Chapter 8 Dialectical Behaviour Therapy and Pathological Gambling

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Description of the Intervention

Dialectical behaviour therapy (DBT) was developed in the late 1980s by Marsha M. Linehan, a psychology researcher at the University of Washington (Linehan 1987). The therapy was designed to treat people with multiple problems and chronic suicidality, including those with a diagnosis of borderline personality disorder (BPD), a pervasive and persistent disorder involving emotional dysregulation, impulsivity, identity disturbance, problematic interpersonal relationships and suicidal or self-harm behaviours (American Psychiatric Association 2013, 5th ed.; Linehan 1993).

DBT is based on a biosocial understanding of the aetiology of BPD (Linehan 1987, 1993): an interaction of biological vulnerabilities with emotion regulation difficulties during stressful situations (Crowell et al. 2009; Linehan 1987, 1993; Linehan et al. 1991). The theory describes a biologically based disposition towards emotion vulnerability (Linehan 1993) on three separate axes: a relatively low threshold for responding to emotional stimuli, relatively intense emotional responses, and a relatively slow return to baseline level of emotional arousal. Vulnerabilities in attachment or trauma can cause individuals with this genetic loading to have difficulty learning how to cope with intense emotional reactions, are often invalidated and may be shaped to respond in escalating ways in order to get their needs met, such as by engaging in acts of self-harm.

Linehan observed burnout in therapists working with non-motivated and chronically suicidal patients who did not have good treatment engagement or positive outcomes and introduced the need for a commensurate commitment from patients in order to access the treatment. She noted that these patients commonly described being raised in profoundly invalidating environments and required a climate of

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particular warmth and kindness in which to develop a successful therapeutic alliance. As a result of this insight, DBT incorporates interventions designed to convey acceptance of the patient and to help the patient practise self-acceptance skills, in balance with change-oriented strategies. The outcome of Linehan's work is a comprehensive, evidence-based, cognitive behavioural treatment for BPD (Linehan 1993).

Key Tenets

DBT combines standard Western cognitive behavioural techniques for emotion regulation and reality testing with concepts of distress tolerance, acceptance and mindful awareness derived from Eastern meditative traditions. The therapy also draws from behavioural psychology, particularly applied behaviour analysis, as it incorporates behavioural analysis, exposure, contingency management, problem solving and stimulus control. DBT is based on the core conditions of balancing acceptance and change through the principle of dialectics, in which thesis and antithesis are synthesised. Therapists highlight both aspects of the dialectic (two apparently connected opposites), and the client develops an understanding that awareness of these opposites offers the possibility of change as they learn to better respond to their environment, fostering successive resolutions at increasingly more functional levels (Linehan 1987). DBT is also characterised by its adherence to a prescribed treatment structure, as well as its biosocial theory, five functions of treatment, dialectical philosophy, focus on emotion and relationships and descriptions of acceptance and mindfulness skills which are distinct from other third wave therapies.

Functions and Processes of Treatment

The five functions of DBT treatment include enhancing and generalising client capabilities, improving motivation, reducing dysfunctional behaviour, enhancing and maintaining therapist capabilities and motivation and structuring the environment. The core of the treatment rests in the client's development of the four key processes of DBT: mindfulness (being aware of the present moment, nonjudgmentally), distress tolerance (coping with painful feelings by building resilience to reduce the impact of upsetting events), emotion regulation (managing challenging emotions without becoming overwhelmed or reacting in damaging and destructive ways) and interpersonal effectiveness (expressing personal needs and beliefs whilst protecting important relationships and treating others with respect; MacKay et al. 2007). Mindfulness is understood to be the core competency underpinning the other three factors. These are designed to complement and treat the four core aspects of personality disorder: identity disturbance, affective instability,

behavioural dysregulation and disturbed relatedness or negative relationships (Linehan 1987). DBT therefore aims to improve emotional coping across a number of life domains and thereby reducing the likelihood of engaging in destructive behaviours.

Treatment Structure

DBT involves four components: individual therapy, group skills training, a therapist consultation team which serves to support the therapist in providing the treatment and phone coaching, designed to help the patient generalise skills into their daily life. Original protocols delineate a 1-year enrolment in DBT, with weekly individual therapy sessions (1 h), skills group (1.5–2.5 h) and fortnightly therapist consultation team meeting (1–2 h). This original model of DBT has the strongest empirical backing; however, modified iterations of DBT are frequently delivered in modern clinical practice, for which the evidence is emerging.

Evidence Base

Clinically, DBT is frequently applied for multiproblematic patients in general, including those patients with comorbid Axis I and II disorders and who are suicidal or self-injurious. The efficacy of DBT has been demonstrated in well-controlled, randomised clinical trials in the treatment of borderline personality disorder (BPD), mood disorders, comorbid BPD and substance use problems, binge eating and other recurrent harmful behaviours and in the treatment of sexual abuse survivors (see Chapman 2006 for a review).

The 2002 Cochrane review of randomised controlled trials of psychological therapies for BPD suggested that although DBT was no better than treatment as usual (TAU) on some indices, it was shown as having consistently led to improved outcomes on reducing self-harm and parasuicidal behaviour and suicidal ideation (Binks et.al 2006; see also Linehan et al. 1999, 2006; Carter et al. 2010; Turner 2000; Linehan et al. 1991, 2006; McMain et al. 2009), particularly for more severely affected BPD patients (Verheul et al. 2003). These results have also been replicated for patients with a cluster B or other personality diagnoses (e.g. Priebe et al. 2012). Some positive outcomes have been shown to be equivalent between DBT and general psychiatric treatment (McMain et al. 2009), transference-focused psychotherapy (Clarkin et al. 2007), collaborative management of suicidality (Andreasson et al. 2016) or TAU (Carter et al. 2010). Linehan et al. (2006) found that medical risk, frequency of emergency department visits and psychiatric hospitalisations were significantly reduced for BPD patients receiving DBT when compared to other therapies delivered by expert clinicians.

Studies on comorbid BPD and drug dependence have found DBT to have improved outcomes compared to TAU (Linehan et al. 1999) and, when compared to other treatments involving validation, was as effective at reducing drug use, however was less effective at maintaining participants in treatment (Linehan et al. 2002). DBT has been shown to effectively reduce frequency of alcohol intake as well as improve global mental health functioning of patients with BPD (Binks et al. 2006). DBT has also been shown to improve behavioural and attitudinal features associated with concurrent disordered eating and substance use for patients that do not have a diagnosis of personality disorder (Courbasson et al. 2012). In terms of processes, results suggest that all four of the DBT modules are the mechanisms responsible for subsequent positive behavioural and psychological change and improved outcomes (Stepp et al. 2008; Axelrod et al. 2011). In addition, DBT has been found to improve features associated with BPD in other patient populations and with adaptations to the original structure (e.g. Koons et al. 2001; Lynch et al. 2007; Lynch et al. 2003), including emerging indications of its efficacy as a transdiagnostic treatment for emotion dysregulation (Neacsiu et al. 2014).

The Use of DBT in the Treatment of Pathological Gambling

Uses in the Literature

While some findings indicate reductions in gambling during treatment for BPD (e.g. Verheul et al. 2003), only a handful of reported studies were found to have used DBT as a treatment for PG. Most recently, Christensen et al. (2013) trialled the use of a brief 9-week DBT group program for 14 treatment-resistant pathological gamblers (PGs) in Melbourne, Australia. They found statistically and clinically significant improvements in self-reported psychological distress, mindfulness and distress tolerance skill use, and 83% were abstinent or reduced their gambling expenditure pre- to post-treatment. Statistically, however, there was no significant change in substance use, gambling behaviour or personal effectiveness. There was no control group and no follow-up measures were reported.

A small informal report by Querney (2006) recorded general improvements in eight patients with either a PG or substance use disorder in a 9-month modified DBT course. Although specific data was not published, findings included reported "excellent" scores in using skills and primary behaviour target outcomes, degree of emotion was also rated as predominantly "very good" and qualitative reports by participants were very positive. Lastly, Korman et al. (2005) randomly assigned 42 PGs with comorbid anger problems, half of whom also had substance use problems, to a 12-week DBT program or TAU condition. The latter group received individual CBT focusing on cognitions and relapse prevention. There were no differences between the groups at baseline. It was found that the modified DBT program group had better retention and reported significantly less gambling at 14 and 26 weeks

post baseline, as well as reduced anger at 14 weeks post baseline. Both treatments did show significant reductions in both gambling and anger, whilst only the modified DBT treatment showed significantly reduced substance use.

It appears from these few examples that DBT has potential as a useful intervention for PGs, perhaps particularly for those who are less responsive to traditional CBT. This treatment resistance may be attributable to personality traits or comorbidities affecting engagement and responsivity. It is of note and encouraging that moderate effect sizes were found even with the relatively brief interventions reported (Christensen et al. 2013).

Potential Uses in the Pathological Gambling Population

A high rate of overlap between PG and personality disorder is notable, particularly cluster B traits (Fernandez- Montalvo and Echeburua 2004; Bagby et al. 2008; Blaszczynski and Steel 1998). A meta-analysis conducted by Dowling et al. (2015) found that almost half (47.9%) of PGs displayed comorbid personality disorder, again with primarily cluster B features (17.6%). A more recent study of 168 treatment-seeking PGs in Australia found similar prevalence rates (Brown et al. 2016). These findings are also indicative of similarities between the two groups across the biosocial developmental model of BPD (Brown et al. 2015).

A number of other psychiatric disorders have been shown to co-occur with PG (Petry 2005; Crockford and El-Guebaly 1998; Lorains et al. 2011), and the association between PG and BPD extends to common comorbidities, which frequently form the behavioural targets for DBT treatment. These include substance use disorders (Cowlishaw et al. 2014; Petry 2007; Trull et al. 2000; Kim et al. 2006; Ste-Marie et al. 2006), suicidality and incidence of suicide attempts (Black et al. 2004; MacCallum and Blascyszcki 2003), depression (Stanley and Wilson 2006), emotional difficulties (Jacob et al. 2008; Kaare et al. 2009; Korman et al. 2005; Williams et al. 2011), dissociative symptoms (Berk et al. 2007; Delfabbro et al. 2006; Wanner et al. 2006), impulsivity (Linehan 1993; Nower and Blaszczynski 2006) and social and relationship issues and interpersonal conflict (Bouchard et al. 2009; Bray et al. 2007; Korman et al. 2005, 2008). This high symptom overlap can inform future treatment directions for PG populations by considering treatments shown to be effective for comorbid personality disorder and other commonly co-occurring conditions, such as DBT. Despite the high comorbidity of PG with other psychiatric disorders, there is little evidence on which to base treatment recommendations for these comorbid groups (Dowling et al. 2016).

The concept of emotion regulation is featured in many models of psychopathology, and it has been proposed that individuals with poorly regulated emotions may more frequently engage in maladaptive behaviours such as gambling, in order to escape from, or to downregulate their emotions. Indications of deficits in emotion regulation in PGs may signify a need to consider these underlying vulnerabilities in addition to directly targeting gambling behaviours in treatment (Williams et al. 2011). De Lisle et al. (2014) also identified emotional dysregulation as a mediator of the mechanism of PG in relation to psychological distress, as well as dispositional mindfulness as a mediator of gambling severity, amongst other factors (de Lisle et al. 2012). Models of the cognitive mechanisms underlying PG behaviour suggest an inverse relationship between mindfulness and gambling severity, with treatment-seeking PGs displaying significantly lower scores on measures of mindfulness than control groups (de Lisle et al. 2014). This is suggestive of the applicability of mindfulness training and mindfulness-based therapies such as DBT, as an avenue to improve efficacy of existing treatment.

Qualitative Review

When examining areas of comorbidity mentioned in this chapter, including difficulties in relationships, suicidality, emotional dysregulation and mediators of gambling severity identified as low mindfulness and low emotion regulation skills, the implications for DBT as an appropriate treatment for PG appear theoretically strong. This is particularly the case in the domains of attention to the therapeutic alliance, client motivations, and therapeutic boundaries, given its efficacy in the treatment of other addictions and problem behaviour. Process research is needed to delineate which modules are effective for subgroups of the PG population-seeking treatment, due to parallels with other available treatments. Despite similarities in models of psychopathology between BPD and PG, and the treatment success of DBT as a treatment for the former group, there has been very little evidence for its application within the PG population, and the limited available literature has severe methodological limitations. Modified and shorter applications of the therapy appear to show moderate effects even with smaller groups, and the ability for DBT to assist various patient groups to regulate their affect is a promising outcome for PGs who gamble to fulfil this function. The evidence suggests a cautiously hopeful outlook for the use of this intervention for a subgroup of PGs who may not benefit as strongly in TAU, in particular those patients with comorbid personality features affecting mood and/or substance use disorders.

Case Study

Suzie is a 35-year-old woman who has engaged in daily gambling on electronic gaming machines over the past 5 years. Suzie lives alone with her parents, grand-mother and older brother, and she works as a freelance chartered accountant. She describes her parents as "the best parents in the world" but also noted that she feels distant from them and closest to her brother. Suzie is otherwise socially isolated and describes chronic thoughts of suicidality, low mood and distress. She presented to an outpatient specialist service for individual treatment for PG after her family discovered her lying to each of them about why she needed to borrow money.

Suzie described always feeling "empty" and noted that she would cut her arms and stomach during times of distress from age 18 to 28, commencing around the time she finished high school. Suzie also reported a period of heavy alcohol use from age 26 to 28, where she would frequently "drink to blackout", and she now no longer drinks alcohol as a result. She reported one significant romantic relationship which lasted for 10 years from age 21, describing her ex-partner as "cold" and "a user", and that she often felt suicidal when she believed he was withholding affection or attention. Suzie had started gambling alone at a local pub at age 30, and at age 31, in the context of the break-up of her relationship, her gambling became more consuming and she looked for work less and less. She took to attending the pub throughout the day when it was quiet and avoided social contact. On assessment. Suzie presented as emotionally detached, but at other times would become enraged when she could not reach her therapist immediately via phone and rescheduled her initial appointment three times prior to presentation. Suzie had commenced treatment on two prior occasions but had been unable to sustain her attendance. On assessment, her symptoms met diagnostic criteria for major depression, PG, and BPD traits. She reported that her gambling was the biggest problem in her life at the moment as it was causing her to feel low, created problems in her family relationships, and was getting in the way of her goals. She identified that gambling had an emotionally "numbing" effect and assisted her to avoid difficult situations or affect. Suzie felt motivated to engage in treatment in order to improve her relationships, however was ambivalent about abstinence.

Suzie engaged in individual therapy, comprised of orientation, risk management, motivational interviewing, stimulus control, behavioural analysis, contingency management and problem-solving strategies to control her gambling. Psychoeducation about gambling, the biosocial model and a shared formulation were developed, and emotion regulation strategies introduced. After three individual sessions, Suzie agreed to concurrent referral to a hospital-based 12-week DBT course. The shared rationale for DBT was to assist Suzie to develop distress tolerance and emotion regulation skills, assisting her to reduce her arousal in order to choose alternative and more value consistent actions. Suzie engaged well and was able to attend and remain in the group and was supported to repeat the course the following year. Suzie attended 25 individual therapy sessions on a fortnightly basis and 21 group DBT sessions. At discharge, she had practised abstinence for 6 months with no emergent maladaptive coping strategies reported and was engaging in emotion regulation skill practice regularly. She reported occasional suicidal thoughts in response to anxiety relating to online dating. She was referred to a private practitioner specialising in attachment trauma and followed up 3 months later via phone. At this time, Suzie reported having remained abstinent from gambling, alcohol use or parasuicidal behaviour and was enjoying regular boxing class and social outlets relating to her gym. She was seeing her family each week and was paying back her debt slowly. Suzie attributed a more stable mood and increased self-efficacy and self-esteem to having overcome her gambling problem.

References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington: American Psychiatric Publishing.
- Andreasson, K., Krogh, J., Wenneberg, C., Jessen, H., Krakauer, K., Gluud, C., Thomsen, R. R., Randers, L., & Nordentoft, M. (2016). Effectiveness of dialectical behavior therapy versus collaborative assessment and management of suicidality treatment for reduction of self-harm in adults with borderline personality traits and disorder- a randomized observer-blinded clinical trial. *Journal of Depression and Anxiety*, 33, 520–530.
- Axelrod, S. R., Perepletchikova, F., Holtzman, K., & Sinha, R. (2011). Emotion regulation and substance use frequency in women with substance dependence and borderline personality disorder receiving dialectical behaviour therapy. *The American Journal of Drug and Alcohol Abuse*, 37, 37–42.
- Bagby, M., Bachon, D. D., Bulmash, E., & Quilty, L. C. (2008). Personality disorders and pathological gambling: A review and re-examination of prevalence rates. *Journal of Personality Disorders*, 22, 191–207.
- Berk, M. S., Jeglic, E., Brown, G. K., Henriques, G. R., & Beck, A. T. (2007). Characteristics of recent suicide attempts with and without borderline personality. *Archives of Suicide Research*, 11, 91–104.
- Binks, C., Fenton, M., McCarthy, L., Lee, T., Adams, C. E., & Duggan, C. (2006). *Psychological therapies for people with borderline personality disorder*. Cochrane Database of Systematic Reviews: John Wiley & Sons.
- Black, D. W., Blum, N., Pfohl, B., & Hale, N. (2004). Suicidal behaviour in borderline personality disorder: Prevalence, risk factors, prediction, and prevention. *Journal of Personality Disorders*, 18, 226–239.
- Blaszczynski, A., & Steel, Z. (1998). Personality disorders among pathological gamblers. *Journal of Gambling Studies*, 14(1), 51–71.
- Bouchard, S., Sabourin, S., Lussier, Y., & Villeneuve, E. (2009). Relationship quality and stability in couples where one partner suffers from borderline personality disorder. *Journal of Marital* and Family Therapy, 35, 446–455.
- Bray, S., Barrowclough, C., & Lobban, F. (2007). The social problem-solving abilities of people with borderline personality disorder. *Behaviour Research and Therapy*, 45, 1419–1417.
- Brown, M., Allen, J. S., & Dowling, N. A. (2015). The application of an etiological model of personality disorders to problem gambling. *Journal of Gambling Studies*, 31, 1179. doi:10.1007/ s10899-014-9504-z.
- Brown, M., Oldenhof, E., Allen, J. S., & Dowling, N. A. (2016). An empirical study of personality disorders among treatment-seeking problem gamblers. *Journal of Gambling Studies*, 32(4), 1079–1100. Online publication date: 26-Mar-2016.
- Carter, G. L., Willcox, C. H., Lewin, T. J., Conrad, A. M., & Bendit, N. (2010). Hunter DBT project: Randomized controlled trial of dialectical behaviour therapy in women with borderline personality disorder. *Australian New Zealand Journal of Psychiatry*, 44, 162–173.
- Chapman, A. L. (2006). Dialectical behavior therapy: Current indications and unique elements. *Psychiatry (Edgmont)*, *3*(9), 62–68.
- Christensen, D. R., Dowling, N. A., Jackson, A. C., Brown, M., Russo, J., Francis, K. L., & Umemoto, A. (2013). A proof of concept for using brief dialectical behavior therapy as a treatment for problem gambling. *Behaviour Change*, 30(2), 117–137. doi:10.1017/bec.2013.10.
- Clarkin, J. F., Levy, K. N., Lenzenweger, M. F., & Kernberg, O. F. (2007). Evaluating three treatments for borderline personality disorder: A multiwave study. *American Journal of Psychiatry*, 164(6), 922–928.
- Courbasson, C., Nishikawa, Y., & Dixon, L. (2012). Outcome of dialectical behaviour therapy for concurrent eating and substance use disorders. *Clinical Psychology and Psychotherapy*, 19(5), 434–449.

- Cowlishaw, S., Merkouris, S., Chapman, A., & Radermacher, H. (2014). Pathological and problem gambling in substance use treatment: A systematic review and meta-analysis. *Journal of Substance Abuse Treatment*, 46(2), 98.
- Crockford, D. N., & el-Guebaly, N. (1998). Psychiatric co-morbidity in pathological gambling: A critical review. *Canadian Journal of Psychiatry*, 43, 43–50.
- Crowell, S. E., Beauchaine, T. P., & Linehan, M. M. (2009). A biosocial development model borderline personality: Elaborating and extending Linehan's theory. *Psychological Bulletin*, 135, 45–510.
- de Lisle, S., Dowling, N. A., & Allen, S. J. (2012). Mindfulness and problem gambling: A review of the literature. *Journal of Gambling Studies*, 28, 719–739.
- de Lisle, S., Dowling, N. A., & Allen, J. S. (2014). Mechanisms of action in the relationship between mindfulness and problem gambling behaviour. *International Journal of Mental Health Addiction*, *12*, 206. doi:10.1007/s11469-014-9475-4.
- Delfabbro, P., Lahn, J., & Grabosky, P. (2006). Psychosocial correlates of problem gambling in Australian students. Australian and New Zealand Journal of Psychiatry, 40, 587–595.
- Dowling, N. A., Cowlishaw, S., Jackson, A. C., Merkouris, S. S., Francis, K. L., et al. (2015). The prevalence of comorbid personality disorders in treatment-seeking problem gamblers: A systematic review and meta-analysis. *Journal of Personality Disorders*, 29(6), 735–754. doi:10.1521/pedi_2014_28_168.
- Dowling, N. A., Merkouris, S. S., & Lorains, F. K. (2016). Interventions for comorbid problem gambling and psychiatric disorders: Advancing a developing field of research. *Addictive Behaviours*, 58, 21–30.
- Fernandez- Montalvo, J., & Echeburua, E. (2004). Pathological gambling and personality disorders: An exploratory study with the IPDE. *Journal of Personality Disorders*, 18, 500–505.
- Jacob, G. A., Guenzler, C., Zimmermann, S., Scheel, C. N., Rusch, N., et al. (2008). Time course of anger and other emotions in women with borderline personality disorder: A preliminary study. *Journal of Behaviour Therapy and Experimental Psychiatry*, 39, 391–402.
- Kaare, P., Mottus, R., & Konstabel, K. (2009). Pathological gambling in Estonia: Relationships with personality, self-esteem, emotional states and cognitive ability. *Journal of Gambling Studies*, 25, 377–390.
- Kim, S. W., Grant, J. E., Eckert, E. D., Faris, P. L., & Hartman, B. K. (2006). Pathological gambling and mood disorders: Clinical associations and treatment implications. *Journal of Affective Disorders*, 92, 109–116.
- Koons, C. R., Robins, C. J., Tweed, J. L., Lynch, T. R., Gonzelez, A. M., Morse, J. Q., et al. (2001). Efficacy of dialectical behaviour therapy in women veterans with borderline personality disorder. *Behavior Therapy*, 32, 371–390.
- Korman, L., Collins, J., Littman-Sharp, N., McMain, S., & Skinner, W. (2005). Concurrent gambling, substance use and anger: Development of a brief integrated treatment (final report). Guelph: Ontario Problem Gambling Research Centre.
- Korman, L., Collins, J., Dutton, D., Dhayananthan, B., Littman-Sharp, N., & Skinner, W. (2008). Problem gambling and intimate partner violence. *Journal of Gambling Studies*, 24, 13–23.
- Linehan, M. M. (1987). Dialectical behavioral therapy: A cognitive behavioral appraoch to parasuicide. *Journal of Personality Disorders*, 1, 328–333.
- Linehan, M. M. (1993). Cognitive-behavioral treatment of borderline personality disorder. New York: Guilford Press.
- Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitivebehavioural treatment of chronically suicidal borderline patients. *Archives of General Psychiatry*, 48, 1060–1064.
- Linehan, M. M., Schmidt, H., Dimeff, L. A., Craft, C. C., Kanter, M. A., & Comtois, K. A. (1999). Dialectical behavior therapy for patients with borderline personality disorder and drugdependence. *The American Journal on Addictions*, 8(4), 279–292.
- Linehan, M. M., Dimeff, L. A., Reynolds, S. K., Comtois, K. A., Welch, S. S., Heagerty, P., & Kivlahan, D. R. (2002). Dialectical behavior therapy versus comprehensive validation therapy

plus 12-step for the treatment of opioid dependent women meeting criteria for borderline personality disorder. *Drug and Alcohol Dependence*, 67(1), 13–26.

- Linehan, M. M., Comtois, K. A., Murray, A. M., Brown, M. Z., Gallop, R. J., Heard, H. L., Korslund, K. E., Tutek, D. A., Reynolds, S. K., & Lindenboim, N. (2006). Two-year randomized controlled trial and follow-up of dialectical behaviour therapy vs. therapy by experts for suicidal behaviour and borderline personality disorder. *Archives of General Psychiatry*, 63, 757–766.
- Lorains, F. K., Cowlishaw, S., & Tomas, S. (2011). Prevalence of co-morbid disorders in problem and pathological gambling. *Addiction*, 106, 490–498.
- Lynch, T. R., Morse, J. Q., Mendelson, T., & Robins, C. J. (2003). Dialectical behavior therapy for depressed older adults. *American Journal of Geriatric Psychiatry*, 11, 33–45.
- Lynch, T. R., Cheavens, J. S., Cukrowicz, K. C., Thorp, S. R., Bronner, L., & Beyer, J. (2007). Treatment of older adults with co-morbid personality disorder and depression: A dialectical behavior therapy approach. *International Journal of Geriatric Psychiatry*, 22(2), 131–143.
- MacCallum, F., & Blaszczynski, A. (2003). Pathological gambling and suicidality: An analysis of severity and lethality. *Suicide and Life Threatening Behavior*, 33, 88–98.
- MacKay, M., Wood, J. C., & Brantley, J. (2007). Dialectical behaviour therapy skills workbook: Practical DBT exercises for learning mindfulness, interpersonal effectiveness, emotion regulation, & distress tolerance. Oakland: New Harbinger Publications.
- McMain, S. F., Links, P. A., Gnam, W. H., Guimond, T., Cardish, R. J., Korman, L., & Streiner, D. L. (2009). A randomized trial of dialectical behaviour therapy versus general psychiatric management for borderline personality disorder. *American Journal of Psychiatry*, 166, 1365–1374.
- Neacsiu, A. D., Eberle, J. W., Kramer, R., Wiesmann, T., & Linehan, M. M. (2014). Dialectical behavior therapy skills for transdiagnostic emotion dysregulation: A pilot randomized controlled trial. *Behaviour Research and Therapy*, 59, 40–51.
- Nower, L., & Blaszczynski, A. (2006). Impulsivity and pathological gambling: A descriptive model. *International Gambling Studies*, 6, 61–75.
- Petry, N. M. (2005). *Pathological gambling: Etiology, comorbidity, and treatment*. Washington, DC: American Psychological Association.
- Petry, N. M. (2007). Gambling and substance use disorders: Current status and future directions. *The American Journal on Addictions*, *16*, 1–9.
- Priebe, S., Bhatti, N., Barnicot, K., Bremner, S., Gaglia, A., Katsakou, C., Molosankwe, I., McCrone, P., & Zinkler, M. (2012). Effectiveness and cost-effectiveness of dialectical behaviour therapy for self-harming patients with personality disorder: A pragmatic randomised controlled trial. *Psychotherapy and Psychosomatics*, 81, 356–365.
- Querney, D. (2006). STEPS: A modified DBT group for preventing relapse among problem gamblers and substance abusers. Retrieved March 25, 2017, from http://www.responsiblegambling. org/articles/deirdre_querney_discovery_2006.pdf
- Stanley, B., & Wilson, S. T. (2006). Heightened subjective experience of depression in borderline personality disorder. *Journal of Personality Disorders*, 20, 307–318.
- Ste-Marie, C., Gupta, R., & Derevensky, J. (2006). Anxiety and social stress related to adolescent gambling behaviour and substance use. *Journal of Child and Adolescent Substance Use*, 15, 55–74.
- Stepp, S. D., Epler, A. J., Jahng, S., & Trull, T. J. (2008). The effect of dialectical behaviour therapy skills use on borderline personality disorder features. *Journal of Personality Disorders*, 22, 549–563.
- Trull, T., Sher, K. J., Minks-Brown, C., Durbin, J., & Burr, R. (2000). Borderline personality disorder and substance use disorders: A review and integration. *Clinical Psychology Review*, 20, 235–253.
- Turner, R. M. (2000). Naturalistic evaluation of dialectical behaviour therapy-oriented treatment for borderline personality disorder. *Cognitive and Behavioural Practice*, 7(4), 413–419.
- Verheul, R., Van Den Bosch, L. M., Koeter, M. W., De Ridder, M. A., Stijnen, T., & Van Den Brink, W. (2003). Dialectical behaviour therapy for women with borderline personality disorder. *The British Journal of Psychiatry*, 182(2), 135–140.

- Wanner, B., Ladoucer, R., Auclair, A. V., & Vitaro, F. (2006). Flow and dissociation: Examination of mean levels, cross links, and links to emotional well-being across sports and recreational and pathological gambling. *Journal of Gambling Studies*, 22, 289–304.
- Williams, A. D., Grisham, J. R., Erskine, A., & Cassedy, E. (2011). Deficits in emotion regulation associated with pathological gambling. *British Journal of Clinical Psychology*, 51, 223–238. doi:10.1111/j.2044-8260.2011.02022.x.