Participant 2’s skill use throughout treatment. There is no trend with high variability in DBT skill use.
Figure 13. Above is a scatterplot graph providing a visual representation of Participant 3’s skill use throughout treatment. There is a steady increasing trend with moderate variability in DBT skill use.
Figure 14. Above is a scatterplot graph providing a visual representation of Participant 4’s skill use throughout treatment. There is a slightly increasing trend with moderate variability in DBT skill use.