PATTERNS OF PHONE COACHING IN DIALECTICAL BEHAVIOR THERAPY:
FREQUENCY AND RELATIONSHIP TO THERAPEUTIC ALLIANCE, SUICIDAL
BEHAVIORS, AND BASELINE SEVERITY

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Pedro Vieira de Oliveira

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APPROVED: _____
                 Shireen L. Rizvi, Ph.D. ABPP

                 _____
                 Edward Selby, Ph.D.

DEAN: _____
                 Stanley B. Messer, Ph.D.

ABSTRACT

Telephone coaching is a mode of treatment in Dialectical Behavior Therapy (DBT) that is

thought to help clients generalize skills, prevent suicidal behaviors, and offer an avenue to repair

the therapeutic relationship. To date, phone coaching has received scant empirical investigation

and little is known about the type and frequency of contact that DBT therapists receive from

clients with Borderline Personality Disorder (BPD). In addition, no studies have investigated

predictors of phone coaching use. The present study as three aims: 1) describe patterns in

frequency of telephone calls and text messaging between clients and their individual therapists;

2) investigate whether baseline severity and suicidal behaviors are predictive of phone coaching

frequency; 3) investigate whether the strength of the therapeutic alliance is associated with phone

coaching frequency. Study participants were 51 adults (35 treatment completers) with a primary

diagnosis of BPD who attended a six-month comprehensive DBT treatment program. The

average number of contacts for phone coaching per month was 2.55 (SD=4.49) with a range of

0-18 contacts. Four of the 35 treatment completers comprised 56% of the contacts in this study.

The most frequent reason clients used phone coaching was for help with skills generalization

followed by check-ins, suicidal behaviors, and issues related to the therapy relationship. Having

a recent history of suicidal behaviors, degree of severity at baseline, or the strength of the

therapeutic alliance were not predictive of phone coaching use at post-treatment. Lower income

was significantly associated with a higher frequency of phone coaching use. These results can

help clinicians and administrators to make decisions on how to better provide phone coaching

and clarify the effort that is involved in providing this service to clients with BPD.

ACKNOWLEDGMENTS

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Introduction

Borderline personality disorder (BPD) is recognized as a complex and severe personality

disorder characterized by a pervasive pattern of instability in regulation of emotions, identity

confusion, suicidal behaviors, conflict in interpersonal relationships, and impulsive behavior. In

clinical settings, BPD is the most prevalent personality disorder and is associated with severe

mental and physical disability, substantial treatment utilization, and high rates of suicidal

behaviors (for a review see Trull, Stepp, & Durrett, 2003). The prevalence of BPD in the

population has been estimated at 2.7% (Trull, Jahng, Tomko, Wood, & Sher, 2010), but this

prevalence increases to 10% in outpatient settings and 15-20% in inpatient settings (Skodol et al.,

2002). Rates of suicidal behaviors are alarmingly high in this population with 69 to 80%

engaging in non-suicidal self-injury (NSSI), approximately 75% attempt suicide at least once in

their life, and up to 10% die by suicide (Black, Blum, Pfohl, & Hale, 2004; Paris, 2002).

Despite a high use of treatment, individuals with BPD often report that treatment is

unsatisfactory and there are high rates of treatment failure (Hörz, Zanarini, Frankenburg, Reich,

& Fitzmaurice, 2010; Skodol, Buckley, & Charles, 1983). High rates of treatment use, suicidal

behaviors, and the associated stress of working with individuals with BPD highlight the need for

effective interventions for this population. Fortunately, in recent years a number of

psychotherapies have been developed and evaluated specifically for the treatment of BPD. Of

those treatments, DBT has received the most empirical support and dissemination. To date, there

are at least 20 published randomized controlled trials (RCTs) and numerous other quasi-

experimental and uncontrolled studies evaluating the efficacy of DBT (for a summary, see

Linehan, Dimeff, Koerner, & Miga, 2014). This literature has shown that DBT consistently

achieves significant reductions in self-harm, suicidal behaviors, hospitalizations, treatment

dropout, depression, hopelessness, and increases overall social functioning. Due to strong

research support from well designed and controlled studies, DBT has been deemed a "well

established treatment," per the criteria established by Chambless and Hollon (1998).

Despite the impressive accumulation of support and dissemination of DBT, several

aspects of the treatment remain in need of investigation. Phone coaching is an important

treatment component of DBT that has received a lack of empirical investigation. Although there

are now several studies that provide guidance on the delivery of phone coaching within a DBT

framework (Ben-Porath, 2004, 2014; Ben-Porath & Koons, 2005; Koons, 2011; Manning, 2011;

Steinberg, Steinberg, & Miller, 2011; Wisniewski & Ben-Porath, 2005), only three studies were

found to offer empirical data on this mode of treatment (Chalker et al., 2015; Limbrunner, Ben-

Porath, & Wisniewski, 2011; Linehan & Heard, 1993). This dearth of research has left clinicians

with a lack of information on what to expect when implementing phone coaching and a lack of

insight into the client factors that may influence patterns of telephone contact.

Overview of DBT

Comprehensive DBT consists of four modes of treatment: individual therapy, group skills

training, as needed phone coaching, and consultation team. Individual therapy is designed to

motivate the client for treatment and help the client use adaptive, skillful responses to inhibit and

replace maladaptive behavior. The skills group component consists of four skill modules

designed to address areas of skill deficits often found in individuals with BPD: Mindfulness,

Emotional Regulation, Interpersonal Effectiveness, and Distress Tolerance (for a full description

of these skills see Linehan, 2015). Phone coaching is designed to change maladaptive patterns of

asking for help, aid in the generalization of skills to everyday life (especially during times of

crisis), and allow for an avenue of contact when conflict or misunderstandings occur in treatment

(Linehan, 1993). The therapist consultation team is designed to help the therapist deliver the treatment as effectively as possible.

Phone coaching in DBT

Dialectical Behavior Therapy was originally designed for a clinical population of individuals at a high risk of suicide, particularly those with BPD. In deciding whether to include phone coaching as a component of treatment, Linehan recognized that the individual therapist is in the best position to provide this service (Linehan, 2011). As the client's primary mental health provider, the DBT therapist typically knows the client more intimately, has a higher reinforcement value than other professionals, and is the only person who can resolve conflicts in the therapeutic relationship. For these reasons, the individual therapist can best provide effective behavioral coaching and decide whether emergency or inpatient care would be appropriate for the client in times of crisis.

Prior to the introduction of DBT (Linehan, 1993), little had been published on how to manage phone calls from emotionally dysregulated clients. In order to render this mode of contact more effective, Linehan (1993) created a target hierarchy to help structure a coaching call. In the order of importance, the targets to prioritize in a coaching call are: (1) decreasing suicidal/self-injurious behaviors; (2) generalizing skills use to everyday life; and (3) resolving interpersonal crises, alienation, and a sense of distance between therapist and patient.

Target 1: suicidal/self-injurious behaviors. The most important target in a DBT coaching call is to reduce suicide attempts and NSSI without simultaneously reinforcing the use of these behaviors in the future. The rationale for this is simple; if the client is dead, treatment cannot continue. Therapists in DBT are trained to reinforce effective behavior and extinguish ineffective means of coping and communicating. As such, patients in DBT are instructed to call

their therapist *before* engaging in suicidal behaviors in order to prevent the occurrence of these behaviors. In order to avoid reinforcing suicidal behaviors with therapist attention and warmth and to reinforce asking for help before engaging in destructive behaviors, DBT therapists require that clients wait 24 hours before making contact with the therapist after an episode of NSSI (unless the wounds are life-threatening).

Target 2: skills generalization. A second function of phone coaching is to assist the client in generalizing the skills they are learning or have learned in treatment to their every day life. Often, during crisis situations and difficult life problems, the application of skills is blocked by overwhelming emotions or a number of other factors. Phone coaching offers the client an opportunity to contact their therapist to receive behaviorally specific coaching on how to manage their emotions and solve problems more effectively. This type of learning is especially powerful because it occurs in the context of real life situations at the time the client most needs it. Although skills generalization is the second target in hierarchy, the DBT therapist wants the vast majority of telephone contacts to be about applying skills to everyday problems. It's expected that by practicing skills the client will become more effective in solving their own problems and will have a reduced need to cope by resorting to suicidal behaviors or other maladaptive solutions.

Target 3: relationship repair. The third main function of phone coaching is to provide an avenue to repair ruptures in the therapeutic relationship. Due to the emotional vulnerability of individuals with BPD, misunderstandings during treatment are more likely to derail treatment. For many individuals with BPD, having to wait a full week to address ruptures in the relationship when they are feeling alienated, abandoned, or rejected creates unnecessary suffering and can result in missed sessions (Linehan, 1993). Phone coaching provides the client and therapist with

a means to repair the relationship, or at least create a patch until the rupture can be fully addressed in the next individual session. Clients are also allowed to call just to "check-in." The job of the therapist during these calls is to briefly provide support (except during the last phase of treatment, when the client is expected to self-soothe) (Linehan, 1993). These "check-in" calls are helpful to clients who find it too difficult to wait an entire week before speaking to the therapist and reduce the possibility of phone calls reinforcing ruptures in the relationship.

      Additional intersession contact. As phone coaching is considered an important mode of treatment, clients who could benefit and don't use phone coaching, either during times of crises or for skills generalization, are often asked to commit to contacting the therapist. Contacting the therapist during times of need not only helps to generalize skillful behavior, but also teaches effective means of asking for help. Conversely, if a client contacts the therapist too much and needs more time and attention than can be provided by a weekly session, the therapist may consider scheduling calls or texts at a regular interval. Such an interval recognizes that the client needs more time and support; minimizes the potential to reinforce crisis behaviors; and teaches distress tolerance by requiring the patient to wait a specified interval of time before contacting the therapist (Linehan, 1993).

      Therapists can further extinguish the link between maladaptive behaviors and contact with the therapist by initiating contact with the client. Linehan (1993) recommends that these calls be brief and focus on applying therapeutic principles to everyday life. A second instance where it may be beneficial for the therapist to initiate phone contact is when the client is engaging in avoidance, such as missing treatment or avoiding problem solving. By initiating contact the therapist can block avoidance behavior that may be functioning to exacerbate or maintain problems.

Texting

The traditional medium of phone coaching consists of a voice call between the client and therapist. In today's fast-changing landscape of interpersonal communication, text messaging has greatly increased in popularity as means of communicating with others, especially among older teens and young adults (Lenhart, Ling, Campbell, & Purcell, 2010; Smith, 2011). The choice to accept text messages from clients is ultimately up to the therapist, but it appears to be a common way for clients and therapists to exchange information. Coaching via text in DBT can have several advantages; for example, the therapist can provide temporary coaching during times when either the client or therapist cannot answer a phone call; the client may feel more willing to ask for coaching via text; and the information provided can be referred to by the client at a later time. As with voice calls, the therapist may have to establish the appropriate parameters for text communication. In this study, texts will be reported alongside voice calls for a more complete picture of client and therapist telephone contact during a six-month comprehensive DBT program.

Research on Phone Coaching

Telephone communication has been recognized as a useful tool in the treatment of many clinical populations, including schizophrenia (Beebe, 2001), substance use (Myersberg, 1985), and depression (Lynch, Tamburrino, & Nagel, 1997; Myersberg, 1985). These studies, however, have included scheduled weekly telephone sessions as opposed to a model that offers unscheduled access to a clinician 24-hours a day. To date, very little data has been published on unscheduled intersession telephone contact. The following studies provide some preliminary data.

Two studies have investigated the effects of offering 24-hour access to an on-call

psychiatrist to individuals who were admitted into a hospital after engaging in NSSI (Evans,

Morgan, Hayward, & Gunnell, 1999; Morgan, Jones, & Owen, 1993). The intent of these studies

was to lower the occurrence of NSSI through the availability of a professional that would assist

the participants cope with crises and emotional distress. Participants in these studies were

randomized into a "green card" condition that offered 24-hour phone consultation, and a

treatment-as-usual condition. In the study by Morgan et al. (1993), the authors found a trend

towards fewer instances of NSSI and less use of hospital services for individuals who called for a

consultation. Notably, the sample they utilized included only individuals who engaged in NSSI

for the first time. In the study by Evans and colleagues (1999), the authors found that the "green

card" condition was not effective in reducing NSSI. Surprisingly, in the sub-group analyses, the

authors found an 85% increase of NSSI for participants with a long history of self-injurious

behaviors (but not for those without a history of NSSI). Although several explanations are

available for this finding, correspondence between Darley (2000) and the lead author (Evans,

2000) suggested that it is possible the self-injurious behaviors in the "green card" study were

inadvertently reinforcement through additional attention to these behaviors.

Four studies were found that published data on the frequency of unscheduled intersession

phone calls to clinicians. Evans, Morgan, and Hayward (2000), reported on the frequency,

duration, and typology of the calls made in the Evans et al. (1999) "green card" study described

above. Out of a sample of 417 participants, only 70 (17%) used the opportunity to call during the

six month study duration. Half of the participants (49%) made only one call, 29 percent made

two calls, and only two participants (2%) called more than six times. Most calls (85%) took 30

minutes or less to complete and most took place in the evening and night hours, 45% between

6pm and 12am, and 25% between 12am and 6am.

Within the first Randomized Controlled Trial (RCT) of DBT (Linehan, Armstrong,

Suarez, Allmon, & Heard, 1991), Linehan and Heard (1993) in a reply to the editor reported a

monthly mean of 2.4 (*SD*=2.5) coaching calls in a sample of 22 participants diagnosed with

BPD. This frequency of calls was not significantly different from the Treatment As Usual (TAU)

condition (n=22) with a mean of 1.6 (*SD*=2.0). Notably, there was a correlation between phone

calls and NSSI in the TAU condition, but not for DBT. This finding is consistent with the

contingencies in DBT, which aim to reduce the link between therapist attention and ineffective

behaviors (Linehan & Heard, 1993). The method for recording call frequency in this study

appeared to be a therapist and patient interview at the end of treatment. As treatment spanned

over a year, the accuracy of the telephone coaching frequency likely reflects a rough, and

perhaps biased, estimate.

In an a study that examined challenging behaviors reported by DBT therapists (Chalker et

al., 2015), the authors reported a median of 12 coaching calls per client during a 12 month

treatment period (i.e. a median of one call per month) for a sample of 63 participants diagnosed

with BPD. In this study, more frequent contacts were associated with a reduction in dropout and

psychological symptoms, and an increase in client and therapist satisfaction. Similar to the

method of recording calls in Linehan et al. (1991), this study utilized a therapist interview at the

end of the 12 month treatment to ascertain the frequency of coaching calls, which likely reflects

a rough estimate of the contact frequency.

Within a DBT program adapted for individuals with eating disorders (ED), Limbrunner

and colleagues (2011) were the first to report phone coaching data on the actual frequency,

duration, and type of calls made within a DBT phone coaching framework. In this study, 36

participants meeting criteria for an ED were admitted into a hospital day treatment program

offering DBT adapted for eating disorders. Actively suicidal individuals were not accepted in to

this study and BPD was not assessed. All participants were offered after-hours telephone

coaching from an on-call DBT team member up to 11pm in the evening. After 11pm,

participants were instructed to call 911 or go to the hospital during an emergency situation. Over

a period of 13 weeks, 17 (42.22%) of participants made use of the phone coaching service. The

results indicated that the most frequent type of call was to reduce urges to engage in ED

behaviors (40%; e.g. binge, restrict), followed by self-imposed accountability (16.2%), and

nutritional and meal plan coaching (12.4%). Notably, only 3 calls were made due to urges to

self-injure. The authors suggested the low number of calls related to NSSI might be due to a low

prevalence of borderline pathology in this sample. During the three-month period, the mean

number of calls per client was 4.82 with a range of 1 to 30 calls and a mean length of 5.92

minutes per call with a range of 1 to 30 minutes. As compared to the NSSI population in Evan's

et al. (2000) study, the ED population called at a higher frequency, with 47% and 26% calling

three times or more respectively. Limbruner et al. (2011) suggested the higher frequency of

contact in their study might be due to a better rapport with the on-call staff. In the study by Evans

et al. (2000), the on call psychiatrist had no pre-established rapport with the individuals calling.

It was hypothesized that the level of familiarity played a role in the higher frequency of calls

placed in the Lumbruner et al. (2011) study. Indeed, having an established positive relationship

is likely an important factor in the frequently of phone coaching use. Studies investigating the

therapeutic alliance and client participation in treatment have found that a stronger alliance is

associated with more engagement (Arnow et al., 2013; Connors, Carroll, DiClemente, Longabaugh, & Donovan, 1997; Keller, Zoellner, & Feeny, 2010).

Aims and Hypotheses

As a mode of treatment in DBT, phone coaching offers clients an effective means to cope with crises and suicidal urges without resorting to behaviors that may result in hospital visits or increased problems; furthermore, it is intended to aid in the generalization of skillful behavior, teaches clients how to effectively ask for help, and offers an avenue to repair ruptures in the therapeutic relationship. Despite all these potentially valuable functions, there has been a dearth of empirical investigation into this component of treatment. While the studies by Evans et al. (2000) and Limbruner et al. (2011) provide data on frequency, duration, and type of calls made by a clinical sample, neither study used a BPD population within a comprehensive outpatient DBT program. In fact, the author found no studies reporting descriptive information beyond mean and median number of coaching calls for clients diagnosed with BPD in a DBT program. As a result, there is a lack of information about the additional effort that comes with implementing phone coaching and it is not uncommon to observe modifications and limits being placed on phone coaching due to fears that clients will abuse this mode of contact. Furthermore, little is know about the factors that influence clients to use this mode of treatment. Information on predictors of phone coaching can help clinicians orient and deliver phone coaching more effectively. To address these gaps in the literature the current study has three aims.

Aim 1: explore patterns of telephone contact in DBT. To meet this aim, this study will report on the type and frequency of calls and texts made by clients over a six-month course of DBT. The proposed categories for classification of calls and texts are: (1) suicidal behaviors, (2) skills generalization, (3) therapy relationship, (4) check-in (e.g. status update), (5) session

attendance issues (e.g. tardiness, cancelation, and treatment avoidance) and (6) other (communication unrelated to treatment). Descriptive statistics will be used to depict the quantity and type of calls fielded by a DBT therapist. Given the exploratory nature of this aim, no specific hypotheses have been made.

Aim 2: explore whether baseline severity and history of suicidal behaviors is associated with frequency of phone coaching use. To meet this aim, this study will conduct a regression analysis to investigate the association between baseline severity and the frequency of phone coaching use at the end of treatment. The baseline measures will capture severity in terms of degree of overall psychopathology, depression symptoms, emotion dysregulation, work and social impairment, and borderline symptoms. A t-test will be used to investigate if a recent history of suicide attempts or NSSI is associated with phone coaching. Given the dearth of information on predictors of phone coaching, no specific hypotheses have been made.

Aim 3: determine if the early therapeutic alliance is related to phone coaching use. To meet this aim, a regression analysis will be conducted to investigate the association between the early therapeutic alliance and the frequency of phone coaching use. Hypothesis: A stronger client rated therapeutic alliance at session four will predict a higher frequency of phone coaching use at the end of treatment.

Method

Recruitment, Screening, and Assessment

Participants in the original study (Rizvi, Hughes, Vieira de Oliveira, & Hittman, 2015) were self-referred or referred by other agencies or mental health professionals in the area. All interested individuals were instructed to call DBT-RU to complete a phone screen designed to determine eligibility to participate in a full intake assessment. Participants eligible for an intake

assessment met with trained psychology doctoral students at DBT-RU where they provided

informed consent, completed interviews assessing eligibility for participation in the full

treatment, were evaluated for psychological diagnoses, and completed baseline measures.

Participants also completed a mid-treatment assessment at three months and a post-treatment

assessment at six months for which they were compensated up to $60. A subset of the study

participants (n=16) participated in a study where they received a mobile application designed to

provide access to interactive skills coaching and a follow up assessment (Rizvi, Hughes, &

Thomas, 2015). A *t*-test comparing telephone contact frequency between the subset that received

the mobile app (n=16) and the remaining participants in this study (n=35) showed no differences

in the total contact frequency or total contact by category. These results indicate that the addition

of the mobile interactive skills application did not significantly impact the rate at which

participants contacted their therapist.

The inclusion criteria for participation in DBT-RU are: a diagnosis of BPD, age 18 years

or older, agreement to take part in assessments, availability to participate in six months of

treatment, consent to videotaping/audiotaping treatment sessions, live within a 45 minute radius

of treatment clinic, and an agreement to stop all other forms of psychotherapy while in treatment

at DBT-RU. As described above, a subset of the participants in this study participated in a

preliminary study of a mobile DBT skills application. Additional inclusion criteria for this subset

included agreement to carry a mobile device installed with the "DBT coach" application and at

least one instance of either NSSI or attempted suicide in the six months prior to pretreatment

assessment and a second within the last five years.

Exclusion criteria consisted of mental health problems that required services that cannot

be provided by DBT-RU (e.g, schizophrenia, life-threatening anorexia), insufficient

understanding of the English language, indication that the participant had an IQ of 70 or below, and inability to understand or sign the research consent forms. Eligibility into DBT-RU was determined through an intake assessment that was conducted by clinical psychology doctoral students. Once a client was considered eligible for treatment, he or she as assigned to a therapist and received six months of comprehensive DBT.

Categorization of Telephone Contact

In this study, phone coaching will refer to communication (i.e., voice calls and text messages) used to address the main targets of phone coaching described below (suicidal behaviors, skills generalization, therapy relationship, and check-in). The term telephone contact is used to describe all types of calls and texts, to include phone coaching, between therapists and clients. Suicide attempts will refer to actions or urges in which the intent of those behaviors is to result in death (e.g., cutting major blood vessel, hanging, overdose of lethal medications). Non-Suicidal Self-Injury (NSSI) will refer to actions that are intended to result in deliberate self-harm, without the intent of dying (e.g. less serious cutting, burning self with cigarette, skin picking). Suicidal behaviors will refer to all behavior related to suicide (e.g. intense suicidal ideation, NSSI, and suicide attempts).

All telephone contact was coded and categorized into one of six categories: life-threatening behaviors, skills generalization, therapy relationship, check-in, treatment attendance, and other. To assign each contact to a category, the lead author of this study read through the participants' session notes and coded each text or call based on the intended purpose of the contact as written in the session note (see below). For example, a contact described as "client called to say she was arriving late" was coded as a treatment attendance call. Due to the nature of texts, multiple texts were coded as a single contact in instances where the purpose of the contact did not change and

the texts took place within the same day. For example, five texts within the category of skills

generalization over the span of three hours were coded as one skills generalization text contact.

When a single telephone contact included multiple categories, the call or text was coded based

on a hierarchy, which is outlined below along with a description of each category:

1. Suicidal behaviors: communication that included a focus on the topic of suicide or NSSI.
    This category also included telephone communication with other professionals or family
    members about life-threatening behaviors of the client.

2. Skills generalization: communication where the therapist coached, reviewed, or
    motivated the client to use skillful behavior.

3. Therapy relationship: communication that addressed the relationship between the client
    and therapist. For example, client apologizing for being angry in session, expressing
    gratitude for emotional support, and communicating fear because treatment is ending.

4. Check-in: scheduled or unscheduled communication that provided a status update. For
    example, a scheduled call to check on the completion of a homework assignment, a
    client text that provided an update to a session topic (e.g. "I'm applying for the job!")
    and a client call to report on their emotional status (e.g. "I'm feeling better now") where
    no skills coaching occurs.

5. Treatment attendance: all contact that addressed session timeliness, attendance, and
    rescheduling. For example, communicating tardiness, reluctance to attend individual or
    skills group session (e.g. "I'm too depressed"), and canceling a session.

6. Other: all communication that did not pertain to the other categories, such as a client
    texting a picture of their pet or asking a question that is not related to treatment. This

category also applied to telephone contact with other treatment providers or family

members during non-crisis situations.

Participants

Participants were 51 adults (M_{age}= 29.86, SD= 9.86) with a diagnosis of BPD who

enrolled in the Dialectical Behavior Therapy program at Rutgers University between September

2010 and March 2015. The sample was predominantly female (n=40; 78.4%). Of these

participants, 35 (68.6%) identified as Caucasian, 8 (15.7%) as mixed origin, 3 (5.9%) as

Hispanic, 2 (3.9%) as Black, 2 (3.9%) as Asian, and 1 (2%) as Middle Eastern. Thirty-six

participants (70.6%) were single, 9 (17.6%) were married, 4 (7.8%) were living with a partner,

and 2 (3.9%) were separated. In regards to highest level of education, 4 (7.8%) reported

receiving a high school diploma or equivalent, 24 (47.1%) attended some college or training

beyond high school, 13 (25.5%) earned a college degree, and 10 (19.6%) received graduate or

professional school education beyond college. In regards to employment, 22 (43.1%) were

unemployed, 8 (15.7%) were employed full time, 8 (15.7%) were in school, 7 (13.7%) were in

school and working part-time, 5 (9.8%) were working part-time, and 1 (2%) worked as a

volunteer. Fifteen participants (30%) earned $9,999 or less, 20 (38%) earned between $10,000

and 39,999, 7 (14%) earned between $40,000 and $69,999, and 8 (16%) earned $80,000 or more.

Income for one participant is unknown due to missing data.

Therapists

The therapists in this study consisted of 16 advanced graduate students in clinical

psychology doctoral programs and one expert DBT clinician (M_{age}=28.00, SD=3.93). The expert

DBT clinician treated one of the 51 participants in this study. Of the treatment providers, 14

(87.5%) were female; 10 (62.5%) were Caucasian; four (25%) were of mixed origin; one (6.3%)

was East Asian; and one (6.3%) was Southeast Asian. The expert DBT clinician received

intensive training in DBT from Marsha Linehan and is an international trainer and consultant in

DBT. The graduate student clinicians' training consisted of a semester-long fundamentals course

in DBT, one hour a week of didactics with an expert in DBT, participation in the supervision of

an advanced graduate student, and observation of advanced graduate students' treatment videos.

In addition, ten (66.7%) of the graduate student clinicians attended a two-week intensive DBT

training led by experts in DBT. As part of the DBT-RU treatment team, graduate student

therapists participated in a weekly 1.5 hour DBT consultation team and one hour of supervision,

both led by the DBT expert.

Treatment

Participants in this study received six months of comprehensive DBT in accordance with

the DBT treatment manuals (Linehan, 1993a; Linehan, 1993b; Linehan, 2015). Treatment

consisted of weekly individual therapy, a weekly two-hour skills group, as needed phone

coaching, and 1.5 hours of consultation team for therapists. Clients in this study were considered

a dropout if they missed four consecutive sessions of either individual treatment or skills group.

Procedure

This study utilized data collected at DBT-RU during various assessment points.

Information on frequency and type of intersession telephone contact was collected from

therapists' weekly therapy notes. In these notes, therapists were prompted to record the

frequency of telephone contact along with a brief description on nature of the contact. Data on

baseline severity and history of suicidal behaviors was obtained from measures given at intake.

Lastly, data on the therapeutic alliance was obtained from the Working Alliance Inventory

(WAI; Kokotovic & Tracey, 1989) administered at the end of session four, with the last

observation carried forward for eight of the participants who were missing the WAI at session four.

Measures

  Diagnostic interview. At pretreatment assessment, DSM-IV-TR psychological diagnoses (American Psychiatric Association, 2000) were evaluated using the Structured Clinical Interview for DSM-IV Axis I and Axis II Disorders (SCID-I; First, Gibbon, Spitzer & Williams, 1996; and SCID-II; First, Gibbon, Spitzer, Williams & Benjamin, 1997). The SCID is a semi-structured interview widely used for assessing all five axes with moderate to excellent inter-rater reliability for the Axis I disorders and excellent inter-rater reliability for Axis II disorders (Lobbestael, Leurgans & Arntz, 2011).

  Global Psychological Distress. The Global Assessment of Functioning Scale (GAF; Endicott, Spitzer, Fleiss, & Cohen, 1976) was used by trained graduate doctoral student assessors to rate the level of impairment due to psychiatric symptoms at baseline. The GAF is a numeric scale ranging from 1 to 100, divided into 10-point intervals, each describing a different level of general social and occupational functioning and degree of distress. The clinician's duty is to select the interval he or she believes best describes the patient and then provide a final rating within the limits of that interval. A higher rating signifies a higher level of functioning. The GAF has demonstrated good interrater reliability ($\alpha = .86$) and correlates moderately with other general symptom severity measures (Hilsenroth et al., 2000).

  The Brief Symptom Inventory (BSI; Derogatis, 1993) is a well-known and accepted self-report measure of global psychological distress. Respondents rank each of the 53 items on a 5-point scale ranging from 0 (not at all) to 4 (extremely). The BSI has nine subscales designed to assess individual symptom groups: somatization, obsessive-compulsive, interpersonal sensitivity,

depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The BSI also includes three global indices of distress: Global Severity Index (GSI), Positive Symptom Distress Index, and Positive Symptom Total. In this study the GSI was used as an overall measure of global psychological distress. In research, the BSI has been shown to be valid and reliable across all nine dimensions (Cronbach's α ranging from .71 to .85; Derogatis & Melisaratos, 1983).

Depressive Symptoms. The Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996) is a widely used 21-item multiple-choice, self-report, questionnaire used for measuring the severity of depression. The BDI has demonstrated excellent internal consistency ($\alpha = .91$), excellent test-retest reliability at one week ($r=.93$), and adequate convergent and discriminant validity (Beck, Steer, & Brown, 1996; Beck, Steer, & Ranieri, 1996).

Borderline Symptoms. The Borderline Symptoms List short version (BSL-23; Bohus et al., 2009) is a 23 item self-report questionnaire designed to measure the overall severity of BPD symptoms. Respondents use a scale ranging from 0 (not at all) to 4 (very strong) to report on BPD symptoms during the past week. The BSL-23 has demonstrated excellent internal consistency ($\alpha = .97$), good test-retest reliability at one week ($r = .82$), good convergent validity, and it is sensitive to the effects of therapy (Bohus et al., 2009).

Emotion Dysregulation. The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36 item self-report questionnaire designed to assess difficulties in emotion regulation on six dimensions. Items are rated on a 5-point scale ranging from "almost never; 0– 10%" to "almost always 91–100%." The DERS has demonstrated high internal consistency (DERS total $\alpha = .93$ and all subscales $\alpha > .80$), good test-retest reliability during a period of four to eight weeks (intraclass correlation coefficient .88), and adequate construct and predictive

validity (Gratz & Roemer, 2004). In this study the DERS total score was used as an overall measure of emotion dysregulation.

Therapeutic Alliance. The Working Alliance Inventory short form (WAI-S; Tracey & Kokotovic, 1989) is a widely used questionnaire used to assess the therapeutic alliance. The shortened form of the WAI is a 12-item self-report measure derived from the full 36-item WAI (Horvath & Greenberg, 1989). Items on the WAI are rated on a 7-point Likert scale with higher scores indicating a stronger therapeutic alliance. The full WAI has been found to correlate moderately with other alliance measures (Horvath & Greenberg, 1989), and both the full and short form (Klein et al., 2003) has been found to predict psychotherapy outcome. Internal consistency estimates (Cronbach's α) for client and therapist WAI-S subscales and total scores were high, ranging from .83 to .98 (Kokotovic & Tracey, 1989). In this study, the total WAI client scores at session four were selected to represent the early alliance. There were eight participants who did not have an alliance rating at session four and their last observed alliance score was carried forward. The patient form was used because it has been found to predict treatment outcome more strongly than therapist-rated assessments of the alliance (Barber et al., 1999; Horvath & Symonds, 1991).

Work and Social Impairment. The Work and Social Adjustment Scale (WSAS; Mundt, Marks, Shear, & Greist, 2002) is a simple self-report 5-item measure of general impairment comprised of 5 items (work, home management, social leisure, private leisure, and relationships). Each of the five items is rated on a 9-point scale ranging from 0 (not at all a problem) to 8 (very severely impaired). Items can be pooled into a total score ranging between 0 and 40, with high scores denoting higher levels of disability. In this study all items were pooled into a total score.

The WSAS has demonstrated good internal consistency (Cronbach's α ranging between .70 and .90), sensitivity to change, and validity (Mundt et al., 2002).

Suicidal Behaviors. Evaluators used either the Suicide Attempt Self-Injury Interview (SASII; Linehan, Comtois, Brown, Heard, & Wagner, 2006) or the Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock, Holmberg, Photos, & Michel, 2007) at intake to assess the frequency of NSSI and suicide attempts (along with other variables not used in this study). In this study, the SASII was administered to the initial 26 participants before being replaced by the SITBI for the subsequent 25 participants. Equivalent items on the SASII and the SITBI were matched in our database to provide a consistent assessment of the frequency of suicide attempts and instances of NSSI across all participants. The SASII has demonstrated very good interrater reliability (median intraclass correlation coefficient .96), and adequate validity (Linehan et al., 2006). The SITBI has demonstrated excellent interrater reliability (r=1.0), good test-retest reliability over a six-month period (intraclass correlation coefficient .44), and good concurrent validity (Nock et al., 2007).

DBT-RU Session Note. The DBT-RU session note (Rizvi, 2010) was designed to create a standardized method for therapists to record treatment progress at DBT-RU. Within the session note format, therapists are prompted to report the occurrence of any life-threatening behaviors, therapy-interfering behaviors, client telephone contact, session target(s), and any other notable events. The following prompt for recording telephone contact was given: "Since the last session, how many times did the client telephone/text the therapist? Provide details if applicable". Using this prompt, therapists wrote down the frequency of contact and a short description of what was addressed during the call or text. Answers to this prompt were categorized into the six categories of telephone contact used in this study.

Data Analysis Plan

Aim 1. Descriptive analyses were conducted to report the overall use of calls and texts between clients and therapists using: frequency, mean, standard deviation, range, and percentage. The total frequency and total frequency by category of telephone contacts were reported at one month, three months, and six months (post-treatment). In addition, the monthly frequency of client contact was reported.

Aims 2 and 3. This study investigated if client baseline severity, early therapeutic alliance, and suicidal/NSSI history in the past year were associated with a higher frequency client telephone contact. As there is no prior research on factors influencing phone coaching frequency, a multiple regression was conducted to investigate if these factors were significantly correlated with the total frequency of phone coaching at six months. Predictors that were entered into the multiple regression were age, income, ethnicity, relationship status, client WAI total scores at session four, and baseline scores for the GAF, BSL-23, BDI-II, WSAS, DERS, and the GSI from the BSI. A t-test was used to explore mean differences in the frequency of telephone contact between individuals with and without a history of self-injury or suicide attempts in the past year.

<div align="center">

Results

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Baseline Severity

Consistent with the eligibility criteria, all participants met for a primary diagnosis of BPD. At intake, participants met for an average of 2.76 (SD= 1.84) current DSM-IV Axis I disorders; 28 (54.9%) met criteria for a comorbid mood disorder (i.e., major depressive disorder, dysthymia, bipolar disorder I, and depressive disorder not otherwise specified); 40 (78.4%) met criteria for an anxiety disorder (i.e. generalized anxiety disorder, agoraphobia, post-traumatic

stress disorder, specific phobia, social phobia, panic disorder, obsessive-compulsive disorder, and anxiety disorder not otherwise specified); 9 (17.6%) met criteria for alcohol dependence or abuse; 7 (13.7%) met criteria for substance abuse or dependence; 5 (9.8%) met criteria for a somatoform disorder (i.e., hypochondriasis, body dysmorphic disorder, pain disorder, and somatization disorder); and 3 (5.9%) met criteria for an eating disorder. In addition to BPD, participants met for an average of .88 (SD= .84) Axis II disorders. The most frequent co-occurring Axis II disorders were avoidant PD 17 (33.3%), paranoid PD 9 (17.6%), and obsessive-compulsive PD 9 (17.6%). Results for client mean scores on baseline severity measures, history of suicidal behaviors, and the therapeutic alliance can be found in Table 1.

Treatment Retention

During the course of this study, 35 (68.63%) participants completed the 6-month treatment and 16 (31.37%) were considered treatment dropouts. There were no significant differences between treatment completers and dropouts with regards to demographic characteristics, psychiatric diagnoses, and lifetime number of suicide attempts and NSSI. There were also no significant differences between completers and dropouts on scores for the WAI, BDI, BSI, WSAS, GAF, and DERS. An independent samples *t*-test was conducted to determine if there were mean differences in phone coaching contacts per week (log-transformed) between completers (n=35) and dropouts (n=16). The results indicated no significant differences between treatment completers and dropouts in their frequency of contacts per week, $t(49)= 1.14$, p=.26.

Telephone Contact Frequency

Throughout the length of a six-month comprehensive DBT program, the 35 participants who completed treatment initiated a total of 714 telephone contacts. The mean amount of contacts during a six-month period was 20.40 (*SD*=31.08) with a range of 0 to 143 and a median

of 11. The mean number of total contacts per month was 3.40 (SD=5.18) with a range of 0-23

and a median of 1.83 per month. When considering contacts made for phone coaching only, the

mean number of contacts per month was 2.55 (SD=4.49) with a range of 0-18 and a median of

one per month. Of the contacts made, 55.46% were telephone calls and 44.54% were texts. Over

a period of six-months, 6% made 0 telephone contacts, 45% made between 1 and 11 contacts,

38% made between 12 and 27, and 11% (4 participants) made between 79 and 143 telephone

contacts. The latter four participants accounted for 56% of the 714 contacts recorded in this

study. Although considered statistical outliers, these four participants were included in all

analyses because they are representative of the sample of individuals who use phone coaching in

DBT. A description of the monthly use of phone coaching by these four participants is presented

on Table 3.

Descriptive statistics for all contacts made by treatment completers in the first month,

mid-treatment, and between mid and post-treatment are presented on Table 2. The results from a

paired-samples *t*-test showed there were no significant differences between the number of

contacts made from intake to mid-treatment and from mid to post-treatment for the total of

number of contacts and total contacts by category.

For the 16 participants who dropped out, the average number of sessions attended was

7.50 (SD=4.21) with a range of 1 to 16 sessions (Median=8.50). The average number of weeks in

treatment was 10.94 with a range of 1 to 20 weeks (Median=13). During an average of 11 weeks,

treatment dropouts initiated a total of 117 contacts. The mean amount of contacts for treatment

dropouts was 7.31 (SD=6.95) with a range of 0 to 31 and a median of 6. The most frequent

reason for contact initiated by clients who dropped out was for session attendance 41.03%

followed by skills generalization 21.37%, check-ins 17.09%, suicidal behaviors 10.26%, other

9.40%, and the therapy relationship 0.85%.

Predictors of Phone Coaching

During data inspection, the data for telephone contact was not normally distributed as

assessed by a visual inspection of a Q-Q plot and a Shapiro-Wilk's test. The count data for

telephone contacts contained a high number of low values (i.e. individuals with zero or one

contact) that heavily skewed the distribution. To correct for the positive skew, a logarithmic

(x+1) transformation was made that normalized the distribution.

All analyses conducted on the predictors of phone coaching below, included only

treatment completers (n=35) and telephone contact for phone coaching (i.e., suicidal behaviors,

skills generalization, therapeutic relationship, and check-in). The rationale for only including

these four categories is based on the logic that telephone contact for session attendance and other

matters is the type of communication that most therapists can expect whereas phone coaching in

DBT is explicitly designed to address the remaining four categories, which are our variables of

interest.

A bivariate correlation analysis was conducted to investigate the association between

phone coaching and demographics (age, gender, income, ethnicity, relationship status), client

WAI session four scores, history of suicidal behaviors in the past year, and baseline measures

(BDI-II, DERS, BSI, BSL-23, WSAS, and the GAF). The results indicated there was a moderate

negative correlation between phone coaching and both income, $r(33) = -.39$, $p= .01$, and GAF

scores, $r(33) = -.35$, $p= .02$. With the outliers of telephone contact winsorized (truncated to the

next highest value; Ghosh & Vogt, 2012), the correlation between GAF scores and phone

coaching frequency was no longer significant, whereas the correlation between phone coaching

and income remained significant.

A multiple regression was conducted to predict phone coaching frequency by treatment completers (n=35) from age, gender, income, ethnicity, relationship status, client WAI session four scores, and intake scores for the BDI-II, DERS, BSI, BSL-23, WSAS, and the GAF. The multiple regression model did not statistically predict phone coaching contact at post-treatment, $F(12,22)= 1.20, p=.34$. The results remained non-significant when the multiple regression was conducted with the four outliers of contact frequency winsorized.

As reported above, there was no correlation between phone coaching and the total alliance score at session four. To further investigate this relationship, post-hoc analyses were conducted on the individual WAI alliance factors of goal, task, and bond (Bordin, 1979). For this analysis, the WAI scores of the first four sessions were aggregated into one mean score for each of the alliance factors. This procedure was followed because combining at least four early alliance ratings has been shown to result in a more reliable alliance score (Crits-Christoph, Gibbons, Hamilton, Ring-Kurtz, & Gallop, 2011). The results of a bivariate correlation between phone coaching frequency and the alliance factors of goal, task, and bond showed no significant associations.

A *t*-test was conducted to determine whether there was a statistically significant mean difference between treatment completers with (n=25) and without (n=8) a history of NSSI in the past year on phone coaching frequency. Two participants were not included in this analysis because it could not be determined that they had engaged in NSSI during the past year. Data on NSSI was entered as yes/no binary data. The results indicated no significant differences between these groups $t(31)=-.56, p=.58$. A second *t*-test was conducted to determine if there was a statistically significant mean difference between treatment completers with (n=22) and without (n=13) a history of suicide attempts in the past year on phone coaching frequency. Data on

suicide attempts was entered as yes/no binary data. The results indicated no significant

differences between these groups, $t(33)$=-.21, p=.83.

Discussion

The main purpose of this study was to provide descriptive data on the frequency and type

of telephone contact made by individuals with BPD in a comprehensive DBT program. Overall,

participants in this six-month study made a total of 714 contacts, 536 of which were for phone

coaching purposes. When considering all categories, therapists received a mean of 3.40 contacts

per month for each client. When focusing only on phone coaching, therapists received a mean of

2.55 contacts per month for each client. This frequency of contact appears to be acceptable to

most clinicians, especially when one considers that this mean frequency includes outliers and the

median number of phone coaching contacts was one per month.

Notably, four participants or 11% of the treatment completer's sample placed 56% of the

telephone contacts made in this study. The treatment notes of these four participants indicated

that the rate at which they contacted their therapists violated the therapists' limits and this

frequency was targeted as a therapy interfering behavior to reduce. A visual inspection of Table

3 shows a large reduction in contacts during the last two months of treatment for these four

outliers of phone coaching. This change in phone coaching frequency suggests that excessive

contact is amenable to change, although these participants still contacted their therapists at a

higher rate than the rest of the sample. However, this study cannot determine if the drop in

contact frequency was due to therapist efforts to reduce contacts or simply a factor of time in

treatment.

Of the phone coaching categories, contacts related to suicidal behaviors are often

considered the most stressful to answer. In this study there was an average of three telephone

contacts for suicidal behaviors over a period of six-months. These statistics do not suggest that the average DBT client is overwhelming their therapist with contact related to suicidal behaviors and may even indicate that these clients should be encouraged to engage in phone coaching more frequently.

Contacts for help with skills generalization were the most frequent reason (41%) for initiating contact with a therapist. As seen in Table 2, this was also the only category for which contacts increased over the course of treatment. The increase in contacts for skills generalization and the decrease in contacts for suicidal behaviors are in line with the skills deficit model in DBT (Linehan, 1993a) in which clients are taught to use skillful behavior to replace maladaptive ways of coping such as NSSI. Future studies should investigate if there is a similar pattern of phone coaching use during a longer course of DBT treatment.

Treatment dropouts in this sample used phone coaching differently from completers, although these results are difficult to interpret due to less time spent in treatment. Treatment dropouts remained in treatment for an average of eight sessions over 11 weeks. Predictably, participants who dropped-out contacted their therapist most frequently for the category of session attendance (41%), meaning there were more contacts for matters such as session cancellation and treatment avoidance. Similar to Chalker et al. (2015), there was a significant correlation between frequency of phone coaching contacts and dropouts; however, this finding has very limited explanatory power as dropouts spend less time in treatment and thus do not have the opportunity to accumulate as many telephone contacts. When accounting for phone coaching frequency on a weekly basis, there was no significant mean difference between completers and dropouts.

In this study, participants contacted their therapists at a higher frequency than in studies that did not focus on a BPD population (Evans et al., 2000; Limbrunner et al., 2011). In a three

month comparison with Limbrunner et al. (2011), the present study observed that 82% of

participants contacted their therapist at least one time and 35% placed more than six contacts,

whereas Limbrunner et al. (2011) observed that 47% used phone coaching at least once and 18%

used phone coaching more than six times. The mean number or contacts per client at three

months was 11.20 (SD=18.89) in the present study and 4.82 (SD=7.11) in Limbruner et al.

(2011). It should be kept in mind that Limbrunner et al. (2011) utilized an eating disorders

population within a day treatment program, limited calls to no later than 11pm, and did not allow

for text messaging, which accounted for nearly half of the telephone contacts in the present

study.

When we focus on the number of contacts for phone coaching only, the present study

received a similar number of contacts to Linehan and Heard (1993). The present study observed

a mean of 2.55 (*SD*=4.49) contacts per month whereas Linehan et al. (1991) reported 2.4

(*SD*=2.5). Identical to the current study, Chalker et al. (2015) reported a median of one call per

month; however, it's important to keep in mind that the median number of calls does not

adequately reflect the small percentage of clients who use phone coaching significantly more

than other individuals, as observed in this study. These statistics provide a consistent, but

preliminary look at the overall frequency BPD clients contact their DBT therapists.

The second aim of this study was to explore whether baseline severity and suicidal

behaviors would predict the overall number of calls received in this study. The results indicated

that baseline severity (to include suicidal behaviors) did not affect the rate at which participants

used phone coaching in this study (see below for GAF scores). These findings suggest that client

severity at baseline is not a cause for concern in terms of requiring more time for phone coaching

between sessions. On the other hand, these findings can be interpreted to suggest that more

orientation or encouragement to utilize phone coaching is needed, if these clients are indeed

engaging in more maladaptive behaviors.

In a bivariate correlation, client income and GAF scores were predictive of more frequent

phone coaching use by study participants. In terms of income, participants who earned less were

more likely to have greater contact with their therapist. In the literature, lower income is

associated with multiple negative outcomes such as higher rates of mental illness, increased

stress, and lower well-being (Chiavegatto Filho, Kawachi, Wang, Viana, & Andrade, 2013;

Costello E, Compton SN, Keeler G, & Angold A, 2003; Ferrer-i-Carbonell, 2005; Kondo et al.,

2009; Pabayo, Kawachi, & Gilman, 2013; Pickett & Wilkinson, 2010). As such, participants in

this study with lower incomes may have had a higher need for coaching due to facing more

adverse conditions such as being financially dependent on others, poor living conditions, and an

inability to pay for unexpected expenses. This association may also indicate that individuals with

lower income may benefit from interventions aimed at ameliorating problems associated with

their income status or financial instability.

In regards to GAF scores, participants rated as more severe were more likely to contact

their therapist for phone coaching; however, the correlation between the GAF and phone

coaching was no longer present when the four outliers of phone coaching were winsorized

(truncated to the next highest value). The fact that this association was no longer significant

indicates that the correlation between phone coaching and GAF scores was heavily influenced by

a small number of extreme scores and is not representative of the entire sample. Further study of

this relationship is needed.

The third aim of this study was to investigate whether the early therapeutic alliance

would be predictive of phone coaching use. It was predicted that a stronger early therapeutic

alliance would result in a higher frequency of phone coaching use. The results indicated that the early therapeutic alliance was not predictive of phone coaching frequency. The relationship remained non-significant even when post-hoc tests were conducted using the three components of the alliance, task, bond, and goals (Bordin, 1979).These results were surprising given that the alliance has been found to be predictive of treatment engagement (Arnow et al., 2013; Connors et al., 1997; Keller et al., 2010). It is possible that these null findings are explained by the high mean alliance ratings and the lack of variability in WAI scores. On average, participants rated the total alliance and the three alliance factors between 5.85 and 6.06 on a 7-point Likert scale with standard deviations no greater than one. As a result, it is possible that phone coaching use was not affected by the therapeutic alliance because most ratings fluctuated within a short and favorable range.

There are several limitations in the current study. The first limitation pertains to the small sample size of treatment completers. As such, a larger sample is needed to confirm the findings pertaining to treatment predictors and mean differences in this study. Second, this study did not ask therapists to record the amount of time spent providing phone coaching nor the time of day when contacts were conducted. The lack of a time estimate and time of day limits the information needed when one considers the additional effort required in providing phone coaching. As a general rule, DBT therapists are instructed to keep their coaching calls focused on applying skills for a duration of about 10 to 20 minutes (Linehan, 1993), but coaching calls are known to range from a few minutes to over 30. Future studies should be designed to report the amount of time DBT therapists spend providing phone coaching (for an estimate with an ED population, see Limbrunner et al., 2011). Although not an aim of this study, a third limitation is that no data on phone coaching and treatment outcome were provided. Outside of the limited

data by Chalker et al., (2015), research still needs to demonstrate whether use of phone coaching improves the outcome of treatment for clients in DBT. A fourth limitation in this study pertains to telephone contacts being categorized on the basis of a hierarchy. Categorizing contacts on a hierarchy has the benefit of not over representing the frequency of contacts and more accurately representing the purpose of the contact, but also limits the information on the variety of problems addressed during client telephone contacts.

Overall, the observed frequency of client initiated telephone contacts does not fit the description that individuals with BPD have sometimes been given of abusing limits or "boundaries" by placing an overwhelming number of out of session contacts. Outside of a small percentage of clients, the call frequency in this study appears acceptable and focused on generalizing skillful behaviors. Furthermore, this study indicated that client severity at baseline is not related to use of phone coaching use whereas individuals with a lower income may use this service more frequently. This information can help clinicians and administrators better understand the effort involved in providing phone coaching and make decisions on how to better provide this service to clients with BPD.

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Table 1

Client Baseline Severity

Baseline Measures	M (SD) or %
Lifetime history of suicide attempts	12.33 (29.88)
Attempted suicide within the past year	33.30%
Lifetime history of NSSI	467.30 (1419.34)[a]
Engaged in NSSI within the past year	64.70%[b]
BDI	29.13 (13.43)
DERS	119.61 (21.74)
BSL	4.31 (3.43)
BSI - Global Severity Index	1.58 (.74)
WSAS	22.71 (9.41)
GAF	47.86 (7.38)
WAI total score at session four	5.88 (1.01)

Note. N=51

[a] One extreme outlier was excluded

[b] Four participants were not included due to missing data

Table 2

Descriptive Data of All Telephone Contact at 1ˢᵗ Month, Mid-tx, and Post-tx by Category

		1ˢᵗ Month	Start to Mid-Tx	Mid to Post-Tx	Total Contact
Suicidal Behaviors	n	46	74	41	115
	M (SD)	1.31 (5.17)	2.11 (6.65)	1.17 (2.29)	3.29 (6.65)
	%	36.51%	18.88%	12.73%	16.11%
	Range	0-30	0-36	0-9	0-45
Skills Generalization	n	36	103	118	221
	M (SD)	1.03 (1.48)	2.94 (5.53)	3.37 (6.13)	6.31 (5.53)
	%	28.57%	26.28%	36.65%	30.95%
	Range	0-6	0-23	0-32	0-55
Therapy Relationship	n	3	29	17	46
	M (SD)	.09 (.51)	.83 (3.66)	.49 (1.56)	1.31 (5.07)
	%	2.38%	5.36%	5.28%	6.44%
	Range	0-3	0-21	0-7	0-28
Check-In	n	27	84	70	154
	M (SD)	.77 (3.05)	2.40 (5.05)	2.00 (4.60)	4.40 (8.06)
	%	21.43%	5.61%	21.74%	21.57%
	Range	0-18	0-22	0-25	0-34
Session Attendance	n	2	57	60	117
	M (SD)	.06 (.33)	1.63 (1.85)	1.71 (2.29)	3.34 (3.62)
	%	1.59%	1.53%	18.63%	16.39%
	Range	0-2	0-6	0-9	0-14
Other	n	4	45	16	61
	M (SD)	.34 (.84)	1.29 (3.08)	.45 (1.17)	1.74 (4.13)
	%	9.52%	3.83%	4.97%	8.54%
	Range	0-4	0-15	0-5	0-20
Total	n	126	392	322	714
	M (SD)	3.6 (8.53)	11.20 (18.89)	9.20 (13.18)	21.60 (32.61)
	%	100%	100%	100%	100%
	Range	0-49	0-67	0-76	0-143

Note. Only treatment completers were included, n=35

Table 3

Descriptive Data of Monthly Phone Coaching Frequency by Outliers of Phone Coaching Use

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month
Mean (*SD*)	19.5 (19.74)	15.25 (9.18)	17.75 (7.63)	17.50 (16.05)	6.75 (2.87)	7.25 (4.27)
Median	10.5	13.5	19.5	14	7	6
n	78	61	71	70	27	29
Range	8–49	7–27	7–25	2–40	3–10	4–13

Note. n=4