Therapy on the Borderline: Effectiveness of Dialectical Behavior Therapy for Patients with Borderline Personality Disorder

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Abstract

The results of evaluation studies into the efficacy of dialectical behavior therapy (DBT) for patients with borderline personality disorder (BPD) are promising. However, controlled and randomized investigations are warranted to confirm the experimental findings of most of the studies. Furthermore, significant and different treatment outcomes in various studies were not comparable with each other (research method, study target, distinctive categories of subjects). Therefore, it is unclear what precise impact DBT has on borderline pathology. There is much to clarify before this type of therapy can be established as an evidence-based practice in community settings.

Introduction

Borderline personality disorder (BPD) is characterized by a pervasive pattern of instability in affect-regulation, impulse control, interpersonal relationships, and self-image, as well as frantic attempts to prevent abandonment, self-mutilating or suicidal behavior, chronic feelings of boredom or emptiness, and brief paranoid ideas or severe dissociative symptoms related to stress (American Psychiatric Association, 2000). BPD patients often have multiple severe and chronic behavioral problems, including suicidal and other self-injurious behaviors, which make them frequent users of mental health resources. Causal factors are only partly known, but genetic factors and adverse events during childhood, such as physical and sexual abuse, contribute to the development of the disorder (Lieb, Zanarini, Schmahl, Linehan, & Bohus, 2004).

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Patients who meet criteria for BPD are prevalent in clinical practice, comprising about 10% of psychiatric outpatients (Martens, 2005b; Robins & Koons, 2004). They usually are difficult to treat, and some forms of treatment may even lead to their problems becoming more severe; therefore, clinicians may feel frustrated, incompetent, or hopeless about the patient (Robins & Koons). Therapy is often complicated by co-morbid Axis I and/or Axis II disorders. BPD is usually accompanied, for example, by one or several of the following symptom disorders: eating disorders, depression, posttraumatic stress disorders, premenstrual tension, dissociative disorders, or anxiety disorders—not to mention one or more additional personality disorders. The accompanying personality disorders will have an impact on amenability to psychotherapy (Stone, 2000).

In this article the efficacy of dialectical behavior therapy (DBT) for patients with BPD is examined in order to provide information that can be used for the development of adequate treatment programs for borderline patients.

Dialectical Behavior Therapy (DBT)

Until the past decade, there was little to no established efficacy for treatments of borderline patients (Fruzetti, 2002). Linehan and colleagues (1993) have developed, refined, and tested DBT, a principle-based psychotherapy for chronically parasuicidal women with borderline personality disorder. DBT utilizes both established change interventions from cognitive-behavioral therapy and acceptance strategies from humanistic therapy and Eastern and Western meditative practices (Fruzetti). DBT also shares elements with psychodynamic, client-centered, gestalt, paradoxical, and strategic approaches (Katz, Gunasekara, & Miller, 2002). Both acceptance and change strategies are dialectically balanced or synthesized into a multicomponent treatment program (Fruzetti). DBT provides structured telephone contacts with individuals diagnosed with borderline personality disorder that emphasize the role of learning principles (Linehan).

The four characteristic problem areas often found among multiproblem borderline patients are (1) confusion about self, (2) impulsivity, (3) emotional instability, and (4) interpersonal problems. DBT employs four corresponding behavioral-skill modules aimed at increasing adaptive behaviors while simultaneously reducing maladaptive behaviors. The four-skill modules include mindfulness, distress tolerance, emotion-regulation, and interpersonal effectiveness skills (Miller, Wyman, Huppert, Glassman, & Rathus, 2000). Inpatient DBT focuses upon self-injuries as a high-ranking problem area and works continuously toward developing skills for distress tolerance and emotion regulation (Bohus et al., 2000).

Research into the Effectiveness of DBT for Borderline Patients

While the existing research consistently points to the effectiveness of DBT in treating borderline personality disorder, little qualitative research has been conducted to ascertain the reasons for its success, especially from the perspective of those undergoing the treatment. The study of Cunningham, Wolbert, and Lillie (2004) is a qualitative investigation into the effectiveness of DBT. This qualitative investigation was undertaken with the goal of understanding, from the perspective of the client, what is effective about DBT and why. Cunningham et al. interviewed 14 borderline outpatients (as defined by the *Diagnostic and Statistical Manual of Mental Disorders 4th edition, DSM-IV)* who were involved in a DBT program. All of the women interviewed reported that DBT had a positive impact on their lives (reduction of symptoms, increased social-emotional skills, employment).

Another qualitative study by Miller et al. (2000) examined, in a nonrandomized sample of suicidal *DSM-IV* BPD patients (n=27; 14-19 years old), self-reports of the helpfulness and overall effectiveness of four skills (mindfulness, distress tolerance, emotion-regulation, and interpersonal effectiveness skills) using pre- and post-treatment evaluations and found significant reductions in BPD symptoms in all four problem areas (confusion about self, impulsivity, emotional instability, interpersonal problems). The most highly rated skills included distress tolerance and mindfulness skills.

It is unclear how truthful these self-reports of the borderline patients are because these subjects' judgment might be substantially colored by their frequent shifting of mood and impulsivity. Perhaps the qualitative study design could be adjusted in order to generate more objective, adequate, and valid data by comparing the reports of the patients with reports of other persons (psychotherapists, work therapists, spiritual or pastoral counselors, mentors, friends, partners) who are involved in the treatment and development process of the patient in question. It is important to mention that not every DBT study employs the four-skills modules.

The investigation of Perseius, Ojehagen, Ekdahl, Asberg, and Samuelsson (2003) used interview data from patients as well as therapists. Self-harm patients (n=10)

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with BPD and 4 DBT therapists were interviewed by Perseius et al. in order to investigate the patients’ and therapists’ perceptions of receiving and giving DBT. The interviews were analyzed with qualitative content analysis. The patients unanimously regarded the DBT therapy as lifesaving and as something that gave them a bearable life situation. The patients and the therapists were concordant on the effective components of the therapy being the understanding, respect, and confirmation in combination with the cognitive and behavioral skills. The patients stressed that the therapy gave them skills that enabled them to handle self-harm impulses, symptoms, and problematic situations more constructively. In their narratives the therapists underlined the same effect areas as the patients. The therapists also described a development in which the patients became more independent and responsible. From the patients’ perspectives it was the understanding, respect, and confirmation they encountered in DBT that they saw as profound. These aspects of a good patient-therapist relationship could have been due to the individuals’ beliefs and the personalities of the therapists. However, in their narratives the therapists rejected this hypothesis by stressing that their way of viewing and encountering the patients was based upon the therapy model and its theoretical underpinnings (“it’s not me, it’s DBT”). The experienced effectiveness of DBT is contrasted by the patients’ pronouncedly negative experiences from psychiatric care before entering DBT (Perseius et al.).

Uncontrolled and Non-Randomized Evaluation Studies

Bohus et al. (2000), in an uncontrolled pre-post study, evaluated a DBT program consisting of a 3-month inpatient treatment prior to long-term outpatient therapy. Subjects were compared at admission to the hospital and at 1 month after discharge using the following instruments:

- Lifetime Parasuicide Count, LPC
- SCL-90-R: Symptom Checklist according to Derogatis
- Beck Depression Scale, BDI
- Hamilton Depression Scale, HAMD 21-item version
- State-Trait-Anxiety Inventory, STAI
- Hamilton Anxiety Scale, HAMA
- Dissociative Experiences Scale, Response Questionnaire on Dissociative Experiences, FDS
- State-Trait-Anger Inventory, STAXI

Subjects were female chronic suicidal patients (n=24; aged 17.4 to 44.4 years) with *DSM-IV* BPD who had committed at least two parasuicide acts (PAs; consciously intended, resultant physical injury) and/or one suicide attempt within the past 2 years. All DBT subjects received DBT individual as well as group skills training and additional skill coaching. The results indicated significant improvements in ratings of depression (MV pre 78,1 MV

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post 71,3 Sig 0.004 Effect Size 0,91), dissociation (MV pre 24,9 MV post 14,6 Sig 0.002 Effect Size 1,14), anxiety (MV pre 73,6 MV post 65,0 Sig 0.001 Effect Size 1.08), and global stress (MV pre 78,4 MV post 69,7 Sig 0.001 Effect Size 1.08) between assessments. Further, a highly significant decrease in the number of PAs was also reported (Bohus et al., 2000).

Simpson et al. (1998), in a retrospective uncontrolled non-randomized study, examined the effectiveness of DBT (adapted for use in a partial hospital program for women) in a population of chronically suicidal women (n=500; age 18-65 years) with *DSM-IV* BPD. Patients attended the program for a minimum of 5 days of individual and group therapy. A full census was 12 women. About 65% of the participants met at least three criteria for BPD, and most had suicidal and self-injurious behavior. Their co-morbid diagnoses included trauma-related diagnoses, anxiety disorders, severe eating disorders, substance abuse, and depression. The partial hospital program is linked to an aftercare program offering 6 months of outpatient skills training based on DBT. Both programs focus on teaching patients four skills: mindfulness (attention to one's experience), interpersonal effectiveness, emotional regulation, and distress tolerance. After 2 years of operation, the women's partial hospital program provided promising anecdotal evidence that dialectical behavioral therapy, an outpatient approach, can be effectively modified for partial hospital settings and a more diverse population. However, no precise recovery or improvement rates were provided and there was no control group.

Rathus and Miller (2002) reported a quasi-experimental pre-post investigation of an adaptation of DBT with a group of suicidal adolescents with *DSM-IV* BPD features. Rathus and Miller adapted DBT for use with adolescents due to its primary treatment targets, which were aimed at reducing behaviors that were life-threatening or interfered with quality of life, as well as its specific focus on treatment engagement and retention. Furthermore, this adaptation placed a greater emphasis on family involvement than standard DBT. They incorporated family therapy into DBT in a more synthesized manner so that it became a hybrid type of therapy. The DBT group (n=29) received 12 weeks of twice-weekly therapy in which participants attended individual therapy and a multifamily skills training group. The treatment as usual (TAU) group (n=82) received 12 weeks of twice-weekly supportive-psychodynamic individual therapy and attended weekly family therapy. Despite more severe pretreatment symptomatology in the DBT group, at post treatment the DBT group had significantly fewer psychiatric hospitalizations during treatment and a significantly higher rate of treatment completion than the TAU group. There were no significant differ-

ences in the number of suicide attempts made during treatment. Examining pre-post changes within the DBT group, there were significant reductions in suicidal ideation, general psychiatric symptoms, and symptoms of BPD (Rathus & Miller).

The use of DBT in a residential treatment facility for chronically suicidal adolescent girls (n=45) with *DSM-IV* BPD was examined by Sunseri (2004) in a retrospective uncontrolled non-randomized pre-post study. Analyses of the time periods before and after the implementation of DBT indicate that DBT was effective in achieving a significant reduction in both premature terminations due to suicidality and in the number of days clients spent in psychiatric hospitals due to self-injurious behaviors. Overall, DBT has proven to be extremely useful in the treatment of chronically suicidal adolescents placed into residential care (Sunseri).

Stanley, Ivanoff, Brooks, and Oppenheim (1998) revealed in an uncontrolled pilot study of females with *DSM-IV* BPD that DBT was significantly and statistically more effective in reducing self-mutilation behaviors, self-mutilation urges, suicidal ideation, and suicidal urges compared with TAU. However, no differences were found for self-reported psychopathology.

Lanius and Tuhan (2003), in an uncontrolled pre-post study, examined the impact of DBT on a non-randomized sample of *DSM-IV* BPD patients (n=18, females; mean age 35 years, mean duration of mental disorder was 19 years). Subjects completed 1 year of DBT within the Traumatic Stress Service, a specialized program for treating psychological trauma. Lanius and Tuhan compared the data for 1 year immediately prior to starting the program with the data for the first year of program attendance. The 1-year outcome data showed a 65% decrease in the duration of inpatient stays. The 1-year outcome data also showed a 45% decrease in the number of emergency room visits. Lastly, the data showed a 153% increase in outpatient visits.

The uncontrolled retrospective study of Puerling (2000) looked at whether DBT was effective in reducing service use, reducing problematic behaviors and improving overall functioning. The study was conducted using subjects (n=29) from an outpatient community mental health center (mixed population). Information about hospitalizations, respite services, level of functioning, and incidents of target behaviors was collected from archival records and diary cards and was compared at specific time points. Repeated measures of analysis of variances revealed a significant rise in skill usage (four skill models; no precise data is available from this dissertation) over time but failed to show statistically significant changes in other variables (employment, relational, symptomal, and syndromal).

Barley, Buie, Peterson, & Hollingswoth (1993), in a quasi-experimental study, evaluated the effectiveness of DBT for the treatment of *DSM-III-R* BPD in an inpatient setting (the medium length of stay was 106 days). A non-randomized sample (n=160; mean age 30, range 16-57 years; 79% were female) was used. DBT includes techniques at the level of behavior (functional analysis), cognitions (e.g., skills training), and support (empathy, teaching management of trauma). This study compared the outcomes of patients during three phases of integrating DBT onto the unit: (1) no DBT, (2) phasing in/introducing DBT onto the unit, (3) full DBT program. Barley et al. found that during and following implementation there was a significant fall in rates of parasuicide when compared to a period before implementation. There was no significant fall during an equivalent time period in another unit offering standard psychiatric care.

Controlled and Randomized Evaluation Studies

Linehan, Armstrong, Suarez, Allmon, & Heard (1991), in a prospective randomized controlled study of chronically suicidal women (n= 47; age 18-45 years) with *DSM-II-R* BPD, revealed that DBT (n=24) compared with TAU (n=23) showed a statistically significant reduction in parasuicidal behavior (repeat rate 26% vs. 60%). DBT patients were significantly more likely to complete treatment (83% vs. 42%) and had fewer inpatient hospital days than the TAU subjects. Treatment duration was 12 months. The DBT program included individual psychotherapy, 150 minutes of group skills training, didactic and homework review, and consultation teams. Subjects were exposed to all skills twice a week. Following completion of treatment, subjects were assessed at 6-month intervals for 1 year.

Linehan et al. (1999) compared results obtained from DBT and a TAU regimen for drug-dependent suicidal women displaying *DSM-IV* borderline personality disorder in a randomized prospective controlled study. These women (n=28; aged 18-45 years) were randomly assigned to DBT or TAU groups. The subjects receiving DBT (n=12), which comprises strategies from cognitive and behavioral therapies and acceptance strategies adapted from Zen teaching, participated in individual psychotherapy, group skills training sessions, and skills-coaching phone calls when needed. Those receiving TAU were referred to alternative substance abuse or mental health counselors and community programs or continued with their own psychotherapists. Subjects were assessed at 4, 8, 12, and 16 months. Results showed a drop-out rate of 36% from DBT patients compared to a rate of 73% from TAU patients. At the 16-month follow-up, urinalysis showed a significant reduction in substance abuse and significant improvements in social and global adjustment in DBT subjects compared to TAU subjects (Linehan et al., 1999).

The efficacy of DBT (n=10) versus TAU (n=10) was examined in a controlled randomized sample of female veterans with *DSM-IV* BPD (Koons et al., 1998). The length of treatment was 6 months. Patients were assessed at baseline, treatment midpoint, and treatment completion. Subjects in the DBT group showed statistically significant reductions in suicidal ideation, depression, hopelessness, and anger compared to TAU subjects at post treatment, and 3 of 10 DBT patients continued to meet BPD criteria compared to 5 of 10 of the TAU group (Koons et al.). No precise details were provided about the treatment program, frequency, and quality of the TAU group.

Evershed et al. (2003), in a controlled prospective non-randomized study, examined the effectiveness of an 18-month treatment based on DBT targeting anger and violence. The study sample consisted of a group of male forensic patients (n=8) in a high security hospital who met the *DSM-IV* criteria for BPD (measured by the Personality Assessment Inventory). A comparison group (TAU) of patients (n=9) assessed as having similar personality disorders received the usual treatment available in the hospital, excluding DBT. The DBT and the control group completed three psychometric tests at pre-, mid-, and post-treatment and at a 6-month follow up. In both groups, all instances of behaviors related to anger and violence were monitored for three 6-month periods, prior to, during, and post-treatment. Overall, patients in the DBT group made greater gains than patients in the TAU group in reducing the seriousness of violence-related incidents and in self-report measures of hostility, cognitive anger, disposition to anger, outward expression of anger, and anger experience (Evershed et al.).

In a naturalistic investigation, the effectiveness of a DBT-oriented treatment was compared with a client-centered therapy control condition (CCT) for BPD patients. Twenty-four patients (aged 18–27 years) diagnosed with BPD were randomly assigned to either DBT or CCT. Blinded, independent-rater evaluations and a battery of patient self-report measures (concerning the patient's expressions of anger, impulsivity, depression, and global health functioning) were completed at baseline, 6 months, and 1 year during the course of treatment. Measures of suicide attempts, self-harm episodes, and therapeutic alliance were collected on a weekly basis. The number of psychiatric hospitalization days per 6-month period was also measured. Outcomes showed the DBT group improved more than the CCT group on most measures. The quality of the therapeutic alliance accounted for significant variance in patients' outcomes across both treatments (Turner, 2000). Therapeutic alliance was linked to patients' experiences of loyalty, respect, faith, and motivation for change that led to more improvement and recovery.

Verheul et al. (2003) compared the effectiveness of DBT with treatment as usual for patients with BPD and examined the impact of baseline severity on effectiveness. Fifty-eight women (mean age 34.9 years) with *DSM-IV* BPD were randomly assigned to 12 months of either DBT or usual treatment in a randomized controlled study. Subjects were recruited through clinical referrals from both addiction treatment and psychiatric services. Outcome measures included treatment retention and the course of suicidal, self-mutilating, and self-damaging impulsive behaviors. DBT resulted in better retention rates and greater reductions of self-mutilating and self-damaging impulsive behaviors compared with usual treatment, especially among those with a history of frequent self-mutilation. Findings show that DBT is superior to usual treatment in reducing high-risk behaviors in patients with BPD (Verheul et al.). The weak point of this study was that it lacked adequate comparison information of control groups (patients who received other types of therapy). Very little information was provided about the precise nature, quality, and frequency of treatment of the control group (Verheul et al. mentioned clinical management from the original sources; addiction treatment; psychiatric services; no more than twice-a-month sessions with a psychologist, psychiatrist, or social worker). The comparison group received significantly less intensive and frequent treatment, but Verheul et al. did not specify (although they did regarding their DBT sample) the type, frequency, and quality of treatment that was offered to different subgroups (education and rank of treatment staff). Some patients were even "treated" by social workers. In this way, the two samples cannot validly be compared to each other.

Bohus et al. (2004), in a controlled non-randomized pre-post study, evaluated a 3-month DBT inpatient treatment program. Clinical outcomes, including changes on measures of psychopathology and frequency of self-mutilating acts, were assessed for 50 female patients meeting criteria for *DSM-IV* BPD. Thirty-one patients had participated in a DBT inpatient program, and 19 patients had been placed on a waiting list and received treatment as usual in the community. Pre-post comparison showed significant changes for the DBT group on 10 of the 11 psychopathological variables and significant reductions in self-injurious behavior. The waiting list group did not show any significant changes at the 4-month point. Compared to the patients on the waiting list, the DBT group improved significantly more on 7 of the 9 variables analyzed, including depression, anxiety, interpersonal functioning, social adjustment, global psychopathology, and self-mutilation. Analyses based on Jacobson's criteria for clinically relevant change indicated that 42% of the patients receiving DBT had clinically recovered on a general measure of psychopathology. The data suggest that 3 months of inpatient DBT treatment is significantly superior to non-specific outpatient treatment (Bohus et al., 2004).

Not all of the investigations revealed that DBT was more successful than TAU or only group skill training. The prospective controlled but non-randomized study of Grohens (2004) investigated the effectiveness of DBT under three conditions (waves) within a public psychiatric hospital on hospital-based severity measures. The waves (N = 66; per wave 20) included three different components of DBT versus TAU: Wave I, a control group (no DBT outpatient and no DBT inpatient), Wave II (no DBT outpatient but DBT inpatient), and Wave III (standard DBT outpatient and DBT inpatient). DBT waves were compared for affect on total admissions, total days of stay, days of seclusion and restraint, episodes of self-injury, and observational intensity. The research concluded that inpatient DBT is not significantly different than the TAU. Findings of significant effect were attenuated by non-significant post hoc analyses for unequal groups. Results tended to support the inverse of the hypotheses for total admissions and total days of stay. Waves with more DBT had worse or equivalent but not better outcomes. Positive findings for inpatient DBT included improved clinical thinking among staff and thera-

peutic communications with patients (Grohens).

Linehan, Heard, and Armstrong (1993), in a prospective randomized controlled study of chronically suicidal patients with *DSM-III-R* BPD, compared the efficacy of DBT patients (n=11; patients already in psychotherapy with therapist in the community) with assessment-only condition patients (n=8; patients who were exposed only to group skills training). There were no differences observed in treatment outcome.

Discussion

Not all of the studies used a controlled randomized study design. The absence of such randomized and/or controlled research designs is related to less reliability and validity of study results. Only a few studies examined the effects of DBT after completion of therapy (follow-up study), and there were hardly any investigations into the long-lasting effects (longer than 1 year). Without data on long-term effects of DBT, it is very difficult to discuss the usefulness of DBT. Furthermore, another problem is that data from distinctive investigations are hardly comparable with each other because of the following differences:

- Samples (suicidal patients, patients with traumatic experiences, forensic patients, mixed populations; inpatient and outpatient programs)
- Follow-up length and different research methodology (different quantitative and qualitative investigations; controlled/randomized versus uncontrolled/nonrandomized studies)
- Treatment (staff) quality
- Combinations with other types of treatment (psychopharmacological, psychoeducation, creative therapy, sports therapy)
- Adaptations of DBT
- Treatment targets (diminishing suicidal attempts, emotional stabilization, anger/violence and impulse control), distinctive outcome criteria (symptomal, syndromal, hospital visits; some investigations measured only the effect of DBT on a few criteria such as suicide ideation, self-mutilation, or anger).

In some studies, precise descriptions of treatments (modules, frequency, and quality), especially with respect to control groups, were missing. Moreover, controls for frequency and intensity of the treatment, therapists, supervision, and therapeutic allegiance are missing and should be implemented for reasons of validity. Not all investigations indicate superior efficacy for DBT compared to TAU. Furthermore, the impact of DBT on deviant behavior and diagnostic symptoms was quite distinctive. Some studies found general reductions of borderline symptoms while other investigations revealed only a reduction of suicidal and self-mutilation as a consequence of DBT (Puerling, 2000). Therefore, it is unclear what the precise effectiveness of DBT is. Furthermore, the effects of DBT in categories of BPD patients other than suicidal and self-mutilating are largely unknown because they are hardly studied.

Robins and Koons (2004) observed that most patients with BPD, though they significantly improved as a result of DBT treatment, still reported clinically significant levels of dysphoria. The clinical experience of Robins and Koons suggested that further therapeutic gains may occur with longer term DBT treatment than has been evaluated in studies to date.

Conclusion

Although not all studies reported favorable outcomes of DBT treatment in BPD, this author agrees with the suggestion of other authors who also analyzed data from DBT research that empirical results are promising (Crits-Cristoph & Barber, 2002; Robins & Koons, 2004; Swenson & Torrey, 2002; Westen, 2000), although they are not sufficient to establish DBT as an evidence-based practice in community settings.

It is unclear what components (or modules) of DBT are effective in reduction-specific diagnostic traits. No investigation was directed toward the effects of distinctive modules of DBT on the reduction of specific symptoms, and therefore, what works in DBT and how it can be improved is still unknown. Although co-morbid mental disorders have considerable impact on course and treatment in BPD, there were no studies on the effectiveness of reducing co-morbid mental disorder symptomology in BPD. There were no investigations into a useful combination of DBT and other therapeutic and neurologic treatments (because of neurobiological dimensions) in BPD and co-morbid mental disorders. Martens (2005b) studied the therapeutic significant predictors and correlates of recovery and outcome of BPD and concluded that more adequate treatment is possible when the correlates of good outcome, such as creativity, intelligence, an ability to experience pleasure and tolerate pain, emotional involvement of family, family stability, age and gender-related factors, and use of medication, are better utilized in therapy. More experimental psychotherapeutic research is needed in the use of correlates of remission and good outcome in treatment programs. It would be very interesting to compare DBT with other successful treatment approaches for borderline patients such as psychoanalytical and psychodynamic therapy (Martens, 2005a). Furthermore, the experimental findings of some investigations must be confirmed by controlled and randomized studies.

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