Patients with borderline personality disorder (BPD) are frequently encountered in all clinical settings. Adults with BPD are common in both the community with a prevalence of 1-2% (Paris, 2010) and in clinical outpatient settings with a prevalence of 10-20% (Korzekwa, Dell, Links, Thabane, & Webb, 2008; Zimmerman, Rothschild, & Chelminski, 2005). Among adolescents, the prevalence of BPD in the community may be even higher at 3% (Bernstein et al., 1993), and the prevalence in outpatient treatment at 22% (Chanen, Jovev, et al., 2008). Although numerous effective psychotherapeutic treatments have been developed for BPD in adults (Biskin & Paris, 2012), there is a paucity of evidence-based treatments for youth, leading one author to state that BPD is “one of the most difficult disorders to treat” (Fleischhaker et al., 2011). The aim of this paper is to
summarize the existing evidence for the treatment of BPD in youth.

**Treatment of BPD in Adults**

Over the past 20 years there has been a revolution in the treatment of BPD. What was once considered an untreatable illness is now treatable with a constantly growing number of evidence-based therapies. Psychotherapy is the crucial component of treatment as the benefits of medications are questionable due to lack to replication and samples that are not representative of patients seen in clinical practice. Psychotherapy remains the treatment of choice, as indicated in many guidelines for the treatment of patients with BPD (American Psychiatric Association Practice, 2001; Kendall et al., 2009) as well as recent Cochrane reports (Stoffers et al., 2012; Stoffers et al., 2010). In adult populations, the number of specialized psychotherapies for BPD have proliferated, with nearly a dozen demonstrating benefit when studied in randomized controlled trials. Of these, only a small group have been studied in youth. Dialectical behavior therapy (DBT), the first evidence-based treatment for BPD (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991), is the best studied with the most evidence supporting its use.

DBT developed out of a combination of cognitive behavior therapy with practices derived from Eastern religious traditions (Linehan, 1993a; 1993b). DBT postulates a biobehavioral model for BPD wherein temperamental dysregulation interacts with an invalidating childhood environment and leads to a variety of maladaptive behaviors, such as self-harm and suicidality. DBT includes four key components: weekly individual therapy, weekly skills training groups, over the phone crisis management for patients, and weekly therapist consultation meetings. The individual therapy is focused on a hierarchy of targets, with life threatening behaviors at the top of the list, and employs a dialectic, or synthesis, between the conflicting ideas of validation and change. Treatment strategies are behavioural in nature with a focus on homework and use of the skills taught in the group component. Group skill sessions focus on teaching a variety of skills to help patients with mindfulness, emotion regulation, distress tolerance, and interpersonal effectiveness. Group skills training is primarily didactic but role play and homework are used to enhance the acquisition and application of skills. Telephone consultation is available at all times for patients who are in crisis and need brief support and guidance on which skills to use and how to use them in their everyday lives. Finally, consultation team meetings serve to help maintain treatment fidelity and support therapists. DBT was originally designed and studied as a one year treatment, although shortened versions exist (Stanley, Brodsky, Nelson, & Dulit, 2007). DBT has been shown to be effective in reducing self-harm and suicidality, as well as rates of hospitalization, with moderate effect sizes (Kliem, Kroger, & Kosfelder, 2010).

Mentalization-based treatment (MBT) is the second specialized psychotherapy for adults with BPD that has also been studied in youth. Mentalization is concisely defined as the ability to understand the mental states, including thoughts and emotions, of oneself and others (Bateman & Fonagy, 2006). MBT is based on psychodynamic theories of attachment and postulates that BPD arises in infancy out of failure of mentalization by the primary caretaker, combined with biological vulnerability in the infant. MBT combines group and individual therapy with a focus on helping patients understand their own mental state and the mental state of others, including the therapist. Treatment lasts for 18 months and has been studied in both outpatient and day hospital settings with demonstrated improvements in suicidality, rates of hospitalization, general psychiatric symptoms and overall functioning (Bateman & Fonagy, 1999; 2009).

**Treatment of BPD in Youth**

Despite the quickly growing literature on the treatment of BPD in adults, there is a paucity of high quality trials for treatments in youth. Several possible explanations exist. The first is that the diagnosis of BPD may not be made in youth, even though the DSM-IV-TR and DSM-5 specifically states that the diagnosis can be made if symptoms persist for one year or longer (American Psychiatric Association & American Psychiatric Association. Task Force on DSM-IV., 2000; American Psychiatric Association, 2013). The revised alternate diagnostic system for personality disorders in the appendix of the DSM-5 entirely removes any age restrictions (American Psychiatric Association, 2013). There is a significant amount of stigma within the mental health system against the diagnosis of BPD (Aviram, Brodsky, & Stanley, 2006), with particular concerns in child psychiatry (Paris, 2008). Despite this reluctance to make the diagnosis, there is increasing evidence for the role of prevention and early intervention (Paris, Chenard-Poirier, & Biskin, 2013). The second possible explanation for the lack of high quality trials in youth with BPD is the generally modest effects of all evidence-based manualized psychotherapies in youth populations. A recent meta-analysis of all evidence-based youth psychotherapies found an effect size of 0.29 compared to treatment as usual and this was reduced to a non-significant difference when the meta-analysis was limited to studies of diagnosed psychiatric conditions (Klein & Miller, 2011). A third possible explanation may be related to a therapeutic desire to focus on comorbidities as the primary treatment target. Patients with BPD frequently have many axis I and axis II comorbidities, but the presence of a BPD diagnosis is a unique contributor to lower psychosocial functioning (Biskin & Paris, 2012). These factors, among others, highlight the challenges in conducting treatment studies for BPD in youth.
**Dialectical Behaviour Therapy**

Despite being the oldest and best studied evidence-based treatment for BPD, there are no randomized controlled trials of DBT for BPD in youth. Several trials are underway, but results are not yet available. Several open trials and quasi-randomized treatments have been conducted with mixed results. Miller, Rathus, and Linehan have developed a modified treatment protocol for BPD in suicidal adolescents (Miller, Rathus, & Linehan, 2007). There are several key differences between standard DBT and DBT for adolescents. First, the treatment has been reduced from one year to 16 weeks to improve retention in youth and with the idea that a shorter treatment may suffice. Second, family members join the patient in the skills group, creating multifamily groups. Third, skills coaching has been extended to family members. Fourth, family therapy sessions were included to address other family issues. Finally, the skills taught were modified, with some skills removed and a new module called “Walking the Middle Path” was added to help achieve a balance between validation and change in family environments. (Klein & Miller, 2011). A comprehensive review found 18 studies of DBT for adolescents, with six focusing on BPD symptoms and one focusing on suicidality in a hospitalized sample (MacPherson, Cheavens, & Fristad, 2013). Most studies included adolescents with sub-threshold BPD diagnoses and treatment varied between 12 and 52 weeks. Within group effects were noted in most measures, including symptoms of BPD, general psychiatric symptoms, and general functioning, but without a comparison group it is unclear how much change is due to the specific treatment. One study of outpatients used a quasi-experimental design wherein all patients referred to the program were included in the study, but only the most severe were offered the DBT treatment program (Rathus & Miller, 2002). This study found that DBT was significantly better at reducing psychiatric hospitalization and maintaining patients in treatment, but there was no difference between groups in the number of suicide attempts made during treatment. Overall, DBT may be a promising treatment for adolescents with BPD with a well-developed manual that has been used in a number of different studies, but the results of ongoing randomized controlled trials are necessary before this treatment can be fully endorsed.

**Emotion Regulation Training**

Emotion Regulation Training (ERT) is an adaptation of an existing psychotherapy for adult BPD called STEPPS (Blum et al., 2008), and STEPPS shares many similarities with DBT. ERT is a 17 week group psychotherapy that is a supplement to treatment as usual (Schuppert et al., 2009). It incorporates psychoeducation, skills training, and family psychoeducation. Two studies by the same group compared ERT plus treatment as usual (TAU) to TAU alone (Schuppert et al., 2009; Schuppert et al., 2012). Both studies found that both groups improved equally on measures of BPD symptomatology, general psychiatric symptoms, and quality of life, with no differences between groups. These results suggest that ERT may not be a useful supplement to TAU.

**Mentalization-based Treatment**

Research suggests that mentalizing may be deficient in adolescents with BPD, but in a slightly different way than in adults. In adolescents with BPD, there is a tendency to “hypermentalize” which means develop elaborate and detailed understandings of the internal states of others. These elaborate explanations are, unfortunately, often incorrect, which suggests that improving mentalization in general may be an effective treatment strategy (Sharp et al., 2013). This was evaluated in one study of MBT for self-harm in adolescents, but 73% of the sample met criteria for BPD (Rossouw & Fonagy, 2012). The treatment lasts for one year and included weekly individual therapy session and monthly mentalization-based family therapy sessions. When compared to TAU, the MBT group demonstrated significantly greater reductions in BPD symptoms, self-harm, and depressive symptoms. Changes in mentalization and the attachment patterns in the MBT group were also noted and moderate the therapy’s effects.

Overall, MBT is currently the only treatment for BPD in adolescence that has a randomized controlled trial supporting its use and is the recommended treatment, if available.

**Cognitive Analytic Therapy**

Cognitive analytic therapy (CAT) is a time-limited integrative psychotherapy that incorporates components of psychodynamic psychotherapy and cognitive-behaviour therapy (Bateman et al., 2007; Ryle & Kerr, 2002). It has been used extensively in the HYPE model, which is an early intervention service for BPD (Chanen, McCutcheon et al., 2009). The HYPE model includes individual CAT along with case management, family psychoeducation and intervention, pharmacotherapy if warranted, inpatient care, and an activity group program. CAT and HYPE have been evaluated in two studies of adolescents with BPD or sub-threshold BPD. The first compared CAT with a manualized good clinical care comparison treatment, and both treatments provided a similar number of sessions (Chanen, Jackson, et al., 2008). Both treatments were equally effective at 24 month follow-up, but CAT demonstrated more rapid improvement which may be an important consideration during adolescence. A second study compared CAT plus the HYPE model, good clinical care plus the HYPE model, to a historical treatment as usual group that were seen before the HYPE model was implemented (Chanen, Jackson, et al., 2009). This study demonstrated that CAT plus HYPE again led to faster and significantly larger improvements than TAU on internalizing and externalizing symptoms at 24 months follow-up.
Differences between the CAT and good clinical care groups were more modest.

In the context of the HYPE model, CAT appears to demonstrate some significant benefits, although these benefits appear more modest when compared to another highly structured and manualized treatment.

**Pharmacotherapy**

The role of pharmacotherapy in adults with BPD is very limited and there are many limitations in the evidence base (Biskin & Paris, 2012). The situation is further compounded in the research on pharmacotherapy in adolescents with BPD. One observational study of fluphenazine at a dose of 3mg per day found benefit at the end of the eight week trial (Kutcher, Papatheodorou, Reiter, & Gardner, 1995) and another observational study of methylphenidate in adolescents with comorbid BPD and attention-deficit/hyperactivity disorder (ADHD) found benefits on both BPD and ADHD symptoms (Golubchik, Sever, Zalsman, & Weizman, 2008). There are many limitations to these studies as well as numerous risks and side effects with these treatments. Therefore it is strongly recommended to avoid pharmacotherapy in this population.

**Conclusions**

The treatment options for adults with BPD has increased dramatically over the past two decades. Unfortunately, treatment options for adolescents with BPD have not improved as quickly as there is still a paucity of research. Many questions about how long to treat adolescents, the best way to incorporate family, and the choice of therapeutic framework remain. One positive finding from the existing literature is that all treatments are associated with improvements over time, and this may partially reflect the natural course of BPD in adolescents (Biskin, Paris, Renaud, Raz, & Zelkowitz, 2011; Chanen et al., 2004, Biskin and Paris, 2012; Weinberg Ronningstam, GoldBlatt). Another possibility is that the highly structured comparator treatments in these studies are also effective, as has been found in one study of adults with BPD treated with general psychiatric management (McMain et al., 2009). In fact, providing a structured therapy with a coherent conceptual framework is one of the most important common factors among treatments of BPD (Biskin & Paris, 2012; Weinberg, Ronningstam, Goldblatt, Schechter, & Maltsberger, 2011). Treating BPD at the critical time period of adolescence may significantly improve the long-term functioning of these patients, so developing and testing effective treatments for this group remains a priority.

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comparison with treatment as usual. *Australian & New Zealand Journal of Psychiatry*, 43(5), 397-408.


