



Skills-homework completion and phone coaching as predictors of therapeutic change and outcomes in completers of a DBT intensive outpatient programme

Emily R. Edwards*^{1,2} , Hedy Kober¹, Gabrielle R. Rinne^{1,3}, Sarah A. Griffin⁴, Seth Axelrod¹ and Emily B. Cooney¹

¹Yale University School of Medicine, New Haven, Connecticut, USA

²James J. Peters VA Medical Center, VISN 2 MIRECC, Bronx, New York, USA

³Yale University, New Haven, Connecticut, USA

⁴University of Missouri, Columbia, Missouri, USA

Objectives. Dialectical behaviour therapy (DBT) emphasizes generalization of skills to the patient's real-world context as a primary mechanism of change in treatment. To promote generalization, DBT includes weekly skills-focused homework assignments and as-needed phone coaching. Despite this central function of generalization in DBT, research on these treatment components is limited. The current study addresses this research gap by assessing the association of homework and phone coaching to DBT treatment outcomes.

Design. A longitudinal study design explored the extent to which (a) completion of skills homework and (b) frequency of phone coaching were associated with therapeutic changes and treatment outcomes in a DBT intensive outpatient programme (DBT-IOP).

Method. Medical records and diary cards of 56 patients who had completed a four-month treatment cycle of DBT-IOP were reviewed and coded for proportion of skills homework completed, frequency of phone coaching calls, and reported urges for and engagement in suicide, non-suicidal self-injury, illicit or non-prescribed substance use, and alcohol use behaviours.

Results. Completion of skills homework and frequency of phone coaching were significantly associated with (a) reduced urges for suicide, non-suicidal self-injury, illicit or non-prescribed substance use, and alcohol use from the beginning to end of treatment and (b) a lower likelihood of engaging in any of these behaviours during the final month of treatment.

Conclusions. Results suggest that within a DBT programme modified for an intensive outpatient setting, skills homework and phone coaching may enhance therapeutic change and outcomes in target behaviours. These generalization methods appear to be important ingredients of DBT effectiveness.

*Correspondence should be addressed to Emily R. Edwards, James J. Peters VA Medical Center, VISN 2 MIRECC, 130 W Kingsbridge Rd, The Bronx, NY 10468, USA (email: Emily.Edwards@yale.edu).

Practitioner points

- In dialectical behaviour therapy (DBT), therapeutic skills homework and phone coaching are specifically designed to promote generalization of skills from the therapeutic context to the patient's real-world contexts.
- In a DBT intensive outpatient programme, patient engagement with therapeutic homework and phone coaching were associated with favourable therapeutic change and outcomes in target urges and behaviours.
- Clinicians may consider a patient's lack of homework completion and/or phone coaching to be early warning signs of poor therapeutic progress within dialectical behaviour therapy.

Background

Dialectical behaviour therapy (DBT) was initially developed to treat suicidal and non-suicidal self-injury (NSSI) behaviours occurring within the context of borderline personality disorder (BPD). With over 40 randomized clinical trials, DBT is a well-established treatment for BPD (Dixon & Linardon, 2020). Growing evidence suggests DBT adaptations are also efficacious for various populations and clinical presentations, including depressed older adults (Lynch, Morse, Mendelson, & Robins, 2003), suicidal and self-injuring adolescents (McCauley et al., 2018; Mehlum et al., 2014; Rathus & Miller, 2002), eating disorders (Safer & Jo, 2010; Telch, Agras, & Linehan, 2001), and substance use disorders (Dimeff & Linehan, 2008).

Despite the large literature supporting DBT as an efficacious treatment, limited research has investigated *how* or *why* therapeutic change occurs in DBT (Boritz, Zeifman, & McMain, 2018). Identifying mechanisms of change can aid ongoing treatment development and refinement by highlighting components necessary for maximizing treatment effects (Kazdin, 2007). For example, as DBT is adapted for different populations, clinical presentations, contexts, and formats, understanding these mechanisms of change is necessary to ensure critical treatment components are maintained.

The current study explores skills generalization as a potential mechanism of change in DBT. In the sections that follow, we introduce the theoretical rationale for generalization as a mechanism of change. Components of DBT that specifically target generalization – namely skills homework and phone coaching – are then discussed within the context of generalization and treatment progress in DBT.

Generalization as a mechanism of change

Behaviour therapies are based on principles of behaviourism, such as conditioning and reinforcement. Primary goals of behaviour therapies include (a) replacing conditioned responses (e.g., maladaptive coping) with new, more adaptive behaviours (e.g., emotion-regulation strategies, social skills) and (b) generalizing these new behaviours to the natural environment. Consistent with these goals, a proposed mechanism of change in behaviour therapies is generalization of behaviours learned in therapy to real-life contexts (Gruber, 1971).

DBT is a behavioural therapy; consistently, generalization is commonly proposed as a mechanism of change in DBT (Linehan, 1993; Lynch, Chapman, Rosenthal, Kuo, & Linehan, 2006). Patients' use of DBT skills outside of treatment is significantly associated with treatment outcomes (Barnicot, Gonzalez, McCabe, & Priebe, 2016; Neacsu, Rizvi, & Linehan, 2010; Rudge, Feigenbaum, & Fonagy, 2020; Stepp, Epler, Jahng, & Trull, 2008), and DBT skills have been supported as a mechanism of change in both mediational (Neacsu et al., 2010) and component analyses (Linehan et al., 2015). For example, in a

study of 108 women with BPD, use of DBT skills mediated the relationship between time in treatment and (a) decreased likelihood of suicide attempts, (b) increased likelihood of abstinence from NSSI, (c) increased anger control, and (d) decreased depressive symptoms (Neacsiu et al., 2010). Similarly, in a study of 27 DBT outpatients, skills use was associated with reductions in BPD symptoms across the course of treatment (Stepp et al., 2008).

Given the centrality of generalization to DBT, clarifying the extent to which skills generalization acts as a mechanism of change in DBT is crucial. Within the DBT model, weekly skills homework and as-needed phone coaching are specifically designed to encourage generalization of skills (Linehan, 1993). Investigating these components of treatment may be critical to understanding how generalization contributes to DBT treatment effects.

Therapeutic homework

Like many behaviour therapies, DBT assigns therapeutic homework to encourage generalization of skills to the patient's natural environment. New skills are introduced and behaviourally rehearsed during weekly, skills-focused, group therapy sessions. 'Skills homework'¹ is then assigned to encourage generalization of the introduced skill between group sessions. In DBT, skills homework typically involves practising the newly acquired skill and completing a corresponding worksheet that guides practice. Homework completion is given high priority, with group leaders confirming patient commitment to every homework assignment and addressing each instance of missing homework with brief, 'missing links' interventions (Linehan, 2015).

To our knowledge, there are no published reports investigating the effects of therapeutic homework on treatment outcomes in DBT. Substantial research, however, has investigated the impact of homework on cognitive behaviour therapy (CBT) outcomes. Like DBT, CBT regularly includes therapeutic homework to encourage generalization of skills to real-life contexts (Beck, 2011). Inclusion of homework in CBT yields moderate improvements in treatment outcome (Kazantzis, Deane, & Ronan, 2000; Kazantzis, Whittington, & Dattilio, 2010). Completion of assigned homework is also pivotal; meta-analyses suggest quality (e.g., accuracy, thoroughness) and quantity (e.g., proportion completed) of homework completion is moderately associated with CBT treatment outcome (Kazantzis et al., 2000, 2016; Mausbach, Moore, Roesch, Cardenas, & Patterson, 2010).

These homework effects may also occur in DBT. However, there are notable differences between DBT and more traditional CBT treatments. First, CBT is typically delivered as an individual therapy (Beck, 2011), whereas most forms of DBT include both individual and group modalities (Linehan, 1993). In CBT, the 1:1 context allows therapists to individualize homework to the unique needs of each patient (Beck, 2011); conversely, DBT skills homework is delivered and reviewed in a group context following a curriculum and is not individualized. Second, CBT homework typically builds upon itself from week to week, resulting in continuity of assignments across the course of treatment (Beck, 2011). Alternatively, skills homework in DBT changes from week to week in accordance with the skills-group curriculum (Linehan, 2015). Given these differences, it remains

¹ DBT often also incorporates additional homework into individual therapy. The focus of this study, however, is homework delivered and reviewed within the context of DBT skills groups.

unclear to what extent relationships between homework and treatment outcomes in CBT may replicate in DBT.

Phone coaching

Relatively unique to DBT is incorporation of phone coaching as a generalization-focused treatment component. DBT phone coaching serves three functions: (1) decreasing crisis behaviours (e.g., suicide, NSSI); (2) generalizing skills application to real-life contexts; and (3) making repairs to the therapeutic relationship (Ben-Porath, 2004, 2015; Linehan, 1993). Phone coaching is intended to provide patients in-the-moment instruction and reinforcement surrounding application of skills learned in treatment, thereby fostering generalization of skilful behaviour to real-life contexts (Ben-Porath, 2015; Linehan, 1993; Lynch et al., 2006). Given the presumed reinforcing nature of therapist contact, restrictions are placed around phone coaching to limit potential for reinforcement of maladaptive, dysregulated behaviours (e.g., maintaining focus on skills use and application and withdrawing access to phone coaching for 24 hours after engagement in NSSI or suicide behaviours; Ben-Porath, 2004; Linehan, 1993).

Little research has been published on phone coaching, either within or outside of DBT. Despite DBT's roots in data-driven treatment development, the majority of literature in this area is anecdotal and founded in clinical experience (e.g., Ben-Porath, 2004, 2015; Ben-Porath & Koons, 2005; Manning, 2011; Steinberg, Steinberg, & Miller, 2011; Wisniewski & Ben-Porath, 2005).

Early evidence suggested phone coaching could be contraindicated for persons with past suicidal behaviour (Evans, Morgan, Hayward, & Gunnell, 1999). In a randomized trial, 827 patients recently hospitalized for deliberate self-harm (i.e., suicidal or NSSI behaviour) were randomly assigned upon discharge to receive (a) 24-hour telephone access to an on-call psychiatrist to assist with crises and emotional difficulties or (b) treatment as usual. Telephone access was not provided as part of a DBT programme and therefore not structured as DBT phone coaching. However, it shared some similarities. For example, consistent with DBT's '24-hour rule' to limit accidental reinforcement of crisis behaviours, telephone access was only available if the patient had not already engaged in deliberate self-harm at the time of contact. Overall, results suggested telephone access was ineffective in reducing deliberate self-harm behaviour over a six-month follow-up period. For patients who participated in the study after a first instance of deliberate self-harm, telephone access had no effect on subsequent frequency of deliberate self-harm. Conversely, for patients with a history of multiple prior instances of deliberate self-harm, telephone access was associated with 85% *more* deliberate self-harm behaviour over the follow-up period in comparison to patients receiving treatment as usual (Evans et al., 1999).

The potential ineffectiveness of telephone access was also highlighted in a long-term, randomized clinical trial of outpatient schema therapy for borderline personality disorder (Nadort et al., 2009). The trial randomly assigned 62 patients with borderline personality disorder to receive outpatient schema therapy either with or without access to telephone availability outside office hours. Unlike DBT, no restrictions were placed on telephone accessibility. Although patients showed notable improvements in symptoms after receiving 1.5 years of treatment, there were no significant differences between patients who received versus did not receive telephone access. Authors therefore concluded that telephone availability, while not iatrogenic when provided within the context of schema therapy, did not provide a value-add to treatment outcomes (Nadort et al., 2009).

Investigations into phone coaching within DBT are generally more optimistic. In a recent study of 63 patients receiving standard, outpatient DBT, frequency of out-of-session phone contact was associated with lower likelihood of dropout, higher patient satisfaction, higher therapist satisfaction, and greater reductions in psychological symptoms across the course of treatment (Chalker et al., 2015). Preliminary evidence also suggests DBT patients' use of telephone contact is generally consistent with the DBT model of phone coaching. In a study of 51 adults with BPD receiving standard, outpatient DBT, approximately 16% of telephone contacts targeted suicidal or NSSI behaviours, 31% targeted skills generalization, and 6% targeted the therapeutic relationship. Other therapeutic contacts included therapeutic check-ins (22%), calls about session attendance (16%), and miscellaneous targets (9%; Oliveira & Rizvi, 2018). Similarly, in a study of 17 adults with eating disorders receiving DBT-based day treatment, 40% of telephone contacts targeted reduction of urges to engage in eating-disorder behaviour (Limbrunner, Ben-Porath, & Wisniewski, 2011).

Current study

Understanding mechanisms of change in DBT is critical for treatment optimization and refinement. The current study therefore investigates generalization of skills as a mechanism of change in DBT modified for an intensive outpatient programme (hereafter DBT-IOP). Because skills homework and phone coaching are specifically designed to encourage generalization of skills, these treatment components are the focus of this study. Further, given focus of the DBT-IOP on reducing suicide, NSSI, illicit or non-prescribed substance use, and alcohol use, treatment outcomes were defined as changes in urges for and engagement in these target behaviours. Established research on generalization, therapeutic homework, and phone coaching informed the following hypotheses:

1. Higher completion of weekly skills homework would be associated with reductions in DBT-IOP target urges and behaviours.
2. Higher utilization of phone coaching would be associated with reductions in DBT-IOP target urges and behaviours.
3. Completion of weekly skills homework and utilization of phone coaching would independently predict treatment response even after controlling for programme attendance.

Method

Treatment setting

Data were collected from a DBT-IOP within a day-hospital setting. To accommodate the intensive outpatient context, DBT-IOP made the following modifications to the traditional DBT structure:

- a. Interventions were delivered primarily in a group format. The programme occurred over two days per week, with three, one-hour groups per treatment day: two diary-card review groups, one behaviour-chain analysis group, one skills-coaching group, one skills instruction group, and one skills-homework review group. Skills instruction and homework review groups followed standard DBT skills-training protocols.
- b. Treatment cycles were four months in length, with one skills module reviewed per month (i.e., emotion regulation, distress tolerance, interpersonal effectiveness, and

- mindfulness). Admissions were rolling. At the end of four months, patients had the option of renewing for an additional four-month cycle or discharging. For current analyses, only data from the first, four-month treatment cycle were included. This represents approximately 96 hours of group intervention (16 weeks at 6 hours per week).
- c. All groups were co-led by licensed, expert DBT psychologists alongside DBT trainees (i.e., psychology or social work practicum students, and/or pre-doctoral psychology interns).
 - d. Similar to other 'group-only' DBT programmes (Linehan et al., 2015), each patient was assigned a primary clinician within the DBT-IOP. Primary clinicians were DBT trainees supervised by licensed, expert DBT psychologists. Primary clinicians provided care coordination, encouragement of skills practice, case management, phone coaching, weekly risk assessment and management, as-needed family therapy, and ongoing treatment planning.
 - e. Phone coaching was available to patients from their DBT primary clinician (with other DBT team members serving as backup) on Mondays through Thursdays from 8am to 9pm and on Fridays from 8am to 6pm. Outside these hours, phone coaching was available from primary clinicians and/or expert DBT psychologists. Primary clinicians received training and supervision in phone coaching following standard DBT protocols (Ben-Porath & Koons, 2005).
 - f. All patients were required to meet with an external, outpatient, individual therapist at least once per week. Outpatient therapists were not required to be DBT-trained nor to be delivering DBT-oriented therapy. If patients terminated outpatient therapy during the course of DBT-IOP, they worked with their primary clinician to secure a new outpatient therapist.
 - g. All patients received ongoing medication management with an internal or external licensed psychiatrist or advanced nurse practitioner. The internal psychiatrist was an active member of the DBT treatment team and followed DBT protocols for medication prescribing/consultation (Linehan, 2013; Witterholt & Nelson, 2013).
 - h. Skills handouts and worksheets followed the DBT skills-training manual (Linehan, 2015), with minor modifications to suit the IOP context.
 - i. Appropriateness of patients referred for participation was determined via clinical interview and based on assessment of the client's difficulties with emotion dysregulation, broadly defined, and ability to engage in group-format treatment. There were no diagnostic eligibility requirements.

Participants

Charts from 88 patients enrolled in DBT-IOP between 1 January 2017 and 31 December 2019 were reviewed. Patients were excluded from the dataset if (a) the patient discontinued DBT-IOP before completing a full, four-month cycle ($n = 4$) or (b) diary-card data yielded fewer than 7 days of data in Month 1 and/or Month 4 ($n = 28$). After these exclusions, 56 patients were included in the final sample. Patients were predominantly female, White, and in early adulthood (see Table 1). Chart diagnoses at the start of treatment reflected notable heterogeneity in clinical presentation; most common diagnoses included major depressive disorder ($n = 35$) and borderline personality disorder ($n = 32$). This study was completed as part of ongoing quality-improvement

efforts of the DBT-IOP. All procedures were approved by the Institutional Review Board at Yale University School of Medicine.

Procedures

Data were collected from patient progress notes, DBT diary cards, and attendance records. These data were used to explore the extent to which (a) completion of skills homework and (b) utilization of phone coaching were associated with DBT-IOP treatment outcomes after statistically controlling for attendance. To satisfy assumptions of temporal order, a longitudinal design with cross-lagged analyses was used wherein completion of skills homework and utilization of phone coaching were assessed during the first three months of treatment (weeks 1–12), and therapeutic outcomes were assessed in the fourth month of treatment (weeks 13–16). Treatment outcomes were determined by assessing differences in (a) mean urge intensities for and (b) frequency of engagement in target behaviours (i.e., suicide, self-harm, illicit or non-prescribed substance use, alcohol use) between Month 1 (weeks 1–4) and Month 4 (weeks 13–16) of treatment.

Measures

Completion of skills homework

Skills-homework worksheets were assigned to patients during weekly, skills instruction groups and reviewed during homework review groups the following week. Patient completion of homework (i.e., producing completed worksheet/s and discussing associated skills application in session) was recorded in progress notes within each patient's chart. Progress notes were reviewed, and completion of each assignment was coded as 'incomplete' or 'complete' (partial completions were coded as 'incomplete'). Completion of skills homework was operationalized as the proportion of completed skills homework in attended homework review groups during the first 12 weeks of treatment (e.g., a patient completing 8 homework assignments and attending 10 skills-coaching groups received a score of 80%).

Utilization of phone coaching

All patients had access to and were encouraged to utilize phone coaching throughout the duration of their treatment. Patients could request phone coaching from their primary clinician and/or treatment team members via a paging system. Consistent with the DBT protocol (Linehan, 1993), phone coaching was not provided if the patient had engaged in NSSI or suicide behaviour within 24 hours prior to paging. Details about each coaching call (e.g., prompting event, nature of coaching, coping plan, etc.) were recorded in progress notes within the patient's chart. Utilization of phone coaching was operationalized as frequency of coaching-focused calls (i.e., calls in which the clinician provided instruction, assistance, and/or reinforcement around skills use) occurring during the first 12 weeks of treatment.

Table 1. Patient demographics & chart diagnoses

	<i>n</i>	<i>N%</i>
Gender		
Female	44	78.6%
Male	9	16.1%
Transgender/Non-Binary	3	5.4%
Race/Ethnicity		
White/Caucasian	50	89.3%
Hispanic	3	5.4%
Black/African American	1	1.8%
Asian	2	3.6%
Personality disorders		
Borderline personality disorder	32	57.1%
Unspecified personality disorder	3	5.4%
Mood disorders		
Major depressive disorder	35	62.5%
Bipolar disorder	12	21.4%
Other specified mood disorder	1	1.8%
Unspecified mood disorder	8	14.3%
Anxiety, OCD, and trauma disorders		
Generalized anxiety disorder	7	12.5%
Obsessive compulsive disorder	2	3.6%
Post-traumatic stress disorder	15	26.8%
Unspecified anxiety disorder	14	25.0%
Eating disorders	6	10.7%
Adjustment disorder	3	5.4%
Psychotic disorders	1	1.8%
Body dysmorphic disorder	1	1.8%
Impulse control disorder	1	1.8%
Substance use disorders		
Alcohol	14	25.0%
Cannabis	9	16.1%
Cocaine	2	3.6%
Heroin	2	3.6%
Other	2	3.6%
Polysubstance	6	10.7%

Attendance

Patient charts were also coded for programme attendance. Attendance was operationalized as the proportion of scheduled programme days at least partially attended by the patient.

Treatment outcomes

Treatment outcome data were gathered from patients' diary cards. Throughout treatment, patients completed diary cards to report for each day of the week (a) their highest urge for engaging in each target behaviour and (b) engagement in each target behaviour. Diary cards were reviewed weekly with patients during diary-card review groups and scanned

into the patient's chart to aid in tracking treatment progress. Diary cards were coded for reported urges for and engagement in target behaviours. From these, various indicators of treatment outcome were calculated.

First, change scores were calculated to determine change from beginning to end of treatment in patient urges for target behaviours. Mean reported urges for target behaviours at the beginning of treatment (Month 1) were subtracted from mean reported urges at the end of treatment (Month 4). Resulting values were used as an index of change in urges across the course of treatment.

Second, frequency of engagement in each target behaviour during the beginning of treatment (Month 1) and end of treatment (Month 4) were calculated. To account for missing data, frequencies were calculated as the proportion of total days on which a target behaviour was reported out of the total number of days with any reported diary-card data (e.g., a patient reporting two days with NSSI and providing fourteen days of data in a given month received a NSSI frequency score of 2/14, or 0.14, for that month). To determine improvement in frequency of engaging in target behaviours across treatment, frequencies at the beginning of treatment (Month 1) were subtracted from frequencies at the end of treatment (Month 4). To further understand patient status at the end of treatment, patients were also coded according to whether they reported any (or no) engagement in one or more target behaviours during the final month of treatment.

Results

Descriptive statistics

On average, DBT-IOP patients attended 88% of all scheduled programme days ($SD = 9\%$, median = 88%, and range = 68-100%). Patients completed 86% of skills-homework assignments over the first three months of treatment ($SD = 18\%$, median = 91%, range = 36-100%), with 24 out of 56 patients completing all skills-homework assignments. Patients also made an average of 5.39 phone coaching calls ($SD = 5.69$, median = 3, range = 0-31) over the first three months of treatment; only 5 patients made no phone coaching calls during this period. Accordingly, although not assessed formally, patients were generally receptive to phone coaching, were understanding of rationales for restrictions on availability, and utilized the intervention appropriately. On multiple occasions, patients also noted that knowing they would lose access to phone coaching was helpful in motivating them away from acting on urges for crisis behaviours, such as self-harm. On diary cards, patients provided data for a total of 2,139 of the possible 3,136 possible diary-card days² (68.21%, including 69.71% of Month 1 days and 66.71% of Month 4 days). Diary cards reflected generally low overall urges for and rates of engagement in target behaviours. Reported urges were relatively stable from Month 1 to Month 4, whereas frequency of target behaviours decreased slightly. See Tables 2 and 3 for a summary of patients' urges for and engagement in target behaviours.

Treatment outcome

Correlational analyses were first used to determine the extent to which (a) proportion of skills homework completed in Months 1-3 and (b) frequency of phone coaching in Months 1-3 were associated with changes in urges for and engagement in target behaviours

² 56 patients, each with 28 days (4 weeks) in Month 1 and 28 days in Month 4

between Month 1 and Month 4 (see Table 4 for a summary of these results). Regarding urges, the proportion of skills homework completed was significantly associated with reductions in urges for suicide ($r = -.35, p < .01$) and illicit or non-prescribed substance use ($r = -.36, p < .01$) and marginally associated with reductions in urges for alcohol use ($r = -.25, p = .06$). Frequency of phone coaching was also significantly associated with reductions in urges for NSSI ($r = -.31, p = .02$). Regarding frequency of engagement in target behaviours, results reflected no significant associations. Correlational analyses further suggested that as urges for a target behaviour decreased, frequency of engagement in that behaviour and urges for other target behaviours also tended to decrease.

Second, a multivariate analysis of covariance was used to further investigate the relationship between treatment components and patient engagement in target behaviours at the end of treatment. Specifically, analyses compared rates of homework completion and phone coaching utilization across individuals who reported engaging in one or more target behaviours (i.e., suicide, NSSI, illicit or non-prescribed substance use, alcohol use) during the final month of treatment versus individuals who did not report engaging in any target behaviours, controlling for programme attendance. Of the 56 patients included in the sample, 27 reported engaging in one or more target behaviours during the final month of treatment, and 27 did not report engaging in any target behaviours. Two patients did not provide adequate data on engagement in target behaviours and were therefore excluded from these analyses. Results of the omnibus test suggested significant differences across the two groups, Wilks' $\lambda = 0.86, F_{(2, 50)} = 3.95, p = .03$. Follow-up univariate tests suggested patients who did not report engaging in target behaviours completed significantly more homework throughout Months 1 to 3 ($M = 91.30\%, SD = 13.27\%$) compared to patients who reported engaging in target behaviours ($M = 79.81\%, SD = 20.76\%$), $F_{(1, 54)} = 5.44, p = .02$. Although patients who did not engage in target behaviours made slightly more coaching calls ($M = 6.00, SD = 5.31$) compared to patients who did engage in target behaviour(s) ($M = 3.85, SD = 3.49$), this difference was only marginally significant $F_{(1, 54)} = 2.88, p = .096$.

Discussion

Results support skills homework and phone coaching as important aspects of DBT. As DBT is adapted to different settings, contexts, and populations, there may be temptation to exclude certain treatment elements due to concerns of cost, logistics, and/or patient level of functioning (Dimeff & Koerner, 2007; Robins & Chapman, 2004). Nevertheless, skills homework and as-needed phone coaching appear to play important roles in supporting favourable therapeutic change and outcomes surrounding target behaviours.

Completion of skills homework

Consistent with Hypothesis 1, patients who completed greater proportions of the weekly skills-homework assignments experienced larger reductions in urges for suicide and illicit or non-prescribed substance use from the beginning to end of treatment. Such patients were also less likely to engage in any target behaviours during the final month of treatment. The magnitude of these associations was comparable to that observed in CBT (Kazantzis et al., 2000, 2010) and provides further support for therapeutic homework as a key element of behavioural interventions, particularly in the treatment of suicide and illicit

Table 2. Frequency of target behaviours

Behaviour	Beginning of treatment (Month 1)			End of treatment (Month 4)			Mean Frequency per Patient Reporting Behaviour
	Urge ^a M (SD)	Frequency of Behaviour across Patients	Mean Frequency per Patient Reporting Behaviour	Urge ^a M (SD)	Frequency of Behaviour across Patients	Frequency of Patients Reporting Behaviour	
Suicide	2.59 (2.56)	2	1.00	2.28 (2.64)	0	0	0
Self-harm	2.37 (2.69)	39	3.00	2.42 (2.51)	16	11	1.45
Illicit Substance Use	2.02 (2.73)	73	6.64	2.42 (2.92)	66	15	4.40
Alcohol Use	1.71 (2.16)	57	3.80	1.71 (2.34)	42	16	2.63

^aUrges rated on scale of 1–10.

Table 3. Behaviours across treatment

Reported Behaviour	Patients Not Engaging in Behaviour in Month 1 or 4 (n)	Patients Engaging in Behaviour in Month 1 Only (n)	Patients Engaging in Behaviour in Month 1 & 4 (n)	Patients Engaging in Behaviour in Month 4 Only (n)
Suicide	54	2	0	0
Self-harm	38	7	6	5
Illicit Substance Use	36	3	8	8
Alcohol Use	29	7	4	13

substance use. A non-significant trend was also observed between homework completion and reductions in urges to drink alcohol. Investigating this trend in samples with heavier alcohol use and/or specifically seeking treatment to reduce alcohol use may help to clarify the strength and nature of associations before drawing conclusions.

Notably, correlational analyses suggested no significant associations between homework and change in engagement in target behaviours. However, the analysis of covariance suggested completion of skills homework was significantly associated with whether patients engaged in a target behaviour in the fourth month of treatment even after controlling for attendance (in partial support of Hypothesis 3). Consistent with the generalization hypothesis, findings may suggest that homework completion contributes to mediating factors (e.g., reduced urges, real-world application of skills) that, in turn, drive broad-level improvements in functioning. Future research is needed to test this hypothesis explicitly.

These findings also suggest failure to complete weekly skills homework may be an early warning sign of poor therapeutic change and/or response. Poor homework completion may stem from various sources, including lack of engagement, poor understanding of the importance of homework, perception of assignments as irrelevant to personal treatment goals, and/or difficulty applying skills outside of the treatment context. To troubleshoot barriers to homework completion, DBT includes commitment strategies and problem-solving protocols (e.g., ‘missing-links analyses’; Lindenboim, Chapman, & Linehan, 2007; Linehan, 2015). Notably, because this association was observed even when most patients completed 90+% of homework assignments, clinicians should consider each instance of homework non-completion seriously and intervene accordingly.

Phone coaching

Approximately 91% of patients in this sample utilized phone coaching as part of treatment. There was wide variation in utilization of this service, with most making fewer than 4 calls and one patient making 31 calls during the first three months of treatment. On average, patients made approximately 5.39 coaching calls during this period, similar to previous research on DBT phone coaching (e.g., Chalker et al., 2015; Oliveira & Rizvi, 2018), which suggests fairly little between-session contact within this day-hospital setting.

Adding to literature on DBT phone coaching, results suggest patients who utilized more phone coaching during the first three months of treatment tended to have larger

Table 4. Correlation between homework, phone coaching, and treatment outcomes

	Homework	Phone Coaching	Attendance	Suicide Urges	Self-Harm Urges	Substance Urges	Alcohol Urges	Suicide Behaviour	Self-Harm Behaviour	Substance Use	Alcohol Use
Proportion of homework completed	–										
Frequency of phone coaching	0.15	–									
Attendance	0.11	0.16	–								
Change in suicide urges	–0.35*	–0.20	–0.04	–							
Change in self-harm urges	–0.11	–0.31*	0.10	0.56*	–						
Change in substance use urges	–0.37*	–0.13	0.00	0.46*	0.42*	–					
Change in alcohol urges	–0.25	–0.01	0.08	0.42*	0.37*	0.39*	–				
Change in suicide behaviour	–0.11	–0.04	–0.01	0.25	–0.01	0.00	0.06	–			
Change in self-harm behaviour	0.21	–0.14	–0.06	0.01	0.36*	0.10	0.09	–0.06	–		
Change in substance use	–0.09	–0.18	–0.10	0.19	0.16	0.58*	0.46*	0.03	0.14	–	
Change in alcohol use	0.19	–0.03	0.02	0.17	–0.23	0.16	0.48*	0.14	–0.21	0.16	–
Sample size	56	56	56	56	54	52	51	56	54	52	52

* $p < .05$.

reductions in urges for NSSI from the beginning to end of treatment, consistent with Hypothesis 2. Patients who successfully refrained from target behaviours during the final month of treatment also made, on average, slightly more phone coaching calls than individuals who engaged in one or more target behaviours during this time, although this difference was not statistically significant. These findings are consistent with recent research suggesting that frequency of between-session contact is associated with positive therapeutic change across the course of treatment (Chalker et al., 2015) and provide further support for the utility of phone coaching within the context of DBT treatment. Findings are also, however, inconsistent with research into telephone availability provided outside the context of DBT. Briefly, this latter research has suggested telephone availability may be unhelpful or even iatrogenic when delivered to persons who are suicidal and/or diagnosed with borderline personality disorder and receiving treatments other than DBT (Evans et al., 1999; Nadort et al., 2009). It is therefore possible that factors unique to DBT phone coaching drive the beneficial effects of this intervention. For example, DBT phone coaching is considered a fundamental aspect of DBT, and patients are oriented to its use accordingly. Within DBT, patients are also oriented to rationales behind restrictions in phone coaching (e.g., the 24-hour rule) and, as noted in the current sample, are generally receptive to these rationales. Also, DBT phone coaching is typically brief, task-oriented, and explicitly tied to processes occurring during in-person sessions. Given this study's modest sample size, continued research with larger samples is needed to further understand associations between phone coaching and therapeutic change and to clarify which aspects of DBT phone coaching may be driving therapeutic effects.

Although some therapists are reluctant to provide phone coaching (Ben-Porath, 2004), findings suggest DBT phone coaching might be an integral aspect of treatment, particularly for patients experiencing urges for NSSI. Low utilization of phone coaching may be an early indicator of poor treatment progress and outcome. Clinicians should regularly discuss with patients their use of phone coaching, providing reinforcement for appropriate use of coaching and intervention for infrequent or otherwise ineffective coaching. To increase utilization of phone coaching, clinicians may encourage coaching for non-crisis situations (e.g., difficulty applying a skill effectively, requesting assistance with therapeutic homework) or for reinforcement of effective skills use. While promoting phone coaching utilization, clinicians should also pay careful consideration to stimulus specificity in order to reinforce utilization of phone coaching without reinforcing crisis behaviours. This helps ensure that phone coaching (and other between-session contact) is not contingent on the patient experiencing intense emotional distress or crisis. This is consistent with Linehan and Heard's (1993) finding that phone contact and frequency of suicidal and NSSI behaviour were significantly correlated in the treatment-as-usual condition, but not in DBT. Given the resource requirements to provide off-hours phone coaching, further research is needed to determine whether phone coaching is a cost-effective intervention.

Limitations and future directions

Despite the study's several methodological strengths, including high external validity, longitudinal design, and novel investigation of DBT interventions, it should nevertheless be understood within the context of a few methodological limitations. First, DBT-IOP is a modified DBT programme adapted for a group-based, day-hospital setting. Although the programme retained foundational principles and strategies of traditional DBT (including standard protocols for phone coaching and skills-homework review), substantial

structural modifications were made to fit the day-hospital setting (e.g., delivery of services in a group format). Preliminary research supports DBT modifications for group-based and day-hospital settings (Federici & Wisniewski, 2013; Gutteling, Montagne, Nijs, & van den Bosch, 2012). However, further research on modifications and efficacy of adapted-DBT programmes is needed. Future research will investigate the efficacy of this DBT-IOP specifically and should also examine generalizability of observed results to more traditional, outpatient DBT programmes and to other adapted-DBT programmes, such as those delivered in inpatient units or residential programmes.

Second, frequency statistics for engagement in target behaviours should be interpreted with caution. While completing diary cards, patients indicated only whether they did or did not engage in each target behaviour on a given day. Thus, diary card frequency data did not account for severity of behaviour or instances in which a patient engaged in a target behaviour multiple times in one day. Further, diary card data were only available for approximately 68% of days across patients. It is therefore unknown whether target behaviours occurred during the 32% of days unassessed by diary cards. Also, while DBT employs commitment and validation strategies to engage patients in treatment collaboration and to create an accepting, emotionally supportive environment, patients may have underreported on diary cards due to ambivalence about change, embarrassment, or shame. For these reasons, frequency statistics are likely an underestimation of true frequency of target behaviours in this sample.

Third, the study relied on information gathered from patient charts and did not include a reliability check. Use of clinical data increases external validity of the study and allows for a longitudinal design and cross-lagged analyses, increasing confidence in potential causal directionality of results (Shingles, 1976). However, such data also restrict the scope of analyses. Analyses were unable to account for potential confounding variables, such as patient motivation, personality, pre-treatment functioning, environmental supports, and/or the therapeutic relationship. Furthermore, analyses could not exclude the possibility of reverse-order effects, wherein a patient's urges or engagement in target behaviours impacted their homework completion and/or utilization of phone coaching. Moreover, the absence of research diagnostic assessments may limit the generalizability of results. Future studies may consider using experimental designs and/or administering clinically relevant measures periodically before, during, and following treatment to allow for consideration of broader research questions, analyses, and theory.

Fourth, this study only investigated two generalization-focused DBT interventions. It is therefore unclear how the present findings might relate to potentially more direct skills-generalization strategies in DBT, such as recording skills use on diary cards or assigning specific skills to avoid target behaviours as derived from behavioural chain analysis (Lindenboim, Comtois, & Linehan, 2007). Future research may, for example, explore frequency of skills use as a potential mediator for the relation between generalization-focused interventions and clinical outcomes.

Fifth, the study sample and design may limit generalizability of findings to other demographics. The current sample was primarily White and female. Race (especially race-based inequities) and gender differences may affect a person's willingness or ability to access phone coaching, particularly if their provider were culturally different from them. Additionally, the design could not account for patients who dropped out ($n = 4$) and patients who did not complete diary cards ($n = 28$; 31.8% of the original sample). Exclusion of these participants may have influenced findings, as non-compliance may reflect poorer outcomes. If this is the case, the current findings would

be an underestimate of the association between engagement in skills generalization and outcome.

Lastly, the study's sample size and modest participant use of phone coaching limited statistical power. Although the study included all patients completing a four-month cycle of DBT-IOP over a three-year period, the resulting sample included only 56 patients. Low patient dropout, while advantageous from a clinical perspective, also limited ability to compare treatment-completers versus non-completers. Similarly, although phone-coaching utilization was comparable to previous research (Chalker et al., 2015; Oliveira & Rizvi, 2018), rates were modest from a statistical perspective. Consequently, power to detect small yet potentially meaningful associations was limited, and statistical adjustments for multiple comparisons were not feasible, increasing the likelihood of type I error. Future research may benefit from collecting data over a longer period, from a larger treatment programme, or across sites to increase the resulting sample size.

Conclusions

As empirical evidence for DBT mounts, so does the need for research about mechanisms underlying the treatment process. This study investigated two treatment components – skills homework and phone coaching – as predictors of treatment progress and outcome in a DBT programme adapted to an intensive outpatient setting. Results suggest patient engagement with these treatment components was associated with (a) reduced urges for suicide, NSSI, and illicit or non-prescribed substance use from beginning to end of treatment and (b) a lower likelihood of engaging in target behaviours during the final month of treatment. Although further research is necessary to replicate and expand upon these preliminary results, findings support these skills-generalization methods as important ingredients of DBT effectiveness.

Conflict of interest

E. R. Edwards's work for this article was supported by the Department of Veterans Affairs, Office of Academic Affiliations, VA Special MIRECC Fellowship Program in Advanced Psychiatry and Psychology and by the VISN-2 MIRECC. The views expressed here are the authors' and do not necessarily represent the views of the Department of Veterans Affairs. S. A. Griffin's work on this manuscript was supported by the National Institute on Alcohol Abuse and Alcoholism (T32 AA-013526; PI: Kenneth Sher).

Author contributions

Emily Rachel Edwards, PhD (Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Writing – original draft; Writing – review & editing) Hedy Kober (Conceptualization; Writing – review & editing) Gabrielle R. Rinne (Data curation; Project administration; Writing – review & editing) Sarah A. Griffin (Data curation; Project administration; Writing – review & editing) Seth Axelrod (Project administration; Resources; Software; Supervision; Writing – review & editing) Emily B. Cooney (Conceptualization; Methodology; Project administration; Resources; Supervision; Writing – review & editing).

Data availability statement

The data that support the findings of this study are not available due to privacy restrictions.

References

- Barnicot, K., Gonzalez, R., McCabe, R., & Priebe, S. (2016). Skills use and common treatment processes in Dialectical Behaviour Therapy for borderline personality disorder. *Journal of Behavior Therapy and Experimental Psychiatry*, *52*, 147–156. <https://doi.org/10.1016/j.jbte.p.2016.04.006>
- Beck, J.S. (2011). *Cognitive behavior therapy: Basics and beyond*. New York: Guilford Press.
- Ben-Porath, D.D. (2004). Intersession telephone contact with individuals diagnosed with borderline personality disorder: Lessons from dialectical behavior therapy. *Cognitive and Behavioral Practice*, *11*, 222–230. [https://doi.org/10.1016/S1077-7229\(04\)80033-6](https://doi.org/10.1016/S1077-7229(04)80033-6)
- Ben-Porath, D.D. (2015). Orienting clients to telephone coaching in dialectical behavior therapy. *Cognitive and Behavioral Practice*, *22*, 407–414. <https://doi.org/10.1016/j.cbpra.2014.02.004>
- Ben-Porath, D.D., & Koons, C.R. (2005). Telephone coaching in dialectical behavior therapy: A decision-tree model for managing inter-session contact with clients. *Cognitive and Behavioral Practice*, *12*, 448–460. [https://doi.org/10.1016/S1077-7229\(05\)80072-0](https://doi.org/10.1016/S1077-7229(05)80072-0)
- Boritz, T., Zeifman, R.J., & McMain, S.F. (2018). Mechanisms of change in dialectical behaviour therapy. In M.A. Swales (Ed.), *The Oxford handbook of dialectical behaviour therapy* (pp. 515–532). New York: Oxford University Press.
- Chalker, S.A., Carmel, A., Atkins, D.C., Landes, S.J., Kerbrat, A.H., & Comtois, K.A. (2015). Examining challenging behaviors of clients with borderline personality disorder. *Behaviour Research and Therapy*, *75*, 11–19. <https://doi.org/10.1016/j.brat.2015.10.003>
- Dimeff, L.A., & Koerner, K.E. (2007). *Dialectical behavior therapy in clinical practice: Applications across disorders and settings*. New York: Guilford Press.
- Dimeff, L.A., & Linehan, M.M. (2008). Dialectical behavior therapy for substance abusers. *Addiction Science & Clinical Practice*, *4*, 39–47. <https://doi.org/10.1151/ascp084239>
- Dixon, L.J., & Linardon, J. (2020). A systematic review and meta-analysis of dropout rates from dialectical behaviour therapy in randomized controlled trials. *Cognitive Behaviour Therapy*, *49*, 181–196. <https://doi.org/10.1080/16506073.2019.1620324>
- Evans, M.O., Morgan, H.G., Hayward, A., & Gunnell, D.J. (1999). Crisis telephone consultation for deliberate self-harm patients: Effects on repetition. *The British Journal of Psychiatry*, *175*(1), 23–27. <https://doi.org/10.1192/bjp.175.1.23>
- Federici, A., & Wisniewski, L. (2013). An intensive DBT program for patients with multidisorder eating disorder presentations: A case series analysis. *International Journal of Eating Disorders*, *46*, 322–331. <https://doi.org/10.1002/eat.22112>
- Gruber, R.P. (1971). Behavior therapy: Problems in generalization. *Behavior Therapy*, *2*, 361–368. [https://doi.org/10.1016/S0005-7894\(71\)80070-9](https://doi.org/10.1016/S0005-7894(71)80070-9)
- Gutteling, B.M., Montagne, B., Nijs, M., & van den Bosch, L.W. (2012). Dialectical behavior therapy: is outpatient group psychotherapy an effective alternative to individual psychotherapy?: Preliminary conclusions. *Comprehensive Psychiatry*, *53*, 1161–1168. <https://doi.org/10.1016/j.comppsy.2012.03.017>
- Kazantzis, N., Deane, F.P., & Ronan, K.R. (2000). Homework assignments in cognitive and behavioral therapy: A meta-analysis. *Clinical Psychology: Science and Practice*, *7*, 189–202. <https://doi.org/10.1093/clipsy.7.2.189>
- Kazantzis, N., Whittington, C., & Dattilio, F. (2010). Meta-analysis of homework effects in cognitive and behavioral therapy: A replication and extension. *Clinical Psychology: Science and Practice*, *17*, 144–156. <https://doi.org/10.1111/j.1468-2850.2010.01204.x>
- Kazantzis, N., Whittington, C., Zelencich, L., Kyrios, M., Norton, P.J., & Hofmann, S.G. (2016). Quantity and quality of homework compliance: A meta-analysis of relations with outcome in

- cognitive behavior therapy. *Behavior Therapy*, 47, 755–772. <https://doi.org/10.1016/j.beth.2016.05.002>
- Kazdin, A.E. (2007). Mediators and mechanisms of change in psychotherapy research. *Annual Reviews of Clinical Psychology*, 3, 1–27. <https://doi.org/10.1146/annurev.clinpsy.3.022806.091432>
- Limbrunner, H.M., Ben-Porath, D.D., & Wisniewski, L. (2011). DBT telephone skills coaching with eating disordered clients: Who calls, for what reasons, and for how long? *Cognitive and Behavioral Practice*, 18, 186–195. <https://doi.org/10.1016/j.cbpra.2010.01.010>
- Lindenboim, N., Chapman, A.L., & Linehan, M.M. (2007). Borderline personality disorder. In N. Kazantzis & L. L'Abate (Eds.), *Handbook of homework assignments in psychotherapy* (pp. 227–245). Boston, MA: Springer.
- Lindenboim, N., Comtois, K.A.K., & Linehan, M.M. (2007). Skills practice in dialectical behavior therapy for suicidal women meeting criteria for borderline personality disorder. *Cognitive and Behavioral Practice*, 14, 147–156. <https://doi.org/10.1016/j.cbpra.2006.10.004>
- Linehan, M.M. (1993). *Cognitive behavioral therapy of borderline personality disorder*. New York: Guilford Press.
- Linehan, M. (2015). *DBT skills training manual*. New York: Guilford Publications.
- Linehan, M.M., & Heard, H.L. (1993). Impact of treatment accessibility on clinical course of parasuicidal patients: Reply. *Archives of General Psychiatry*, 50, 157–158.
- Linehan, M.M., Korslund, K.E., Harned, M.S., Gallop, R.J., Lungu, A., Neacsiu, A.D., . . . Murray-Gregory, A.M. (2015). Dialectical behavior therapy for high suicide risk in individuals with borderline personality disorder: A randomized clinical trial and component analysis. *JAMA Psychiatry*, 72, 475–482. <https://doi.org/10.1001/jamapsychiatry.2014.3039>
- Lynch, T.R., Chapman, A.L., Rosenthal, M.Z., Kuo, J.R., & Linehan, M.M. (2006). Mechanisms of change in dialectical behavior therapy: Theoretical and empirical observations. *Journal of Clinical Psychology*, 62, 459–480. <https://doi.org/10.1002/jclp.20243>
- Lynch, T.R., Morse, J.Q., Mendelson, T., & Robins, C.J. (2003). Dialectical behavior therapy for depressed older adults: A randomized pilot study. *The American Journal of Geriatric Psychiatry*, 11(1), 33–45. <https://doi.org/10.1097/00019442-200301000-00006>
- Manning, S.Y. (2011). Common errors made by therapists providing telephone consultation in dialectical behavior therapy. *Cognitive and Behavioral Practice*, 18, 178–185. <https://doi.org/10.1016/j.cbpra.2010.06.002>
- Mausbach, B.T., Moore, R., Roesch, S., Cardenas, V., & Patterson, T.L. (2010). The relationship between homework compliance and therapy outcomes: An updated meta-analysis. *Cognitive Therapy and Research*, 34, 429–438. <https://doi.org/10.1007/s10608-010-9297-z>
- McCauley, E., Berk, M.S., Asarnow, J.R., Adrian, M., Cohen, J., Korslund, K., . . . Linehan, M.M. (2018). Efficacy of Dialectical Behavior Therapy for adolescents at high risk for suicide: A randomized clinical trial. *JAMA Psychiatry*, 75(8), 777–785. <https://doi.org/10.1001/jamapsychiatry.2018.1109>
- Mehlum, L., Tørmoen, A.J., Ramberg, M., Haga, E., Diep, L.M., Laberg, S., . . . Grøholt, B. (2014). Dialectical behavior therapy for adolescents with repeated suicidal and self-harming behavior: A randomized trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 53, 1082–1091. <https://doi.org/10.1016/j.jaac.2014.07.003>
- Neacsiu, A.D., Rizvi, S.L., & Linehan, M.M. (2010). Dialectical behavior therapy skills use as a mediator and outcome of treatment for borderline personality disorder. *Behaviour Research and Therapy*, 48(9), 832–839. <https://doi.org/10.1016/j.brat.2010.05.017>
- Oliveira, P.N., & Rizvi, S.L. (2018). Phone coaching in dialectical behavior therapy: Frequency and relationship to client variables. *Cognitive Behaviour Therapy*, 47, 383–396. <https://doi.org/10.1080/16506073.2018.1437469>
- Rathus, J.H., & Miller, A.L. (2002). Dialectical behavior therapy adapted for suicidal adolescents. *Suicide and Life-threatening Behavior*, 32, 146–157. <https://doi.org/10.1521/suli.32.2.146.24399>

- Robins, C.J., & Chapman, A.L. (2004). Dialectical behavior therapy: Current status, recent developments, and future directions. *Journal of Personality Disorders, 18*(1), 73–89. <https://doi.org/10.1521/pedi.18.1.73.32771>
- Rudge, S., Feigenbaum, J.D., & Fonagy, P. (2020). Mechanisms of change in dialectical behaviour therapy and cognitive behaviour therapy for borderline personality disorder: A critical review of the literature. *Journal of Mental Health, 29*(1), 92–102. <https://doi.org/10.1080/09638237.2017.1322185>
- Safer, D.L., & Jo, B. (2010). Outcome from a randomized controlled trial of group therapy for binge eating disorder: Comparing dialectical behavior therapy adapted for binge eating to an active comparison group therapy. *Behavior Therapy, 41*(1), 106–120. <https://doi.org/10.1016/j.beth.2009.01.006>
- Shingles, R.D. (1976). Causal inference in cross-lagged panel analysis. *Political Methodology, 3*, 95–133.
- Steinberg, J.A., Steinberg, S.J., & Miller, A.L. (2011). Orienting adolescents and families to DBT telephone consultation: Principles, procedures, and pitfalls. *Cognitive and Behavioral Practice, 18*, 196–206. <https://doi.org/10.1016/j.cbpra.2009.10.007>
- Stepp, S.D., Epler, A.J., Jahng, S., & Trull, T.J. (2008). The effect of dialectical behavior therapy skills use on borderline personality disorder features. *Journal of Personality Disorders, 22*, 549–563. <https://doi.org/10.1521/pedi.2008.22.6.549>
- Telch, C.F., Agras, W.S., & Linehan, M.M. (2001). Dialectical behavior therapy for binge eating disorder. *Journal of Consulting and Clinical Psychology, 69*, 1061–1065. <https://doi.org/10.1037/0022-006X.69.6.1061>
- Wisniewski, L., & Ben-Porath, D.D. (2005). Telephone skill-coaching with eating-disordered clients: clinical guidelines using a DBT framework. *European Eating Disorders Review, 13*, 344–350. <https://doi.org/10.1002/erv.657>
- Witterholt, S., & Nelson, K.J. (2013). Dialectical Behavior Therapy applications for psychiatrists. *Psychiatric Annals, 43*, 158–161. <https://doi.org/10.3928/00485713-20130403-05>

Received 10 June 2020; revised version received 4 January 2021