A systematic review of interventions for co-occurring substance use and borderline personality disorders

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Abstract
Issues. The aim of this study was to undertake a systematic review on effective treatment options for co-occurring substance use and borderline personality disorders to examine effective treatments for this group. Approach. A systematic review using a narrative analysis approach was undertaken as there were too few studies within each intervention type to undertake a meta-analysis. The inclusion criteria comprised of English language studies (between 1999 and 2014) and a sample of >70% borderline personality disorder, with measurable outcomes for substance use and borderline personality disorder. All abstracts were screened (n = 376) resulting in 49 studies assessed for eligibility, with 10 studies, examining three different treatment types, included in the final review. Key Findings. There were four studies that examined dialectical behaviour therapy (DBT), three studies that examined dynamic deconstructive psychotherapy (DDP) and three studies that examined dual-focused schema therapy (DFST). Both DBT and DDP demonstrated reductions in substance use, suicidal/self-harm behaviours and improved treatment retention. DBT also improved global and social functioning. DFST reduced substance use and both DFST and DPP improved treatment utilisation, but no other significant positive changes were noted. Implications. Overall, there were a small number of studies with small sample sizes, so further research is required. However, in the absence of a strong evidence base, there is a critical need to respond to this group with co-occurring borderline personality disorder and substance use. Conclusion. Both DBT and DPP showed some benefit in reducing symptoms, with DBT the preferred option given its superior evidence base with women in particular. [Lee NK, Cameron J, Jenner L. A systematic review of interventions for co-occurring substance use and borderline personality disorders. Drug Alcohol Rev 2015;34:663–72]

Key words: review, substance use disorder, borderline personality disorder, therapy, intervention.

Introduction
Borderline personality disorder (BPD) is characterised by a complex cluster of persistent symptoms that impact on general and interpersonal functioning and commonly co-occur along with other psychiatric disorders and symptoms [1,2]. Substance use disorders (SUD) appear to be particularly common [3–5]. Although an estimated 1% of the general population meet the criteria for a BPD diagnosis [6], the rate among individuals with SUD is substantially higher up to an estimated 65% of those in treatment [7]. Co-occurring SUD increase the level of complexity, severity and impairment of BPD and are associated with increased rates of self-harm and suicidal behaviour among people with BPD [8,9]. Women experience higher rates of BPD than men and will present more frequently for hospital admissions [9]. Both BPD and SUD are associated with emotional dysregulation [10,11], impaired decision making [12] and high rates of relapse [13,14].

Although there is an extensive literature on the psychological treatment of both BPD and SUD independently [13], and BPD has been the most studied in...
terms of treatment of psychological therapies [16], less is known about treatment of co-occurring BPD and SUD.

Practitioners often find it difficult to treat BPD and substance use, becoming pessimistic about treatment outcomes [11,17]. Identifying evidence-based interventions for this group is crucial in both preventing relapse and achieving effective outcomes. In a previous review of BPD and SUD treatments, Pennay et al. [18] concluded that at that time there was insufficient evidence to recommend one treatment over another. The study examined the literature up to early 2010. Since then, additional research has been published.

The aim of this study was to build upon previous works by undertaking a systematic review on effective treatment options for co-occurring SUD and BPD to examine effective treatments for this group.

**Method**

This study was undertaken as part of the development of the Australian Clinical Practice Guideline for the Management of Borderline Personality Disorder [19]. A systematic review utilises a structured procedure to search for, identify and assess studies. Two options for analysing the results of a systematic search are a meta-analysis [20] or a narrative analysis [21,22]. This paper used a narrative analysis because there were too few studies of each treatment type to make a meta-analysis feasible.

An illustration of the systematic review is provided in Figure 1.

**Search strategy**

Initial search terms were based on the National Institute for Health Care Excellence Guideline on Borderline Personality Disorder: Treatment and Management [23]. A search protocol was developed and approved by the committee before the review was undertaken. In addition, a combination of MeSH headings, keyword terms and words in the text and titles were used to develop the search terms, an example of this string search is provided in Table 1.

Four electronic databases were searched, including Medline, PsycINFO, Embase and the Cochrane Database of Systematic Reviews, and the results were summarised in Table 2.

**First screen**

The citations from all sources were collated for screening with a total of n = 668 studies included prior to duplicates and incorrect citations being removed. During the first screen, we included all eligible studies (n = 292 excluding duplicates); the citations were then reviewed against the inclusion criteria (a further n = 243 were excluded).

For inclusion in the review, studies needed to meet the following criteria:

- Included any outcome data from treatment or intervention for both BPD and SUD.
- >70% sample size of BPD.
- English language.
- Study years 1999–2014.
- Randomised controlled trial.

**Second screen**

During the second screen, two reviewers independently assessed the remaining studies (n = 49) for eligibility using quality checklists adapted for the purpose of this review from the National Institute for Health and Clinical Excellence [23] as well as from Petticrew and Roberts [24]. During this stage, a further n = 39 references were excluded because they did not meet the inclusion criteria. For each of the remaining studies (n = 10), the data were extracted into a specifically developed extraction sheet. If inclusion status was not
clear, this was resolved by team consensus. Table 3 provides an overall assessment of the quality of evidence.

**Extraction**

As with the previous phases, two reviewers completed the data extraction. The data extraction sheet we adapted from Torgerson [25] documented key information from each study including citation details, reference type, study setting, study objective, outcome measures, design, participants details, intervention and results as well as a summary of study and the completed quality check. In the case of inconsistencies or ambiguity during the extraction process, studies were re-examined and discussed by both the original and additional reviewers for consensus. The data were then transferred to an evidence table, which we adapted for our review and based on the minimum data recommended by Higgins and Green [26]. We included the following data summaries:

- Participant details: number, age, gender and diagnosis.
- Intervention: details of intervention and comparison.
- Outcomes: primary outcome related to BPD and substance use.
- Other relevant fields: follow up and summary of study.

As there were too few studies for each intervention type to undertake a meta-analytic review, a narrative analysis was undertaken.

**Results**

Ten studies, examining three different treatment interventions, met the inclusion criteria. There were four studies of dialectical behaviour therapy (DBT), three studies of dynamic deconstructive therapy (DDP) and three of dual-focused schema therapy (DFST). A summary of outcomes on symptoms measured for each intervention type is detailed in Table 4.

A descriptive summary of each study including the participants, intervention, comparison intervention, primary outcome, length of follow up and summary of the results is provided in Table 5.

**DBT**

DBT is a cognitive behavioural therapy that was developed in the late 1980s to specifically target women with...
a history of chronic suicide attempts [2]. DBT is a skills-based form of cognitive behavioural therapy and promotes acceptance and change; it can be used in both inpatient and outpatient settings and targets suicidal behaviours, self-harm and ‘therapy-interfering behaviours’, such as non-attendance, inappropriate interpersonal interaction and boundary issues [2]. There is typically a combination of group and individual treatment sessions and high levels of practitioner clinical supervision [32].

One study of Axis I disorders [36] among those with BPD showed an improvement in substance use abstinence with DBT [29]. Participants were 101 women (age 18–45) who met criteria for BPD and reported at least two suicide attempts and/or non-suicidal self-injury acts in the past 5 years, with at least one act in the 8-week pre-study period. DBT was more likely to result in full and partial remission of symptoms and more drug and alcohol-abstinent days than community treatment by experts.

Two studies [1,27] used adapted DBT with medication. In the first study [1], DBT involved individual weekly psychotherapy plus weekly group skills support and additional phone support as needed and was compared with treatment as usual (TAU). This was a small sample study with a high drop-out rate and no randomisation. The mean age of all female participants was 30.4 years. There were no differences between groups on history of suicide and self-harm behaviours or on the State-Trait Anger Inventory. However, the DBT group showed a decrease in SUD and the DBT group attended almost twice the number of therapy hours as the TAU group, although the medication made it difficult to isolate the contribution of the DBT alone.

In the second study, Linehan et al. [27] used an adapted version of DBT for 48–52 weeks; both treatment groups also received opiate agonist medication l-alpha-acetylmethadol (LAAM). The treatment consisted of comprehensive validation therapy with 12 steps (CVT) versus a manual-based treatment that included strategies similar to DBT in combination with the standard 12 steps. There was no difference between groups on suicide and self-harm behaviours or global and social functioning and no difference in opiate use as measured by urinalysis until 12 months when DBT showed less opiate use than CVT (P < 0.02). At 16 months, there was no difference between groups.

van den Bosch et al. [28] analysed secondary data on SUD and personality disorders, not specific to BPD. The study investigated whether standard DBT could be successfully implemented in a mixed population of BPD patients with or without co-occurring SUD. Participants were 58 women with BPD. The DBT group showed greater (non-significant) reduction in self-harm behaviours. There were no differences in reduction of SUD. The DBT group had greater treatment retention and greater reductions in self-harm.
### Table 5. Summary of included studies

<table>
<thead>
<tr>
<th>Reference</th>
<th>Participants (N, age, gender, diagnosis)</th>
<th>Intervention</th>
<th>Comparison</th>
<th>Measures (Symptom)</th>
<th>Primary outcomes</th>
<th>Follow up</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Linehan et al. [1] RCT</td>
<td>N = 28 N = 12 (DBT + medications) N = 16 (TAU) Mean age = 30.4 Gender Female 100%</td>
<td>Adapted DBT with replacement medication for 4 months plus 4 months of tapering</td>
<td>TAU was defined as meeting with case managers as required</td>
<td>Structured clinical interview (substance use) Urinalysis (substance use) Timeline follow back (substance use) Parasuicide history interview (suicide/ self-harm) State-Trail Anger Expression Inventory (anger) Social history interview (global and social functioning) Treatment history interview (treatment utilisation)</td>
<td>SUD symptoms DBT group showed greater reduction in SUD than TAU (P &lt; 0.05). BPD symptoms No between group differences on parasuicide, anger (12 months), but slightly better global and social functioning (16 months). There was no difference in treatment utilisation between groups.</td>
<td>12 months</td>
<td>Small sample study with high drop-out rate and no randomisation. Those in the DBT groups received almost twice the amount of therapy hours as compared to TAU. The medication made it difficult to isolate the contribution of DBT.</td>
</tr>
<tr>
<td>Linehan et al. [27] RCT</td>
<td>N = 23 N = 11 (DBT) N = 12 (CVT+12S) Mean age = 36.1 Gender Female 100% Diagnosis BPD (SCID-II) and personality disorder examination SUD (SCID-I)</td>
<td>Adapted DBT for 48–52 weeks plus opiate agonist medication (LAAM)</td>
<td>CVT with 12-step manual-based treatment that included strategies similar to DBT in combination with the standard 12 steps plus opiate agonist medication (LAAM)</td>
<td>Urinalyses (substance use) Timeline follow back (substance use) Social history interview (global and social functioning) Parasuicide history Interview (suicide/ self-harm)</td>
<td>SUD symptoms Results of urinalyses indicated that both groups were effective in reducing opiate use relative to baseline. The DBT group had a significantly lower percentage of opiate-positive urinalyses than the comparison (t = 2.32, P &lt; 0.02). At 16 months (4 months post-treatment), all participants had a low proportion of opiate-positive urinalyses (27% in DBT; 33% in comparison). BPD symptoms No between group difference in parasuicide or global and social functioning. CVT had higher retention rates than DBT.</td>
<td>16 months</td>
<td>Strong research design. Higher retention rates in comparison group (100% for study duration). With regard to between group differences, DBT maintained reductions in mean opiate use through 12 months of active treatment while the comparison significantly increased opiate use during the last 4 months of treatment.</td>
</tr>
<tr>
<td>van den Bosch et al. [28] RCT</td>
<td>N = 58 N = 27 (DBT) N = 31 (TAU) Mean age = 37.5 Gender Female 100% Diagnosis BPD (DSM-IV diagnosis of BPD) SUD (European version of the Addiction Severity Index)</td>
<td>DBT</td>
<td>TAU was not defined.</td>
<td>European version of the Addiction Severity Index (substance use) Instruments used were not reported but also measured suicide/self-harm and treatment retention.</td>
<td>SUD symptoms No between group differences in reduction of SUD BPD symptoms DBT group showed greater reduction in self-harm behaviours but not significant. The DBT group had higher retention rates (37% DBT vs. 77% TAU attrition).</td>
<td>12 months</td>
<td>Participants reported high rates of suicide attempts, self-harm and substance use at baseline, the DBT group had better treatment retention and greater reductions in self-harm. No change in SUD.</td>
</tr>
<tr>
<td>Harned et al. [29] RCT</td>
<td>N = 101 N = 52 (DBT) N = 49 (CTBE) Mean age = 29 Gender Female 100% Diagnosis BPD SUD (DSM-III-R Personality Disorders)</td>
<td>DBT</td>
<td>CTBE was developed to control for expertise, treatment allegiance, availability of a clinical supervision group, prestige, general factors and assistance in finding a therapist, availability of affordable and sufficient treatment hours and therapist gender, training and clinical experience.</td>
<td>Diagnostic and Statistical Manual of Mental Disorders (substance use) Treatment history interview (psychotropic medication) Timeline follow back (psychological status)</td>
<td>SUD symptoms DBT participants had a significantly greater proportion of drug- and alcohol-abstinent days across time than did CTBE patients with SUD. BPD symptoms For specific Axis I disorders, DBT patients were significantly more likely to achieve full remission from SUD than were CTBE patients. DBT patients spent significantly more time in partial remission and less time in no remission from SUD than did CTBE patients.</td>
<td>12 months</td>
<td>The study concluded that DBT is superior to CTBE in treating co-occurring SUD among suicidal BPD patients. DBT and CTBE patients did not significantly differ in the proportion of Axis I disorders that reached full remission or that subsequently relapsed.</td>
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<tr>
<td>Reference</td>
<td>Participants (N, age, gender, diagnosis)</td>
<td>Intervention</td>
<td>Comparison</td>
<td>Measures (Symptom)</td>
<td>Primary outcomes SUD symptoms</td>
<td>Primary outcomes BPD symptoms</td>
<td>Follow up</td>
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<tr>
<td>Ball et al. [10] RCT</td>
<td>N = 52 Mean age = 38.3 Gender Female 6% Diagnosis PD (PDQ) SUD (Substance use in past 30 days)</td>
<td>DFST</td>
<td>SAC included a drop-in centre for clients and also typically included three counselling or education sessions a week.</td>
<td>Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition substance use disorders (substance use) Addiction Severity Index (substance use) Brief Symptom Inventory (multiple-scales) Inventory of Interpersonal Problems—Circumplex model (global and social functioning) Early Maladaptive Schema Questionnaire (global and social functioning) Therapy retention (total weeks in treatment) Treatment utilisation (number of weeks in which sessions were attended)</td>
<td>SUD symptoms No change in SUD assessed due to high drop-out rate. BPD symptoms No change in PD symptoms assessed because of high drop-out rate. Study attrition prevented evaluation of outcomes other than retention and utilisation. Treatment utilisation of DFST compared to SAC was statistically significant.</td>
<td>24 weeks</td>
<td>This study had a significant problem, which was that study attrition prevented analysis of outcomes other than retention and utilisation. 60% dropped out after 1 month and 77% after 3 months. Overall, there was greater utilisation of individual DFST than the SAC group (but less so for more severe personality disorder symptoms demonstrated better utilization of SAC than DFST).</td>
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<tr>
<td>Ball [31] RCT</td>
<td>N = 30 N = 15 (DFST) Mean age = 37 Gender Female 50% Diagnosis PD (SCID-II) SUD (Substance Use Timeline Calendar)</td>
<td>DFST 12FT</td>
<td>12FT is a manually guided 12-step group therapy focusing on the disease model of addiction.</td>
<td>Substance Use Timeline Calendar (substance use) Addiction Severity Index (substance use) Brief Symptom Inventory (global and social functioning) Multiple-Affect Adjective Checklist Revised (anger) Working Alliance Inventory (therapeutic alliance)</td>
<td>SUD symptoms Reduction in SUD in the DFST group as measured by a timeline calendar. BPD symptoms Change in symptoms not reported.</td>
<td>24 weeks</td>
<td>DFST was associated with a stronger therapeutic alliance. Contrary to predictions, 12FT demonstrated better reduction of dysphoric affect than did DFST.</td>
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<tr>
<td>Ball et al. [15] RCT</td>
<td>N = 105 N = 54 (DFST) N = 51 (IDC) Mean age = 26.5 Gender Female 19% Diagnosis BPD (PDQ-4R) SUD (DSM-IV)</td>
<td>Manual-guided weekly counselling known as IDC was delivered during the first 6 months in a residential therapeutic community.</td>
<td>Manual-guided weekly weekly Drug and Alcohol Counselling (DACC) Delivery as determined by the first 6 months in a residential therapeutic community.</td>
<td>Brief Symptom Inventory Revised (anger) Inventory of Interpersonal Problems—Circumplex model (global and social functioning) Adherence/Competence Rating Scale Treatment retention</td>
<td>SUD symptoms The substance-free status of most participants on admission and the controlled residential environment made substance use an irrelevant outcome variable. BPD symptoms Participants diagnosed with BPD showed significant symptom reductions during the first 3 months, however, IDC demonstrated continued reductions during the remaining 3 months, whereas DFST showed no further improvement.</td>
<td>6 months</td>
<td>Investigators concluded that the value of adding dual-focus therapies for a range of co-occurring PDs and substance dependence in residential rehabilitation settings was not supported by this trial.</td>
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<tr>
<td>Gregory et al. [32] RCT</td>
<td>N = 30 N = 15 (DDP) N = 15 (TAU) Mean age = 28.7 Gender Female (80%) Diagnosis BPD (DSM-IV) Axis II PDs SUD (DSM-IV-TR Axis I Disorders)</td>
<td>DDP TAU was defined as usual treatment in the community but included mostly individual psychotherapy and medication management.</td>
<td>Lifetime Parasuicide Count (suicide/self-harm) Addiction Severity Index (substance use) Treatment history interview (treatment utilisation) Beck Depression Inventory Dissociative Experience Scale Social Provisions Scale (social support) BEST (BPD severity)</td>
<td>SUD symptoms DDP was associated with statistically significant improvement in alcohol misuse. BPD symptoms DDP was associated with statistically significant improvement in parasuicide/self-harm. Treatment retention and was better in the DDP (73%) compared with TAU (63%). Treatment utilisation was statistically significant in the DFP group.</td>
<td>12–18 months</td>
<td>A well-conducted study however the small sample size limits its power to detect treatment effects so results should be interpreted cautiously. DDP was associated with statistically significant improvement in secondary outcome measures, including core symptoms of BPD, depression and dissociation. Perceived social support also improved but was not statistically significant.</td>
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DDP

DDP was developed for particularly challenging cases of BPD, such as those with co-occurring SUD. It is a modified form of psychodynamic psychotherapy [32]. The treatment involves individual weekly sessions over 12–18 months using a manual-based protocol [32].

Three studies were published by the same research group reporting on the same DPP study [32,33,23], which showed that DDP was significantly more effective than TAU in addressing both BPD and alcohol use disorder symptoms.

The first paper reported on the [32] feasibility, tolerability and efficacy of manual-based version of DDP for co-occurring BPD and alcohol use disorder. The

Table 5. (Continued)

<table>
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<tr>
<td>Gregory et al.</td>
<td>N = 30</td>
<td>DDP</td>
<td>TAU was defined as usual treatment in the community.</td>
<td>Actual measures not reported but outcomes included measures of parasuicide (suicide/self-harm), alcohol misuse (substance use) and institutional care (treatment utilisation) and treatment retention.</td>
<td>SUD symptoms</td>
<td>3–6 months</td>
<td>Improvements in both BPD and alcohol use disorder symptoms for DDP group are greater than TAU. The results suggest a clinically meaningful effect between groups but not reaching statistical significance (p = 0.071).</td>
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<td>[33] RCT</td>
<td>N = 15 (DDP) N = 15 (TAU)</td>
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<td>Diagnosis BPD (DSM-IV) and SUD (Alcohol use)</td>
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<tr>
<td>Gregory et al.</td>
<td>N = 30</td>
<td>DDP</td>
<td>OCC referred to the best treatment available in the community within the restrictions of their own financial resources, availability of treatment and their willingness to engage.</td>
<td>Addiction Severity Index (substance use) BEST (BPD severity) Beck Depression Inventory Dissociative Experiences Scale Treatment history interview (treatment utilisation) Lifetime Parasuicide Count (suicide/self-harm) Social Provisions Scale (social support)</td>
<td>SUD symptoms</td>
<td>30 months</td>
<td>Sample size is small, making it difficult to draw firm conclusions and there was substantial loss to follow up.</td>
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<tr>
<td>[34] RCT</td>
<td>N = 15 (DDP) N = 15 (OCC)</td>
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<td>Diagnosis BPD (SCID II) and SUD (SCID)</td>
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12FT, 12-step facilitation therapy; BEST, borderline evaluation of severity over time; BPD, borderline personality disorder; CTBE, community treatment by experts; CVT, comprehensive validation therapy; DBT, dialectical behaviour therapy; DFST, dual-focus schema therapy; DSM, Diagnostic and Statistical Manual of Mental Disorders; IDC, individual drug counselling; LAAM, l-alpha-acetylmethadol; OCC, optimised community care; PD, personality disorder; PDQ, Personality Diagnostic Questionnaire; RCT, randomised controlled trial; SAC, substance abuse counselling; SCID, Structured Clinical Interview for DSM; SUD, substance use disorder; TAU, treatment as usual.
participants were 30 adults with diagnosis of BPD and alcohol use disorder (abuse or dependence). There were assessments every 3 months for a year. DDP participants showed statistically significant improvement in suicide and self-harm behaviour, alcohol use disorder, institutional care (treatment utilisation), depression, dissociation, BPD symptoms and treatment retention. TAU participants received higher average treatment intensity but showed only limited change during the same period. The proportion of DDP participants reporting suicide and self-harm behaviours decreased from 67% (n = 11) pre-treatment to 30% (n = 3) at 12 months. The proportion of DDP participants reporting incidents of alcohol misuse (≥5 drinks on a single occasion) decreased from 67% (n = 10) pre-treatment to 30% (n = 3) at 12 months. The proportion of DDP participants remaining abstinent more than doubled over the 12 months of treatment. The proportion of DDP participants needing institutional care decreased from 67% (n = 10) pre-treatment to 10% (n = 1) at 12 months.

In the second paper [33], 3 and 6 month data were reported. Improvements in both BPD and alcohol use disorder symptoms were reported for the DDP group. During the first 6 months, both treatment groups received approximately the same number of individual treatment contact hours/month, but the TAU participants received more hours of group therapy. Study retention rates were equivalent for both groups at 6 months. However, therapist retention rates differed markedly between the treatment groups (73% DDP vs. 18% TAU). Risk for suicide and self-harm behaviour in the DDP group decreased by 38%, against an increase in relative risk of 35% for TAU. Even for participants who continued to report suicide and self-harm behaviour, the number of incidents decreased by 64%. The risk for an episode of intoxication decreased by 31% for both groups. Mean number of drinking days decreased by approximately half in both groups (53% for the DDP group, 48% for TAU). The mean number of days using illicit substances decreased by 54% for DDP and 25% for TAU. The relative risk of institutional care (treatment utilisation) decreased by 55% for DDP and 32% for TAU. In addition, the mean number of inpatient days decreased by 94% for DDP and 64% for TAU. The mean number of visits to emergency room decreased by 93% for DDP and 86% for TAU.

In the final study [34], 16 of the 19 original participants were followed up at 30 months. Results showed that at 30 months subjects who received DDP had more improvement overall than those receiving community TAU on measures of core BPD symptoms, depression, parasuicide and recreational drug use, while there was a trend that favoured DDP in reduced alcohol consumption (but not treatment utilisation). Using a modified intent-to-treat (ITT) analysis across time points from baseline, 6, 12 and 30 months, almost all DDP participants displayed clinically meaningful improvement in BPD symptoms (average of 25% reduction) by 12 months compared with only 38% of participants receiving TAU. This difference was sustained during the naturalistic follow-up period.

**DFST**

DFST combines relapse prevention for substance dependence with targeted work on early maladaptive schemas (enduring negative beliefs about oneself, others and events) and coping styles [37]. There were three studies by Ball et al. examining DFST for co-occurring BPD and SUD.

In one study [15], DFST failed to show any benefit over individual drug counselling (IDC) and IDC appeared to show more sustained reductions in symptoms. The study intervention was a weekly DFST individual therapy delivered during the first 6 months in a residential therapeutic community. Participants diagnosed with BPD showed significant symptom reductions during the first 3 months in both therapy conditions; however, IDC showed continued reductions during the remaining 3 months, whereas DFST showed no further improvement. The three-way interaction of personality disorder by time by therapy condition was significant. IDC resulted in more sustained reductions than did DFST in psychiatric and affective symptoms BPD, but not for participants without a personality disorder. Investigators concluded that the value of adding dual-focused therapies for a range of co-occurring personality disorders and substance dependence in residential rehabilitation settings was not supported by this trial.

The research group’s other studies [31,30] were not specific to BPD; however, the first study [28] evaluated the personality disorder symptoms of SUD clients of a homeless drop-in facility. There was a high drop-out rate in both groups, with a slightly better result for DFST group for number of weeks attended. In the second study [31], there was a reduction in SUD in the DFST group, but not in treatment utilisation or retention.

In the third study [30], participants showed significant BPD symptom reductions during the first 3 months; however, IDC demonstrated continued reductions during the remaining 3 months, whereas DFST showed no further improvement. The substance-free status of most participants on admission and the
controlled residential environment made substance use an irrelevant outcome variable.

Discussion

This systematic review examined the efficacy of three interventions for co-occurring BPD and SUD. The review was based on randomised controlled trials and used a narrative analysis because of the small number of studies in each treatment type and the widely varying outcome measures.

Ten studies met criteria for inclusion examining three different treatment options: DBT (four studies), DFST (three studies) and DDP (three studies). Most of the studies had small sample sizes and variable outcomes.

DFST showed minimal beneficial outcomes and does not appear to be an efficacious option.

DDP showed generally good outcomes across the range of symptoms, including reductions in substance use and suicidal behaviour. The results are limited by a small number of studies with small sample sizes, but there were significant benefits across main outcome measures.

DBT showed generally good outcomes compared with TAU and other non-validated manualised comparison treatments. The studies were of generally good quality. Some studies were confounded by the introduction of pharmacotherapy, which is known to be an effective intervention. The results, although limited by a small number of studies with small sample sizes, suggest that DBT has a good enough evidence base to be utilised with clients with co-occurring BPD and SUD.

As DBT is one of the only evidence-based treatments for women with BPD [19], it should at least be considered for women with co-occurring BPD and SUD. In studies of DDP for BPD without co-occurring SUD, DDP performed poorly, showing fewer significant outcomes than DBT [23]. Given this, DBT seems to be most likely the first choice in the treatment of BPD and SUD.

Most of the studies primarily recruited women, so the efficacy of these interventions for men with co-occurring BPD and substance use is still unclear and, while the rate of personality disorder is high in substance use treatment, there is no indication from this review that these interventions are particularly helpful for substance use clients with other personality disorders. Moreover, Dimeff and Linehan [38] note that while Dialectical Behaviour Therapy is likely to be effective for people with substance dependence, it is may be too intensive for those who do not have co-occurring BPD; they recommend consistent with a stepped care framework that for people in substance use treatment, efficacious treatments for that group be tried first [38].

Conclusion

Overall, there were a limited number of studies and the sample sizes were small, so further well-conducted randomised trials are required, making it difficult to draw firm conclusions. It is often difficult for studies of very low prevalence disorders to recruit participants, but further studies, even with small sample sizes would lend themselves to meta-analysis, improving understanding of the outcomes of these treatments. However, in the absence of a strong evidence base, and the critical need to respond to this group, for women with co-occurring BPD and SUD, DBT and DDP are both likely to have some benefit in reducing symptoms, with DBT the preferred option given its better evidence base with women with BPD without SUD. DFST had limited benefit.

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Conflict on interest

The authors have no conflict on interest.

References


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