Dialectical Behavior Therapy for Adolescents With Repeated Suicidal and Self-harming Behavior: A Randomized Trial

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Objective: We examined whether a shortened form of dialectical behavior therapy, dialectical behavior therapy for adolescents (DBT-A) is more effective than enhanced usual care (EUC) to reduce self-harm in adolescents. **Method:** This was a randomized study of 77 adolescents with recent and repetitive self-harm treated at community child and adolescent psychiatric outpatient clinics who were randomly allocated to either DBT-A or EUC. Assessments of self-harm, suicidal ideation, depression, hopelessness, and symptoms of borderline personality disorder were made at baseline and after 9, 15, and 19 weeks (end of trial period), and frequency of hospitalizations and emergency department visits over the trial period were recorded. **Results:** Treatment retention was generally good in both treatment conditions, and the use of emergency services was low. DBT-A was superior to EUC in reducing self-harm, suicidal ideation, and depressive symptoms. Effect sizes were large for treatment outcomes in patients who received DBT-A, whereas effect sizes were small for outcomes in patients receiving EUC. Total number of treatment contacts was found to be a partial mediator of the association between treatment and changes in the severity of suicidal ideation, whereas no mediation effects were found on the other outcomes or for total treatment time. **Conclusion:** DBT-A may be an effective intervention to reduce self-harm, suicidal ideation, and depression in adolescents with repetitive self-harming behavior. Clinical trial registration information—Treatment for Adolescents With Deliberate Self Harm; http://ClinicalTrials.gov/; NCT00675129. J. Am. Acad. Child Adolesc. Psychiatry, 2014;53(10):1082–1091. **Key Words:** self-harm, attempted suicide, psychotherapy, randomized trial

Self-harming behavior (nonfatal self-poisoning or self-injury with or without suicide intent)[1] in adolescents is a serious public health problem in many countries. According to population studies, between 5% and 10% of adolescents report past-year self-harm, with cutting as the most commonly reported method. Relief from intensely unpleasant emotions or dying are reported as the most common reasons for such behavior.[2,3] Only 10% to 20% of adolescents who have self-harmed report receiving any kind of subsequent treatment.[4] Even fewer report having received treatment in child and adolescent psychiatric services. Among those who are referred to specialized care, many will be noncompliant with the treatment or will drop out prematurely because of treatment-interfering characteristics of the adolescents, their families, or the clinical services. Self-harm is a powerful predictor of completed suicide.[5] There is thus a strong need to develop effective interventions that are accessible and acceptable to adolescents and their families, as well as feasible for clinicians in community mental health settings.

Repetitive self-harm is very often linked to personality disorders, in particular to borderline

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personality disorder (BPD); this has been well demonstrated in adult populations.[6] Affective instability and a pronounced sensitivity to environmental stress are among the BPD characteristics shown to increase vulnerability for suicidal and self-harm behavior.[7] Individuals diagnosed with BPD are typically highly emotionally reactive, their reactions tend to be extreme, and the time taken to return to their baseline affective state is often considerably longer than for individuals without BPD. Although clinicians and researchers diagnose personality disorders primarily in adults, in the past decade, more clinical researchers have assessed and identified personality traits and disorders in youth.[8] Such traits are highly predictive of adult personality disorders and are associated with increased long-term impairment, morbidity, and mortality.[9] An important question to answer is whether therapeutic interventions in adolescence could prevent the development of adult personality disorders linked to self-harming behavior.

The paucity of randomized controlled trials (RCTs) offers scarce evidence for effective treatments for self-harming adolescents. Wood *et al.*[10] developed a manual-based cognitive-behavioral therapy–oriented group therapy for adolescents that was shown to be more effective than treatment as usual (TAU) in reducing self-harm behaviors; however, these results were not replicated in 2 subsequent studies from the same group.[11,12] In a recent RCT reported by Rossouw and Fonagy,[13] mentalization-based treatment for adolescents was superior to TAU in reducing self-harm and depression. However, with this notable exception, no treatment program specifically targeting self-harm in adolescents has so far been shown to reduce self-harm more than usual care. The recent critical review of Brent *et al.*[14] provides a good update on intervention studies targeting adolescent suicidal behaviors.

Dialectical behavior therapy (DBT) is a comprehensive, principle-based, multi-modal, outpatient treatment that was developed by Linehan[6] for adults with BPD; it was found, in several RCTs at independent sites, to be superior to comparison treatments in reducing suicidal and nonsuicidal self-harm, emergency department visits, and hospitalizations, improving outpatient treatment completion, global and social adjustment, and personality functioning.[15-20] DBT has since been adapted by Miller *et al.* for outpatient treatment of self-harming adolescents (DBT-A) with borderline personality traits,[21] through shortening treatment length from 12 months to 3 to 5 months, including parents or other caregivers in weekly skills training groups, and adding a new skills module to address common skill deficits among teens with emotion dysregulation and their families. Several uncontrolled studies have suggested that DBT-A could be effective at reducing self-harm while improving treatment compliance and satisfaction.[22-27] However, to date, no RCTs of DBT-A have been published. Although RCT studies of standard DBT for adults offer favorable results, our knowledge of the effectiveness of a considerably shorter and modified DBT for adolescents and their families is limited. The primary hypothesis consequently examined in this study was that DBT-A would be superior to usual care in reducing self-harm behavior, suicidal ideation, and depressive symptoms in self-harming adolescents with BPD features.

METHOD

This was a single-blind randomized trial comparing DBT-A with enhanced usual care (EUC). Participants were randomly allocated (Figure 1) to receive either treatment at 1 of the participating child and adolescent psychiatric outpatient clinics in a 1:1 ratio stratified according to gender, presence of major depression, and presence of suicide intent during the most serious episode of self-harm behavior within the 16 weeks before enrollment. Treatment allocation of participants after baseline assessments was based on a permuted block randomization procedure with an undisclosed and variable blocking factor, and daily management of the randomization procedures was performed by an external group.

Participants

Participants were 77 adolescents (age 12 through 18 years) recruited from child and adolescent psychiatric outpatient clinics in Oslo that screened newly referred patients for current self-harm behavior. If screened positively, the patient and the parents were invited to a diagnostic interview in which the remaining inclusion criteria were checked. Diagnostic assessments were made by experienced clinicians blinded to treatment allocation. Inclusion criteria were as follows: a history of at least 2 episodes of self-harm, at least 1 within the last 16 weeks; at least 2 criteria of *DSM-IV* BPD (plus the self-destructive criterion), or, alternatively, at least 1 criterion of *DSM-IV* BPD plus at least 2 subthreshold-level criteria; and fluency in Norwegian. Exclusion criteria were a diagnosis of bipolar disorder (except bipolar II), schizophrenia, schizoaffective disorder, psychotic disorder not otherwise specified, intellectual disability, and Asperger syndrome. Self-harm was defined as self-poisoning or