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### **Dialectical Behaviour Therapy (DBT) skills training group for borderline personality disorder**

**A Scoping review and a feasibility study of an intervention in a public hospital in Santiago de Chile.**

Correa-Ramírez, Matías

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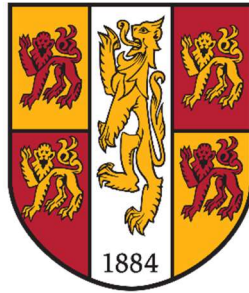
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**Dialectical Behaviour Therapy (DBT) skills training  
group for borderline personality disorder**

A Scoping review and a feasibility study of an  
intervention in a public hospital in Santiago de Chile.

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Master by Research (MRes) Thesis  
Bangor University School of Medical and Health Sciences  
December 2022

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## Thesis abstract

Borderline personality disorder is a serious mental illness starting in adolescence, and its prevalence amongst the adult population is close to 1,8%. Borderline personality disorder provokes functioning impairment and increases the risk of premature death by suicide and other causes. Many evidence-based psychotherapies have demonstrated effectiveness in reducing symptoms several clinical manifestations and the impact of BPD. To date, Dialectical Behaviour Therapy is the most widely used as there is significant evidence supporting its effectiveness. However, implementing a full version of standard DBT is very resource intensive and lead to implementation challenges particularly in public health systems which often experience staffing and budget shortages. In response to this an adaptation of DBT has been widely implemented: DBT skills training group (DBT-ST). This adaptation is based exclusively on the DBT skills training group, it does not include individual therapy and allows for more flexibility in its delivery?. This less time-consuming adaptation varies in length (generally around 24 weeks) and has shown effectiveness in reducing BPD clinical manifestations. Hence, DBT-ST is a promising alternative which has been implemented in public health setting worldwide.

This thesis reports on the results from 1) a Scoping review of the literature on delivery and implementation aspects of DBT-ST And 2) A qualitative feasibility study of an online 13-week DBT-ST in a public hospital in a low-income area of Santiago de Chile which included two phone interventions (phone coaching and check-in calls), two additional 3-week groups (crisis survival skills and psychoeducational) and regular consultation team meetings.

The Scoping review in Chapter 2 shows a wide variety of ways of DBT-ST implementations in different countries, especially regarding the skills training group characteristics and the DBT therapists. Only some programmes included phone coaching and consultation meeting; a few DBT-ST programmes also added interventions different from the classic DBT modes that could help achieve some of the five DBT functions. The feasibility study in Chapter 3, through focus groups with therapists, showed the online enhanced 13-week DBT-ST was feasible in the context of a public hospital in Santiago; however, some concerns arose regarding the duration of group sessions and the online format; meanwhile, the consultation team meeting and the skills schedule was generally positively evaluated.



After gathering data from Scoping review and the therapists' perspective about this online enhanced 13-week DBT-ST programme in the Chilean public health system, this thesis gives clinical recommendations for implementing this kind of DBT adaptation with a particular emphasis on the Chilean public mental health centres. Chile has a national guideline for secondary-level mental health centres, so the "top tips" for implementing DBT-ST programmes consider this guideline also to achieve administrative feasibility. These recommendations are separated by DBT modes (skills training groups, phone interventions, consultation team meetings) but also include some suggestions for interventions that may improve even more DBT functions, such as intake interviews or case management

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## **Chapter 1: Borderline personality disorder and Dialectical Behaviour Therapy: An overview**

### **1.1 Introduction**

This thesis aims to answer two key questions: First, how are DBT teams worldwide implementing an adaptation of Dialectical Behaviour Therapy (DBT) based solely on the skills training group (DBT-ST) for borderline personality disorder (BPD) patients? Second, what is the feasibility of a DBT-ST programme implemented in a public outpatient service in a low-income area of Santiago de Chile?

Borderline personality disorder (BPD) is a "serious mental illness" (SMI) characterised by pervasive emotion dysregulation and impulsivity associated with alterations in identity and interpersonal relationships, which is today considered a public health problem (Chanen, 2017). The most important evidence-based treatment is Dialectical Behaviour Therapy; however, different restrictions in public health systems make the full 12-month standard version of this treatment challenging to implement. For this reason, briefer DBT-ST adaptations seem suitable to implement in the challenging setting of the public health system.

The first chapter provides a detailed overview of the problem of borderline personality disorder and why it should be considered a public health problem. Additionally, this first chapter will present in a nutshell the standard DBT and its evidence, and, finally, the context in Chile.

The second and third chapter will answer, separately, the two mentioned questions of this thesis. , Chapter 2 reports a Scoping Review of extant literature on DBT-ST to address the question of how DBT-ST interventions are being implemented worldwide. Chapter 3 reports a qualitative study using interviews to therapists about their views on the feasibility of that intervention to address the question of feasibility of an online DBT-ST in Santiago de Chile.

Finally, chapter 4 will integrate the findings to clinically inform and guide further implementations of DBT-ST in the Chilean public health system and wider.

### **1.2 Borderline personality disorder**

#### *1.2.1 History and nosology*

The term borderline personality disorder was coined for the first time in 1938 by Adolf Stern (Stern, 1938). It was just incorporated in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) of the American Psychiatric Association, in 1980. Later it

appeared in the tenth edition of the International Classification of Diseases (ICD), in 1992, under the name of Emotionally Unstable Personality Disorder (EUPD). The first clinical conceptualisation of BPD that preceded its incorporation into these classification systems started in the 1970s, mainly due to the work of John Gunderson (1975). This late recognition as a diagnosis (compared to other mental disorders, such as schizophrenia or bipolar disorder) may partially explain the poor awareness of its relevance as a public health problem. The BPD is currently incorporated in the latest DSM-5 and ICD-11.

Nevertheless, not a few voices have raised critiques toward the diagnosis of BPD or emotionally unstable, personality disorder, in part, claiming a lack of efficacy in diagnosing and the stigma generated (Mulder, 2023).

### *1.2.2 Clinical presentation*

The clinical criteria for establishing the diagnosis in the revised fifth edition of the of DSM (DSM-5-TR) adequately illustrate the clinical manifestations of BPD (Appendix 1). Although the DSM-5-TR does not establish psychopathological or hierarchical relationships among the criteria, these nine manifestations can be gathered into four different “phenotypes”, which could have a family and genetic association (Gunderson, 2011; Ruocco, 2015). These phenotypes are: A) Interpersonal instability (criteria n°1, 2); B) Cognitive or self-disturbance (criterion n°3); C) Affective and emotional dysregulation (criteria no. 6, 7, 8); and D) Behavioural dysregulation (criteria n°4, 5). Additionally, some criteria are more common than others and the manifestations of BPD criteria show differently across patients. For example, according to a cohort of 175 BPD patients from the Collaborative Longitudinal Personality Disorders (CLPD) study, at the baseline evaluation, the frequencies of presentation of the BPD criteria were the followings: Affective instability (95%), intense anger (87%), impulsivity (81%), unstable relationship (79%), chronic emptiness (71%), stress-related paranoid ideation (68%), identity disturbance (61%), avoids abandonment (60%), and self-injury and suicide attempts (60%) (McGlashan, 2005). Although it escapes from the scope of this introduction, it is worth mentioning that some authors have questioned this DSM diagnosis of BPD. Some support that BPD is either bipolar disorder (Ghaemi, 2002) or complex post-traumatic stress disorder (Hermann, 2015). On the other side, some have challenged the categorial nature of DSM diagnosis and its high variability (256 possible combinations to meet full criteria). So, they have encouraged a dimensional approach, such as the DSM-5

“alternative model of personality disorder” (AMPD), which is now considered a reliable and promising approach to BPD (Letkiewicz, 2022; Vanwoerden, 2022).

### *1.2.3. Etiology:*

Several theories have been proposed to explain the development of BPD. The most robust evidence comes from genetic, severe trauma, attachment, and early childhood environment studies (Bohus, 2021). However, the relationship between trauma childhood adversity (Porter, 2020) and invalidating environment (Lee, 2022) deserves special attention as risk factors to develop BPD. Particularly, sexual abuse plays a role in the course of illness, by being an event that predicts a more severe clinical presentation and poorer prognosis (Fortaleza). For instance, BPD patients with a history of sexual abuse are more likely to have suicide attempts, self-harming behaviours and dissociation (de Aquino Ferreira, 2018).

### *1.2.4. The lived experience:*

The lived experience of BPD patients is a field that is been explored more recently and is still limited, particularly in qualitative studies of the recovery process (Ng, 2016). An interesting and recent example is the qualitative study of Ng (2019) which approached the stages of recovery. The results are mixed but it is worth highlighting the process of improvement and recovery, which although difficult, is still possible.

### *1.2.5 Psychiatric comorbidities.*

There is high comorbidity with other psychiatric pathologies. In the second wave of the “National Epidemiologic Survey on Alcohol and Related Conditions” (NESARC-II), a study at the community in United States, people who completed the criteria for BPD at some point in life had a higher risk of presenting other mental disorders than people without BPD. This increased risk was observed even controlling for sociodemographic factors and other psychiatric disorders. The following disorders were significantly more frequent in BPD people (lifetime prevalence in parentheses): depression (72.9%), bipolar disorder type I (31.8%) and type II (7.7 %); anxiety disorders, such as panic attacks with agoraphobia (11.5%) and panic attacks without agoraphobia (18.8%), social phobia (29.3%) and generalised anxiety disorder (35.1%); post-traumatic stress disorder (39.2%), and substance use disorder (72.9%) (Grant,

2018). Also, it is common to observe eating disorders, mainly bulimia and binge eating disorder, and to a lesser extent Anorexia (Shah, 2018).

### *1.2.6 Epidemiology*

1.2.6.a Prevalence: According to a recent systematic review and meta-analysis of personality disorders in the community, the pooled prevalence rate for BPD was 1.8 (Winsper, 2020). This prevalence could be even higher when studying the adolescent population; on the other hand, it is significantly lower when older adults are observed (Ellison, 2018). Regarding the male/female ratio, BPD does not show differences in the community (Silberschmidt, 2015). However, the prevalence increases drastically when clinical populations are studied. For example, BPD is present between 15 to 28% of users of outpatient mental health services and between 20 and 60% of patients who are hospitalised for psychiatric reasons (Ellison, 2018).

1.2.6.b Course of illness: The first BPD symptoms appear in childhood or adolescence, including self-injurious or suicidal behaviour. A significant percentage of adolescents with BPD maintain the diagnosis in early adulthood. At the same time, another group remains with its manifestations in adulthood (Chanen, 2012). BPD symptoms during adulthood show a progressive decrease; in the CLPD cohort previously mentioned, after a follow-up of 10 years, only 9% maintained the DSM diagnosis (Gunderson, 2011). Similarly, another cohort of BPD patients, the McLean Study of Adult Development (MSAD), showed a 99% of completed remission after a 16-year follow-up (Zanarini, 2012).

### 1.2.7 *Self-injury and suicidal behaviours*

Recurrent suicide attempts and non-suicidal self-injuries (NSSI) are the most severe complications. NSSI (e.g., cuts, burns, blows or bites) usually appear in the first years of illness, in adolescence (Plener, 2015). On the other hand, suicide attempts are also frequent. A cross-sectional study in the community in the USA, the third wave of the “National Epidemiologic Survey on Alcohol and Related Conditions” (NESARC-III) showed that 30.4% of patients had tried to commit suicide. The BPD criteria of feelings of emptiness and NSSI were the main risk factors for suicide attempts (Grilo, 2021). Concerning deaths by suicide, this is not an unusual outcome. In a cohort of 290 hospitalised patients with BPD, in a 24-year follow-up, 5.9% died from suicide and 14% from other non-suicide causes, compared to 1.4% and 5.5% in patients with other PDs, respectively (Temes, 2016). Similarly, in another cohort of 59 BPD patients, in an average follow-up of 27 years, 10% died by suicide (Paris, 2001). In the last case, death usually occurred after several years of the course of the disease, with the average age of death being between 30 and 37 years, particularly in those patients with greater symptom severity and a history of a more significant number of previous suicide attempts (Paris, 2019).

Patients with BPD also have a higher risk of dying from other causes than the general population. A Swedish national cohort of 23,338 people with a primary diagnosis of personality disorder recruited after psychiatric hospitalisation (of which 50% had cluster B personality disorder) revealed, after a 25-year follow-up, significantly higher mortality for any reason compared to that expected for the entire population within that age range. This higher mortality was not only explained by suicide but also because of natural causes. Different reasons have explained this, such as poorer general health, unhealthy lifestyle, and barriers to receiving and maintaining adequate care for their comorbid physical (Björkenstam, 2015).

### 1.2.8 *Burden of disease*

1.2.8.a Functioning: Not only does BPD cause emotional distress to patients, but also functional impairment. In a clinical population study of hospitalised BPD patients, global functional performance expressed on the Global Assessment Functioning (GAF) scale was significantly worse than controls with other personality disorders (Zanarini, 2001). This worse performance compared to controls was maintained through the 16-year follow-up; only 60% of patients had achieved sustained recovery (2 years GAF > 61) after these 16 years of follow-up (Zanarini, 2012). In another similar study, also in a clinical population but mainly

outpatients, poor performance was found in global functioning (GAF) as well in occupational and social functioning (through The Global Social Adjustment [GSA]), compared to patients with another personality disorder and patients with depression. This relatively worse functioning of BPD remained the same for the 10-year follow-up (Gunderson, 2011). On the other hand, although the mentioned studies described the most severe cases obtained in a clinical setting, poor functioning is also observed in BPD patients studied in the community, which is expected to find less severe cases. In a study in the community, the academic and occupational functioning and interpersonal performance (parental, partner, friendship) were worse compared to people without a diagnosis of BPD (Javaras, 2017).

1.2.8.b Health resources utilisation: Although not extensively, the cost-of-illness of BPD has also been studied. Cost-of-illness studies evaluate all the costs associated with a disease, including direct costs related to the consumption of health and non-health resources, indirect costs due to less productivity, and sometimes even intangible costs (Jo, 2014). For example, patients with BPD may use mental health services more than those with depression (Bender et al., 2001, 2006) and those with other personality disorders. Direct health costs in BPD patients are mainly due to a more significant number and days of psychiatric hospitalisation, more visits to the emergency department, more outpatient mental health appointments, and more prescriptions of psychotropic drugs (Bender, 2001; Hastrup, 2019; Horz, 2010; Kantojärvi, 2020; Soeteman, 2008; Tomko, 2014; Van Asselt, 2007). On the other hand, regarding indirect costs, BPD patients present lower productivity and more absences from work (Hastroup, 2019, van Asselt, 2007). Finally, it is worth mentioning that the quality of life in BPD patients is seriously deteriorated (IsHak, 2013).

### 1.2.9 Management

Psychosocial management is the main treatment for BPD. In fact, despite the widespread use of psychoactive drugs, psychopharmacological treatment would not effectively reduce BPD symptoms (Gartlehner, 2022; Stoffers-Winterling, 2020). Despite this, psychotropic drugs are indicated for treating psychiatric comorbidities that require it, or when individuals are in crisis and there is no psychosocial intervention available (Bohus, 2022).

On the other hand, today several psychosocial interventions have been specifically developed or adapted to BPD, although with differences in the number of studies, and with a variety of quality of evidence (Stoffers-Winterling, 2022; Storebø, 2020). However, not all of



them have shown the same effectiveness in reducing BPD symptoms and functioning. The intervention with the highest number of studies supporting effectiveness is Dialectical Behaviour Therapy (DBT), followed by Mentalization-based therapy (MBT) and Systems Training for Emotional Predictability and Problem Solving (STEPPS), and in less extent Schema-focused therapy (SFT), and Transference-focused psychotherapy (TFP) (Bohus, 2022, Storebø, 2020).. According to a Cochrane’s Systematic Review (Storebø, 2020), BPD-tailored therapies (e.g. DBT, MBT, STEPP) may be more effective than usual treatments. More specifically, DBT, compared to treatment as usual (TAU), was more effective at reducing BPD severity, self-harm and improving psychosocial functioning. Similarly, MBT appears to be more effective than TAU at reducing self-harm, suicidality and depression. There is a paucity of research regarding head-to-head RCT studies that determine the differences among these treatments. Notwithstanding, a few studies show uneven results regarding head-to-head comparisons with DBT, where DBT would be equal to GPM (McMain, 2009), but superior to MBT in reducing self-harm behaviours (Barnicot, 2019).

### **1.3 Dialectical Behaviour Therapy**

#### **1.3.1 Overview**

Dialectical behaviour therapy is an evidence-based treatment for several mental disorders, but primarily for borderline personality disorder. It was developed by Linehan in the late 1970s and involves cognitive behavioural therapy (CBT) principles and techniques like problem solving, as well it incorporates practices of acceptance to balance this practice of change from CBT. While CBT provides the foundation for change, Zen principles, provide the primary foundation for acceptance (Heard, 2016, chapter 1). The first clinical trial of DBT that settled the effectiveness was published by Linehan in 1991. In that study suicidal BPD patients were randomised either to received 1-year standard DBT or treatment as usual. The intervention showed to be effective decreasing “parasuicidal” behaviours and days of hospitalisations. It is important to highlight that when DBT was developed there were no evidence-based treatments for BPD, considering them simply as those that have shown to be effective in at least one randomised-controlled trial (Livesley & Larstone, 2018, p. 481).

### 1.3.2 *Theoretical Foundation of Dialectical Behaviour Therapy*

DBT is founded on the so-called Linehan's "biosocial theory" of borderline personality disorder, which is how the disorder is understood. As was mentioned, the theoretical principles of the intervention correspond to behavioural theory and Zen practice of acceptance, but also a dialectical philosophy, all of which are described more extensively below.

1.3.2.a Behavioural theory. DBT, as a form of cognitive behavioural therapy, understands patient problems from learning theories; that is, maladaptive behaviours are the consequence of learning. This learning occurs in three known ways: a) classical conditioning, b) operant conditioning, and c) Staats' Psychological Behaviorism (Heard, 2016, chapter 1).

1.3.2.b Buddhist Zen Practice: During the development of the therapy, Linehan incorporated elements of Zen practice after observing the clinical need for her patients to have a more accepting view of reality (and of themselves) just as it is and without prejudices (Linehan, 2020). These Zen elements were transferred to all the therapy components, from the so-called "therapeutic assumptions" to the therapists' strategies, as well as the modules and skills taught in group sessions (Heard, 2016).

1.3.2.c Dialectical philosophy: The dialectical philosophy expresses some assumptions about reality relevant to the therapy of patients with BPD. 1) Reality is a process of continuous change, and everything is transitory; 2) the change occurs as a consequence of opposing forces within a system that transcends the tension and is resolved in a new synthesis that again involves a new tension; 3) the "transactionality" of reality, two elements are not simply combined creating a new one, but rather both model each other in the process. (Heard, 2005).

1.3.2.d Biosocial theory. Linehan's biosocial theory states that BPD develops due to the interaction of a biological vulnerability and a invalidating environment. Biological vulnerability, originating from genetic factors, would manifest itself in a greater susceptibility to presenting intense emotions, a low threshold for an emotional reaction, with a rapid and intense emotional arousal, with a slow return to baseline. The invalidating environment, in turn, would discredit, criticise, trivialise, or outright punish internal experiences, emotions, thoughts, beliefs, or overt behaviours (Linehan, 1993).

### 1.3.3 Treatment structure

Concerning the structure of DBT, there are four "treatment modes" or components of therapy, which correspond to the moments where the therapy is delivered; these are: a) Individual therapy; b) Skills training group; c) Phone coaching; and d) Consultation team meeting.

1.3.3.a Skills training group. This mode consists of a typical group activity under the psychoeducation or class modality, led by two DBT therapists. Each group session teaches one or more DBT skills, as well as reviewing the homework assigned the previous session. In the standard DBT, these sessions last 2.5 hours weekly, with programming throughout the year of two identical cycles of 24 weeks. All the skills taught are grouped into four types: mindfulness, distress tolerance, emotional regulation, and interpersonal effectiveness (Linehan, 2015).

1.3.3.b Individual therapy: The individual sessions have a variable duration according to the patient's needs, but it is usually between 50 to 60 minutes, and the frequency is usually weekly. However, it can increase to biweekly at certain times, such as at the beginning of therapy or in periods of crisis. In an individual session, the therapist must pay special attention to motivational aspects, as well as to individual and environmental factors that are inhibiting the incorporation of adaptive behaviours, as well as those that are causing or reinforcing maladaptive behaviours (Linehan, 1993).

1.3.3.c Phone coaching: Despite the concerns and myths that may exist around this DBT mode (Chapman, 2019, chapter 1), the calls between sessions are a crucial part of the therapy, and they complete a particular functions: The primary function of phone coaching is to guide the patients to use skills effectively when needed in their natural environments; however, it can also be used for situations of suicidal or self-harm crises or when it is necessary to repair the feeling of alienation from therapy after a problem that has arisen in session, and that jeopardises the continuation of care (Chapman, 2019).

1.3.3.d Consultation team meeting: This meeting is held weekly, and it has a duration of 120 minutes. Working with a BPD patient is highly stressful and can quickly lead to burnout, so therapists need to support each other. Therefore, the DBT consulting meeting, unlike traditional clinical meetings, is focused on the therapists, not the patients themselves; summarising it is applying DBT to the therapists (Koerner, 2012b).

### 1.3.4 Treatment Functions

For DBT to be “comprehensive” the four modes must achieve the following goals, called “functions”: 1) increase the patient's capabilities, 2) increase the patient's motivation to use these skills, 3) ensure that patients generalise these skills to all relevant environments, 4) increase the skills and motivation of therapists, and 5) structure the environment for both patient and therapist in a way that facilitates clinical progress (Koerner, 2021). Each of these functions is typically performed by one or more modes as part of the standard DBT version (see table 1).

<b>Functions</b>	<b>Modes</b>
<u>Enhancing clients’ capabilities:</u> Helping clients acquire responses for effective performance	Skills training (individual or group), pharmacotherapy, psychoeducation
<u>Improving motivation:</u> Strengthening clinical progress and helping reduce factors that inhibit and/or interfere with progress (e.g., emotions, cognitions, overt behaviour, environmental factors)	Individual psychotherapy, milieu treatment
<u>Ensuring generalisation:</u> Transferring skilful response repertoire from therapy to clients’ natural environment and helping integrate skilful responses within the changing natural environment	Skills coaching, milieu treatment, therapeutic communities, in vivo interventions, review of session tapes, involvement of family/friends
<u>Enhancing therapists’ skills and motivations:</u> Acquiring, integrating, and generalising the cognitive, emotional, and overt behavioural and verbal repertoires necessary for effective application of treatment—including the strengthening of therapeutic responses and the reduction of responses that inhibit and/or interfere with effective application of treatment	Supervision, therapist consultation meeting, continuing education, treatment manuals, adherence and competency monitoring, and staff incentives
<u>Structuring the environment through contingency management within the treatment programme as a whole as well as through contingency management within the client’s community</u>	Clinic director or via administrative interactions, case management, and family and couples interventions

Table 1. Functions and modes of DBT (Adapted from Koerner, 2012a)

### 1.3.5 Evidence in Dialectical Behaviour Therapy

The comprehensive standard DBT, that is, 12 months of treatment with the four modes delivering the five functions of DBT, for adult BPD patients, has been extensively studied. Randomized-controlled studies of efficacy, as well as effectiveness and cost-effectiveness, have been carried out in different countries. Due to the broad availability of clinical studies on DBT, several meta-analyses exclusively on DBT have been published to date (Chen, 2021; Ciesinski, 2022; DeCou, 2019; Kliem, 2010; Panos, 2014). In the same way, even more meta-analyses and systematic reviews that also include other therapies for BPD besides DBT have been published (Chakhssi, 2021; Cristea, 2017; McLaughlin, 2019; Méndez-Bustos, 2019; Mungo, 2020, Oud, 2018; Stoffers-Winterling, 2022; Storebø, 2020). This robust scientific literature systematically shows the benefits of this therapy in different outcomes. Breaking down by outcomes, these studies have shown to improve multiple outcomes in adult BPD patients: Global BPD symptomatology, suicidal ideation, suicide attempts, self-injurious behaviours, impulsivity, anger, aggressiveness, depressive symptoms, dissociation, quality of life, global functionality, psychosocial functioning, psychiatric hospitalisations, visits to the emergency service and quantity of psychotropic drugs. It is worth mentioning that the clinical effects of DBT persist even in evaluations up to a 2-year follow-up (Gillespie, 2022).

Deeping in these outcomes, the most robust effect of DBT is in suicide attempts, self-harming behaviours, and psychosocial functioning, with moderate-to-large effects when they are studied as primary outcomes; also anger when is studied as a secondary outcome (Stoffers-Winterling, 2022).

1.3.5.a Live experience of patients and carer receiving DBT: In recent years, the lived experience of BPD patients receiving DBT and their carers has received more attention. This relatively new field of research comes to reinforce the properness of this therapy for the treatment of BPD patients and its benefits from a perspective beyond the biomedical view. The positive impacts of DBT in BPD patients, beyond changes in problematic behaviour, can be reviewed in more detail in a recent systematic review (Little, 2021). In addition, similar themes regarding the positive impact of DBT can be found in the experience of carers/parents of young patients (Ratnaweera, 2021)

1.3.5.b Effect of DBT on therapists burnout and attitude toward BPD: Another interesting and new approach in DBT research is the effect of this therapy on the therapists, in relation to burnout and attitude toward BPD patients. It is well known that working with

patients with this diagnosis exerts an impact on the mental health of therapists and many times stigma and negative attitudes arise toward them (Bodner et al, 2011; Bodner et al, 2015; Westwood & Baker, 2010). Even more, a structural stigma has been described, meaning that BPD patients and their carers find different barriers to access to treatment (Klein et al., 2022) In this regard, it is worth highlighting that just even training professionals in DBT could help to reduce this impact (Carmel et al, 2013; Haynos et al, 2016; Knaak et al, 2015; Perseius et al, 2007).

1.3.5.c Dialectical Behaviour Therapy in other populations: DBT for adult BPD has also been implemented and has shown to be effective in settings other than standard outpatient settings, such as psychiatric inpatient units (Fox, 2019), day hospitals, and intensive outpatient programmes (Swearingen, 2022). Similarly, standard DBT has been adapted for disorders and populations other than adult BPD. For instance, DBT for adolescents with borderline personality disorder (DBT-A) (Kothgassner, 2021; Rathus, 2019); DBT for pre-adolescent children with emotional dysregulation (DBT-C) (Perepletchikova, 2021); DBT for post-traumatic stress disorder (PTSD) in BPD patients (Bohus, 2019; Harned, 2021), eating disorders (Wisniewski, 2021); substance disorders (DBT-SUD) (Dimeff, 2021). and BPD-family members (Fruzzetti, 2021); and refractory depression (Lynch, (2020).

## **1.4 Implementation of Dialectical behaviour therapy in public health systems.**

### *1.4.1 Rationale for implementing DBT in public or community settings*

Several reasons support the decision to implement DBT (or other evidence-based therapy) in a public or state health system. First, the fact that there is an effective evidence-based treatment for a particular disease - recognised and validated and classified - imposes a professional duty to make this treatment accessible, as would happen in any other speciality of medicine.

On the other hand, besides implementing due to the considerable prevalence of BPD in the community and mental health facilities, as was mentioned previously, another important reason for implementing DBT in public health systems is the high cost of illness: functional disability, incomplete education, lower productivity, unemployment, work absenteeism, deteriorated physical health and quality of life, increased family and carer burden; and ultimately the direct cost due to health care utilisation. This call to action is essential in the adolescent and young population, in whom early intervention is especially beneficial (Chanen, 2017). Ultimately, this imperative to implement an evidence-based treatment that decreases disability and suicidal risk is aligned with the latest edition of the World Health Organization's "Comprehensive mental health action plan 2013–2030" (WHO, 2021).

Despite this clarity of need, BPD has suffered neglect from decision-makers and policymakers (Commonwealth of Australia, 2006, p.89), and has been marginalised in health systems (Kealy, 2010). For this reason, it is not surprising that there is a well-known health care gap (Iliakis, 2019).

#### *1.4.2 Evidence of DBT in public and community settings.*

As is known, "efficacy" studies of psychotherapeutic interventions, in other words, "laboratory" research under ideal conditions, with "purified" samples by narrow inclusion criteria and numerous exclusion criteria not considered in routine clinical practice, and protected settings controlled by research teams, are far from what is actually observed in "real life". These efficacy interventions are necessary at the outset, to determine whether the changes caused by an intervention are due to the intervention itself, or to other environmental or time determinants. For this reason, it is crucial to know the "effectiveness" of the intervention in the real-life context where patients are cared for, in the "routine clinical settings" (Huppert, 2006).

In this sense, there are experiences and evidence of the effectiveness of standard DBT, that is, comprehensive DBT (including the four modes) for 12 months, in community contexts or public health centres in different countries: Australia (Walton, 2020), United Kingdom (Priebe, 2012; Feigenbaum, 2012), Germany (Stiglmayr, 2014), Sweden (Hjalmarsson, 2008), Ireland (Flynn, 2017), United States of America (Comtois 2007). Likewise, there are pragmatic studies of effectiveness in the "real world" of abbreviated versions of 6 months of comprehensive DBT in Australia (Pasiieczny, 2011; Brassington, 2006; Prendergast, 2007, Carter, 2010; Williams, 2010); Ireland (Murphy 2020; Blennerhassett, 2009 McSherry, 2012; Lyng, 2015); USA (Ben-Porath, 2004) and New Zealand (Brassington, 2006).

From an economic perspective, it is reasonable to implement DBT in public health systems since, among different evidence-based interventions for BPD, it is the one with the most evidenced cost-effective interventions. (Brazier, 2006; Meuldijk, 2017; Murphy, 2020). It is not surprising, therefore, that several countries have incorporated DBT, either in clinical guidelines (Simonsen, 2019; NHMRC, 2012) or in funded national or state health programmes. Such are the cases of Ireland, United Kingdom, Australia, New Zealand, Germany, Finland, Sweden, Spain, Switzerland, Denmark, and the Netherlands.

#### *1.4.3 Challenges of implementing DBT in public health systems*

If already for a team of trained professionals, it can be challenging to start a comprehensive DBT programme (Dimeff, 2020); how much more can it be for a public health institution where there is, in general, greater organisational and administrative complexity and financial restrictions. Various barriers have been described, as well as facilitators, in the implementation of DBT in a public context, which have been observed from different perspectives, from clinicians, team leaders, and administrators (Flynn, 2021). Among the most frequently described implementation barriers are the absence of protected time, lack of funding, staff turnover, lack of implementation planning, lack of administrative support, and lack of support from managers, among others (Herschell, 2009; Swales, 2012; Carmel, 2014; Landes, 2017; King, 2018; Flynn, 2020).



Fortunately, from the body of work in the "Implementation science" domain, there is growing knowledge and guidance in the implementation process of DBT programmes (Toms, 2019). In this sense, opting for DBT when deciding to implement an evidence-based intervention has the advantage that there is literature that guides and helps by providing step by step guide in implementing a DBT programme (Swales, 2010a; 2010b).

The modular nature of the standard DBT version also allows adaptations that could make it still effective meanwhile cost-effective and accessible to more patients. As it is the case with comprehensive programmes with a single cycle of 6 months or less or those based exclusively on group skill training groups without individual DBT therapy.

## **1.5 Context in Chile**

Chile has a general population of 17 million inhabitants, and Santiago, the capital, seven million approximately. The country has two health provision systems, public and private. The public national health system ("*Sistema Nacional de Servicios Salud*" [SNSS]) is nationwide integrated; meanwhile, the private sector is scattered among several independent provider institutions. Similarly, there are two kinds of funding institutions: the "*Fondo Nacional de Salud*" (FONASA), which is public and receives income from direct persons' health taxes and state funds; and "*Instituciones de Salud Previsional*" (ISAPRE), which are private and manage individual monthly contributions. Both, providers and funding institutions, public and private, are at some points integrated. People subscribed to FONASA can receive care from public health system, and from private if they can afford it "out of the pocket". On the other hand, people subscribed to ISAPREs are not allowed to enter to public national health system, except for some specific primary care interventions and emergency room. Also, the SNSS in a few situations can "buy" services to private providers (Oliveira, 2021). It is worth mentioning that there are some health conditions that, by force of a law, must be covered to all people, regardless of if they are in FONASA or ISAPRE. This law determines the national programme called AUGE or "Universal Access with Explicit Guarantees (in Spanish AUGE: "*Acceso Universal a Garantías Explícitas en Salud*"), which forces FONASA and ISAPREs to provide treatment with some minimums of times and interventions (Bitrán, 2013). Up to this point AUGE considers only three mental disorders: bipolar disorder, schizophrenia, and depressive disorder.

Inside the public health system, all mental disorders, regardless of whether they are included in GES, are generally treated in any of the following health facilities: primary health care centres, secondary level health care centres, inpatient units, and day hospitals. General practitioners and psychosocial teams manage the most common and mild mental disorders at the primary care level. The secondary level centres include more specialised professionals, including psychiatrists, and care for more complex psychiatric disorders such as bipolar disorder, schizophrenia, severe depression or personality disorders, among others. The secondary-level facilities may be added to a general hospital or as a community centre.

In relation to the borderline personality disorder, currently, in Chile, there are no studies on the epidemiology of BPD in the community, nor on its prevalence in clinical settings, which would allow us to account for the magnitude of the problem. This lack of knowledge could also explain, although not completely, the existing gap in public policies and programmes oriented to this group of patients. In fact, there is not any clinical guidelines or programmes for borderline personality disorder coming from the governance of SNS. There are only isolated clinical initiatives in some public clinical centres, such as Hospital Dr. Sótero del Río in Santiago, but nothing ordered by the central or regional governments. Although there is no official information, my view, as a specialist dedicated to this problem in Chile, is that there are so few professionals trained in evidence-based psychotherapies for BPD. And those who effectively are trained, work mainly in the private health sector. This means that even if there were national guidelines and policies for the treatment of BPD there would not be enough supply of therapists to cover the demand in the public system. In other words, not only is it needed data about epidemiology but also a clear policy from the government's central administration to train and deploy trained professionals in public centres.

More research is needed in Chile to close the current gaps in the BPD epidemiology and its impact, as well as clinical research of interventions adapted to the public settings.

## **1.6 Summary**

Borderline personality disorder is a serious mental illness associated with functioning impairment and excess of morbimortality. There are several evidence-based psychosocial interventions, where DBT is the most evidence-supporting effectiveness. However, restrictions in the public health system prevent implementing the full intervention of these interventions. In this context, some adaptations in DBT, such as DBT skills training group,

seems to be a suitable alternative to close the gap in managing this mental illness in the public system. Similarly, the situation in Chile is not favourable since there is no data about BPD epidemiology or the effectiveness of interventions, so research in this field is needed.

## **Chapter 2 Dialectical Behavioural Therapy Skills training group (DBT-ST) interventions for borderline personality disorder: Scoping review of the “How”.**

### **2.1 Introduction**

This chapter reports on a scoping review of how different DBT-ST interventions have been implemented worldwide. Firstly, a brief idea about the "comprehensiveness" of standard DBT will be exposed, as the effectiveness of DBT-ST programmes. Next, the Scoping review will take a perspective from the DBT functions and then a concluding analysis which may inform and help further adaptations of this kind.

### **2.2 Modes and functions of DBT in a comprehensive programme**

A “standard” DBT programme, typically consists of: (a) DBT individual therapy, (b) group skills training, (c) telephone coaching, and (d) a therapist consultation team, which are the four “modes” of DBT. Similarly, a DBT programme is considered “comprehensive” if it attends to at least five major functions of the treatment, such as: (1) capability enhancement, (2) motivational enhancement, (3) generalization of gains, (4) structuring of the environment to support clinical progress, and (5) enhancement of capabilities and motivation of therapists. Textually, according to Linehan’s DBT Skills Training Manual (2015): The first function corresponds with *“to enhance an individual’s capability by increasing skilful behavior”* (p. 13), which is accomplished mainly in skills training group. The second function, to *“improve and maintain the client’s motivation to change and to engage with treatment”* (p. 13), is in charge of the individual therapist. The third function, *“to ensure that generalization of change occurs through treatment”* (p. 13), is reached by phone coaching, among other strategies used by the group and individual therapists. The fourth function, *“to enhance a therapist’s motivation to deliver effective treatment”* (p. 13), is completed mainly in the consultation team meetings. Finally, the fifth function, *“to assist the individual in restructuring or changing his or her environment in such a way that it supports and maintains progress and advancement toward goals”* (p. 13). However, for Linehan, it is not the mode itself that is critical but its ability to address a particular function. A strong example of this is the adaptation of DBT in inpatient units, where, for instance, generalisation is accomplished by front-line staff and phone coaching. This distinction between mode and functions, and their articulation, was developed

by Linehan (1999) mainly to help implement DBT in new settings or populations when needs or constraints interfere with adopting the fully comprehensive programme (Linehan, 1999).

Public institutions frequently must deal with several restrictions and a lack of staff, among other barriers, to implement DBT fully (Flynn, 2021). These difficulties have encouraged adapting, implementing, and studying "lighter" versions of DBT to make them more accessible for the treatment of BPD patients. These adaptations may involve reductions in therapy time or exclude some DBT modes. For instance, in a 12-month comprehensive DBT programme (comprehensive of 12 months) with a 2,5-hour skills training group training, 1-hour individual therapy, and 1,5-hour consultation team meeting, two therapists, each with 8 hours per week, would be necessary to treat only eight patients. Since the recommended maximum number of patients per group is eight (Linehan, 1993), in the hypothetical scenario that no patient abandons therapy, only eight patients could receive treatment during one year with that staff resource. However, on the other hand, if standard DBT is adapted to a 6-month skills training group of 2hrs, plus consultation team meeting, and without individual therapy, the same staff resource would permit treating 48 patients instead of eight. Although less intensive and may be less effective for more severe cases, these lighter adapted versions make treatment more affordable, regardless of the payer (patient or a third-party payer), and more accessible by increasing the available hours of therapists.

### **2.3 Evidence of abbreviated Comprehensive Interventions**

All the systematic reviews and meta-analyses published to date on DBT in BPD have included, besides the 12-month comprehensive DBT, abbreviated comprehensive versions of less than a year (Chen, 2021; Ciesinski, 2022; DeCou, 2019; Kliem, 2010; Panos, 2014). The most frequently found are interventions that consider only one cycle of standard DBT skills training group, 24 weeks. Special attention deserves a recent study, not included in the Systematic Review and Meta-Analysis above cited, which studied the non-inferiority of a comprehensive DBT programme of 6 months compared to a standard DBT of 1 year (McMain, 2022). This study showed, among the main results, that the 6-month DBT was not inferior to the 12-month DBT in the decrease in self-injurious and suicidal behaviours at 6, 12 months, and even at 24 months, one year after completing the treatment. There are also a few other RCT of comprehensive adaptations for BPD briefer than 24 weeks (for obvious reasons, they reduce the number of skills taught in group), but they are not included in the Systematic

Reviews and Meta-Analyses previously cited. These DBT programmes lasted 12 weeks (Hamid, 2020) and 18 weeks (Reyes-Ortega, 2019). On the other hand, when the diagnosis is broader than BPD, for example, in patients with only BPD traits, it is also possible to find another RCT of a 16-week DBT programme (Andreasson, 2016).

#### **2.4 Evidence of DBT-ST interventions**

Continuing with adaptations of standard DBT that seek to lighten the intervention, there are programmes based only on DBT skills training groups, without individual DBT therapy, which may or may not have phone coaching and the consultation team meeting. Among these programmes, two classes can be identified, those called "add-on", in which DBT-ST is a complement to a standard psychosocial intervention other than DBT, and the "stand-alone", where the only intervention for the patient is DBT-ST. These group-based programmes began, chronologically speaking, shortly after the publication of the first DBT manual in 1993. Gayner (1999) published a 14-week DBT-ST for BPD patients in the late 90s that showed to have good acceptability and feasibility. Moreover, the first DBT-ST interventions seemed to appear with the initial inpatient adaptations of DBT, just a few years after the first RCT in standard DBT (Linehan, 1991) The inpatient centres in USA had a significant presence of professionals with psychodynamic training, so the first approach was to introduce only skills training group, which was initially thought of as an adjunct to the ongoing psychodynamic treatment (Barley, 1993). In a later study in an inpatient setting, no differences in the improvement of BPD patients were found between DBT-ST and DBT-ST plus individual DBT therapy (Leerer, 1997).

It is also worth mentioning that adherence to DBT model does not have to do with the length of the intervention. From one side, a DBT programme is considered comprehensive, regardless of length, if it considers the four DBT modes. On the other hand, a DBT intervention is considered adherent if the therapist in any of the sessions performs the steps and DBT strategies that are expected for each mode. Therefore, a DBT-ST intervention, although not comprehensive itself, is adherent to DBT if therapists follow principles and strategies.

Regarding the evidence of the effectiveness of DBT-ST, a systematic review published in 2015 (Valentine, 2015) analysed the feasibility, acceptability, and efficacy of DBT interventions based on skills training groups. They analysed 17 studies. The review was heterogeneous since it included different designs and several clinical populations other than

personality disorders (mood disorders, binge eating, bulimia, non-suicidal self-injury, intellectual disability, oppositional defiant disorder, and attention deficit hyperactivity disorder, among others). The review only considered one RCT in DBT-ST for adult BPD (Soler, 2009); However, the search strategy that was used is questionable, considering that it did not completely state the details and the terms used in the search strategy lack of enough sensitivity.

Subsequently, Spong (2021) published a systematic review and meta-analysis of brief psychological interventions, of less than six months, for adult BPD patients. Of the 27 incorporated studies, only four corresponded to DBT-ST (McMain, 2017; Soler, 2009; Kramer, 2016, Lin, 2019). The results showed that group-only interventions, such as Emotion Regulation Group therapy (ERG), DBT Skills Training (DBT-ST) and Systems Training for Emotional Predictability & Problem Solving (STEPPS), had moderate to high effect size in all outcomes analysed, including BPD symptoms, depression, self-harm, anxiety, social functioning, and general mental health. While confirming the effectiveness of group-based therapies, the Spong study did not analyse DBT-ST interventions as an independent subgroup.

More recently, in another systematic review and meta-analysis (Stoffers-Winterling, 2022) that included all types of psychotherapies for BPD, DBT-ST was distinguished as an independent intervention, separated from standard DBT, MBT and STEPPS, among others. Three of the four studies previously incorporated by Spong (McMain, 2017; Soler, 2009; Kramer, 2016) were included in this work. The analysis found a significant effect of DBT-ST on BPD severity, anger, affective instability, impulsivity, dissociation/psychotic, and depression. The two systematic review and meta-analysis above mentioned only considered interventions for BPD patients; however, some RCTs have favourably evaluated the effectiveness and acceptability of DBT-ST versions for populations beyond the narrow BPD criteria, such as emotional dysregulation (Davanari, 2019; Neacsiu, 2014; Tobon, 2020; Uliaszek, 2016).

DBT-ST interventions have also shown to be beneficial for other diagnosis. In a recent systematic review and meta-analysis of DBT-ST for common mental health disorders, a large effect was observed for binge eating disorder/bulimia; moderate effect for overall symptom reduction and depression; and small-to-moderate effect for anxiety and emotion regulation (Delaquis, 2022). There are also experiences of DBT-ST for substance use disorder. A recent systematic review showed good acceptability and feasibility and promising results; however,

the quality of the studies was heterogeneous, and more research is still required in that field (Warner, 2022).

Although DBT-ST has sufficiently shown to be effective for BPD and other conditions, as was mentioned, compared to treatment as usual or waiting list. However, there are still few studies that assess DBT-ST head-to-head with another type of psychotherapy. These RCT studies have compared DBT-ST with some active controls, such as “Activities-based support group” (Neacsiu, 2014), “Cognitive Therapy Group” (Lin, 2019), “Positive psychotherapy” (Uliaszek, 2016), “Standard group therapy” (Soler, 2009), and “Supportive group therapy” (Yang, 2020). Despite neither of them is considered evidence-based psychotherapy (e.g MBT, TFP, STEPPS), the DBT-ST interventions in the before mentioned studies were equal or superior to active controls. At the same time, inside DBT-ST interventions, there is no research that explores whether short interventions are as effective as longer ones. To our knowledge, no review has systematically summarised nor detailed how the DBT-ST programmes have been adapted and delivered. In this area, there is a gap in the literature regarding the DBT-ST intervention itself: general structure, programme length, session duration, specific DBT skills, phone coaching, consultation team meeting, times and schedule, training of therapists, etc. In other words, we already know the effectiveness of DBT-ST for specific populations; however, since standard DBT retains a flexibility that allows adaptations such as DBT-ST, it is also possible to implement DBT-ST in various ways. Therefore, it is that area of knowledge that requires further exploration. It is also relevant to know more about the details of the way of implementing DBT-ST since that piece of work could facilitate the spread of this intervention in settings where it is not possible to adopt a complete comprehensive DBT programme.

According to those mentioned above, a scoping review is the most suitable means to explore the kind of knowledge about DBT-ST that needs to be further researched. In general, a Scoping Review should be performed for the following aims (Peters, 2020): 1) as a precursor to a systematic review; 2) to identify the types of evidence available in a given field; 3) to identify and analyse knowledge gaps; 4) to clarify key concepts and definitions in the literature; 5) to examine how research is conducted on a certain topic or field; and, 6) to identify key characteristics or factors related to a concept. In this case, the third reason matches precisely with what is needed to explore, that is, to get to know the “how” DBT-ST interventions for BPD patients are being adapted and implemented worldwide.



## 2.5 Scoping Review

The purpose, framework, and procedures of the scoping review, as a special tool for reviewing the literature, were first clarified by Arksey & O'Malley (2005), by contrasting with systematic reviews and other types of reviews. Later, this tool was reviewed and shaped through further updates. In 2014, the JBI International Scientific Committee summoned a Scoping Review Methodology Group whose work ended in the publication of the guidelines for authors of scoping reviews (Peters, 2015). Minor updates were made in 2017. Finally, a Preferred Reporting Items for Systematic Reviews extension for Scoping Reviews (PRISMA-ScR) was developed by an international team of experts in 2018 (Tricco et al, 2018), and a methodological update was published in 2021 (Peter et al, 2021).

Although a scoping review is a more than reasonable alternative when it is necessary to find the gaps in the knowledge in a research field, as it is in this case where there is no research related to the way in which DBT-ST are designed and implemented, there are some disadvantages that need to be revealed. Scoping reviews will not assure that the interventions are effective, as it is in a systematic review and meta-analysis, so the characteristics of the several DBT-ST found not necessarily will be those of a useful programme. Similarly, the scoping reviews do not analyse the methodological quality or bias of the studies (Munn, 2018).

### 2.5.1 Methodology

The report of this Scoping Review followed the guidelines of the PRISMA Extension for Scoping Reviews (PRISMA-ScR) (Tricco, 2018).

2.5.1.a Objectives: This Scoping Review aims to close the knowledge gap regarding “the how” the standard DBT has been modified to implement DBT-ST for patients with borderline personality disorder in an outpatient setting. More specifically, this Scoping Review intends to understand the way different DBT-ST programmes have been implemented and, if they modified some DBT modes or intervention to achieve any of the five functions of DBT: 1) Enhancing clients’ capabilities; 2) Improving patients’ motivation; 3) Ensuring generalisation; 4) Structuring environment; and, 5) Enhancing therapists’ skills and motivation.

2.5.1.b Eligibility criteria: Only studies of interventions based on DBT skills training groups for adults with BPD, for less than a year and in an outpatient setting were included. Considering that this Scoping Review was conceived during the COVID-19 pandemic,

telehealth delivery was also included. Sources were included if they reported interventional or observational primary studies, either quantitative or qualitative and mixed-methods analysis.

This Scoping Review excluded any study that the intervention that had incorporated individual DBT psychotherapy or was mixed with another therapeutic technique (e.g. MBT, or General psychiatric management [GPM]). Also, any intervention in other settings, like psychiatric intensive care units, residential facilities and day hospitals, was excluded, as well as intensive outpatient programmes. Studies in which the primary diagnosis was not borderline personality disorder, or its spectrum were not included (e.g., eating disorders, post-traumatic stress disorder, substance use disorder). Secondary analysis studies were not included. Resources were excluded if the language was other than English or Spanish. This Scoping Review comes to continue and to complement the evidence of effectiveness of DBT-ST interventions for BPD, previously mentioned (Stoffers-Winterling, 2022).

2.5.1.c Information sources: A literature search was performed through CINAHL, Cochrane Library, EMBASE, Epistemonikos, Psycinfo, Pubmed. The search was conducted on 10 February 2022. The final search results were exported into Zotero, and duplicates were removed. The electronic database search was supplemented by scanning the references of all relevant systematic reviews and meta-analyses about DBT or any psychological therapy for adults BPD that were found in the same search.

2.5.1.d Search strategy: The final search strategy for CINAHL, Cochrane Library, EMBASE, Epistemonikos, Psycinfo, Pubmed can be found in table 2.

2.5.1.e Selection of Sources of Evidence: The eligibility criteria and rationale were presented to a second screening reviewer, who separately screened the titles and abstracts of the resources and selected them according to the eligibility criteria. After the separate selection, inconsistencies were discussed and agreed through consensus. The second reviewer aimed to decrease bias in selection of resources, especially considering second reviewer was not a DBT therapist.

2.5.1.f Data Charting Process: A data form that followed the five functions of DBT; that is: (1) capability enhancement, (2) motivational enhancement, (3) generalization of gains, (4) structuring of the environment to support clinical progress, and (5) enhancement of capabilities and motivation of therapists; was developed to extract relevant information about how each programme was structured and delivered. The data-charting form (Appendix 2) was

reviewed by the project adviser and DBT expert Michaela Swales. The data from each selected resource was independently extracted and charted by both the thesis student and second reviewers, who were all experienced DBT therapists. The process of data extraction involves at least two reviewers to reduce the chance of errors and bias. Disagreements were resolved through discussion between reviewers. Since some relevant information was not reported across all studies, corresponding authors were systematically contacted via e-mail requesting the missing information.

<p>CINAHL via EBSCO ((dialectic* AND behavio*)) AND (borderline OR unstable OR personality OR emotion* OR suicid* OR "self harm*" OR "self destruct*" OR "self injur*" OR "self mutilat*")</p>
<p>Cochrane Library ((dialectic* AND behavio*)) AND (borderline OR unstable OR personality OR emotion* OR suicid* OR "self harm*" OR "self destruct*" OR "self injur*" OR "self mutilat*")</p>
<p>EMBASE via Ovid (borderline OR unstable OR personality OR emotion* OR suicid* OR 'self harm*' OR 'self destruct*' OR 'self injur*' OR 'self mutilat*') AND (dialectic* NEAR/1 behavio*)</p>
<p>Epistemonikos ((dialectic* AND behavio*)) AND (borderline OR unstable OR personality OR emotion* OR suicid* OR "self harm*" OR "self destruct*" OR "self injur*" OR "self mutilat*")</p>
<p>PsyInfo via ProQuest (borderline OR unstable OR personality OR emotion* OR suicid* OR 'self harm*' OR 'self destruct*' OR 'self injur*' OR 'self mutilat*') AND (dialectic* NEAR/1 behavio*)</p>
<p>Pubmed ((dialectic* AND behavio*)) AND (borderline OR unstable OR personality OR emotion* OR suicid* OR "self harm*" OR "self destruct*" OR "self injur*" OR "self mutilat*")</p>

Table 2. Search strategy

2.5.1.g Selection of Sources of Evidence: After duplicates were removed, a total of 3333 resources were identified from searches of electronic databases and scanning relevant systematic reviews and meta-analysis references. Based on the title and the abstract, 3256 were excluded, with 57 full-text articles to be assessed for eligibility. Of these, five were excluded for the following reasons: 2 included individual DBT therapy, one did not follow Linehan’s DBT Manual, One was a non-published report of preliminary findings whose author

asked not to include., and another was a secondary analysis. The remaining 52 sources were considered eligible for this review (see Figure 1)

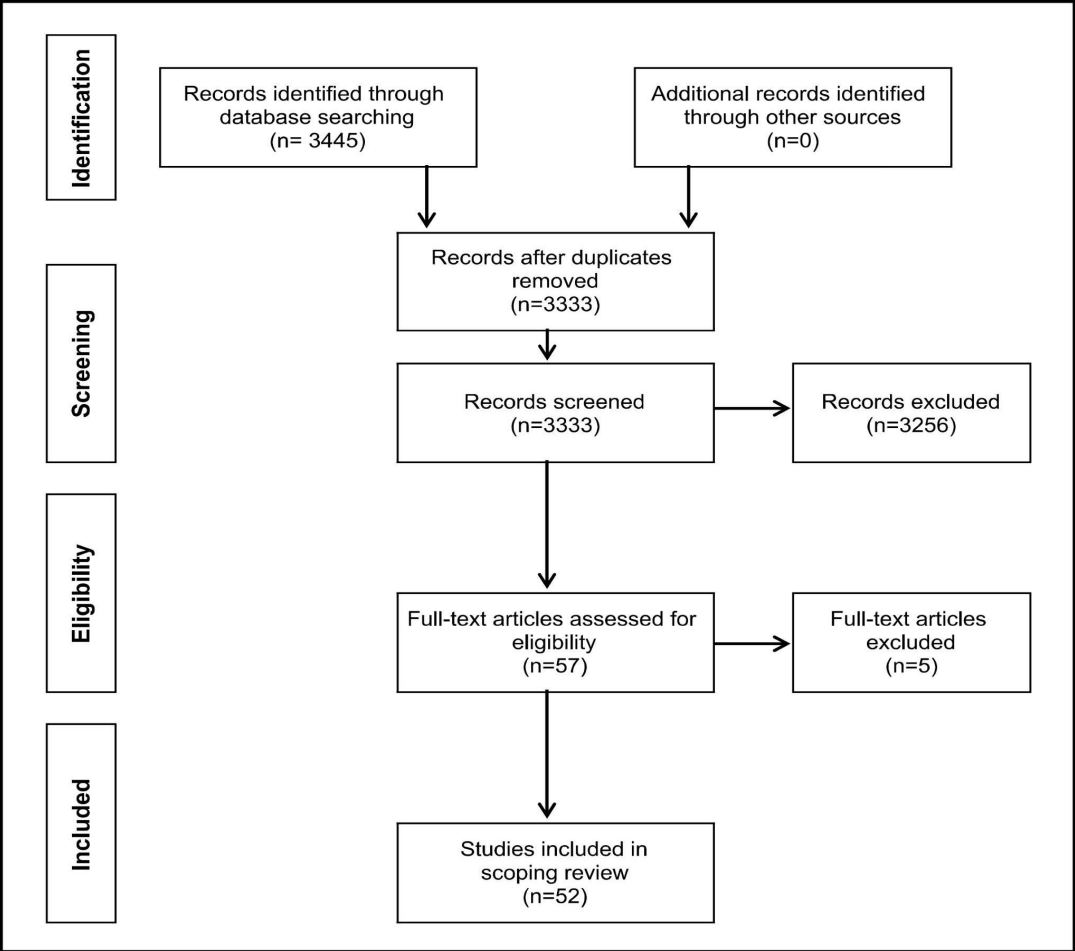


Figure 1. PRISMA-ScR Flow diagram

2.5.2 Results

2.5.2 a General aspects: Almost half of reviewed papers (N=22, 42%) reported studies of DBT-ST for borderline personality disorder exclusively. The next highest proportion of studies (N=15, 28.8%) reported the intervention for patients with emotional dysregulation. The remainder reported studies of the intervention for patients with borderline symptoms, high suicidal risk or axis-I disorders (table 3). These last four groups were included since they all included the clinical sample of interest, specifically patients with BPD . A complete summary of charted data can be found in Appendix 3.

<b>Diagnosis</b>	<b>No</b>	<b>%</b>
Borderline personality disorder	22	42.3
Emotion Dysregulation	15	28.8
Borderline symptoms	4	7.7
Suicidal	3	5.8
Axis-I diagnosis	8	15.4
Total	52	100.0

Table 3. Studies' patients diagnosis

*Settings:* Programmes were implemented in different clinical settings. These settings were categorised into the following: "Community mental health", "College or University", "Veterans", "mother-infant" and "others". The rationale of this categorisation is that those settings significantly differ in their institutions' organisational and administrative characteristics (e.g. budget restrictions in community centres). Besides, despite all patients sharing the same BPD diagnosis, patients from each type of setting (veterans, college, and mothers) have relevant particularities unrelated to BPD itself (e.g. PTSD in veterans). Still, all of them are essential to consider in guiding a DBT-ST implementation. There was not always a clear distinction among these settings and they were not mutually exclusive, with some studied reporting the intervention in combined settings. The most frequently setting were the community mental health centres<sup>1</sup>, frequently state funded. Private and university clinics were included in others or non-otherwise classified (See table 4).

<b>Settings</b>	<b>No</b>	<b>%</b>
Community centres	16	30.8
College/University	12	23.1
Veterans	3	5.8
Mother-infant	3	5.8
Other/NOS	19	36.5

Table 4. DBT-ST settings

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<sup>1</sup> These centres are defined by WHO (2021) as follow: "Community mental health centres provide care and support options for people with mental health conditions and psychosocial disabilities in the community. These centres are intended to provide support outside of an institutional setting and in proximity to people's homes"

*Programme length:* Although we obtained 52 studies, to analyse the length of the programmes, we considered 61 programmes since there were seven studies with two or more different DBT-ST groups. Some studies had programmes with the same length in weeks but different modules, and others, had the same modules but with different lengths. The length varied from just four weeks to 36 weeks. The average was 15.1 weeks; the median was 12 weeks. When programmes length was classified in 4-week intervals, most programmes fit inside the 9-12 week long group, followed by programmes between 17-20 weeks long (Figure 2).

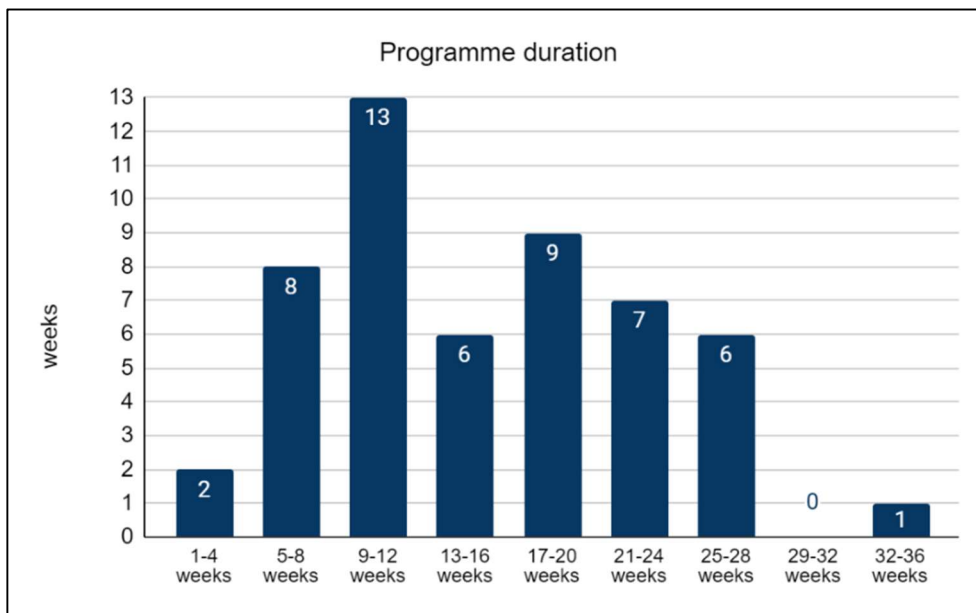


Figure 2: Programme length

*Add-on versus Stand-alone:* This analysis was made by understanding that the difference between an add-on and a stand-alone programme relies on the possibility (or not) of the patients receiving another individual non-DBT psychosocial intervention; nevertheless, the distinction is not always clear. According to reviewers, from 47 studies with enough information to determine (90.4%), 17 programmes (36.2%) were considered stand-alone, and 30 add-on (63.8%).

#### 2.5.2.b Function Enhancing patients' capabilities

*Skills training group modules and skills:* Of the 52 studies, only one did not describe the included DBT modules. These 51 studies involved 58 different programmes, of which forty-two included four modules (72.4%); one study included three modules (1.7%); four studies included two modules (6.9%); and eleven studies only one module (19%). Among those

programmes with 4 modules, the average proportion of each module was the following: general/orientation 1.6%, mindfulness 22.9%, distress tolerance 25.6%, emotion regulation 26.2%, and interpersonal effectiveness 23.6%. (To appreciate proportion of each of the four DBT modules see Figure 3). Of the 58 programmes, only thirty-six (62%) detailed the specific skills they taught. In those programmes briefer than 24 weeks long, when it was possible to obtain the details and order of skills, we saw that in 83% of cases the mindfulness module was considered as a single block. This strategy of setting a sole mindfulness module is different than the standard version where each module of distress tolerance, emotion regulation and interpersonal effectiveness is intercalated by 2 weeks of mindfulness. In one study the skills training group was held twice weekly (Hart-Mitchell, 2008).

*Group session duration* of each skills group session varied from 55 to 180 minutes, with an average of 120 minutes (SD 26.5). The most frequent format was 120 min (40%), followed by 150 min (28%) and 90 mins (20%).

*Therapists:* Group therapists are responsible for increasing the capabilities of patients through skills training. Nine studies did not mention anything about the group therapists' profession; from the remaining forty-three, there were psychologists, nurses, counsellors, social workers, psychiatry residents, and occupational therapists (see table 5). We have simplified and distinguished the following two ways of training: 1) formal training (Intensive or Foundational DBT training by "Behavioral Tech" or "British Isles DBT Training" or equivalents, or any mentioned to "formal training"); 2) other "informal" ways of training, such as classes, seminars, or less of 5 days training. Of the 52 studies, forty-seven stated that therapists were trained in DBT; the other five did not mention training. Of those forty-seven studies mentioned, only twenty-three described some details of the training characteristics. It is worth mentioning that in some studies there was more than one type of training. The most frequent was formal training (69.6%), then informal (39.1%), and in 17.4%, despite details, it was not possible to clarify the type of training.

*Cultural adaptations:* The language and culture, and so their respective adaptations inside DBT, are relevant aspects that affect skill acquisition. In fifteen studies, the intervention was delivered to non-English speaking patients (Spain, Iran, Italy, Malaysia, Switzerland, Taiwan, Iran, Nepal, and China). However, only two of those studies made a cultural adaptation of contents besides the language translation to facilitate skills learning.

*Other ways to increase patients' capabilities:* Some programmes incorporated other interventions aimed at increasing patients' capacities. The most frequent, although described in only four studies, was the use of the DBT diary card. In two other cases, they modified the content of the sessions or material to adapt them to the context, as was the case in the two perinatal DBT programmes.

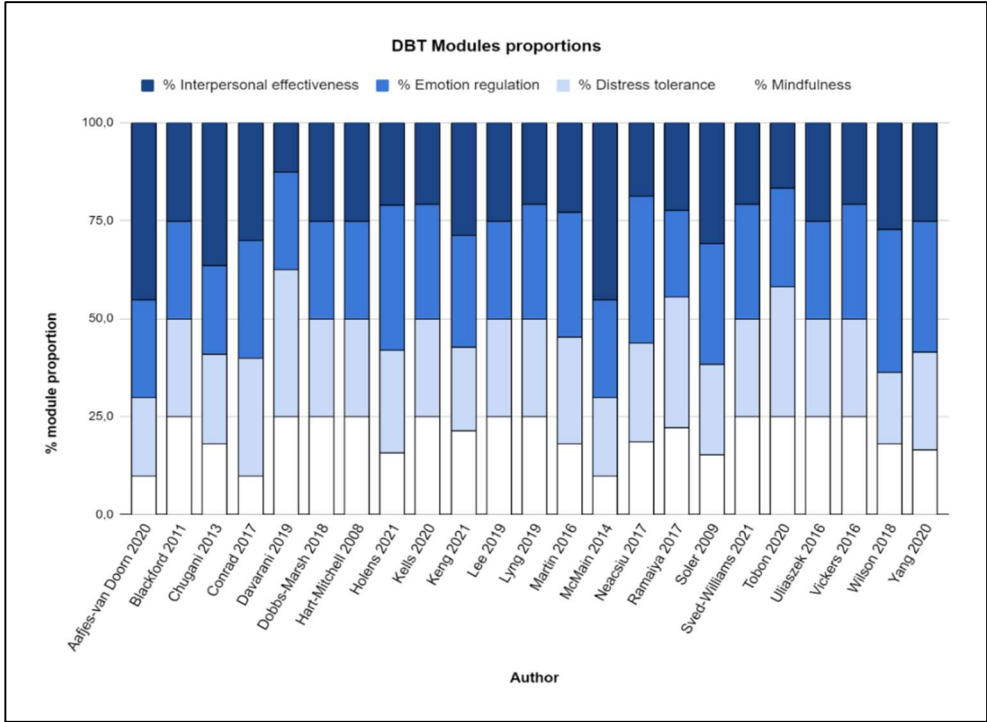


Figure 3: DBT modules proportions

Therapists' profession	No	%
Psychologist	40	93.0
Nurses	13	30.2
Counsellor	9	20.9
Social worker	3	7.0
Psychiatry resident	2	4.7
Occupational therapist	1	2.3

Table 5. Therapists' profession



### 2.5.2.c Function Enhancing patients' motivation

The DBT mode "in charge" of improving motivation is, per definition, individual therapy, so the charting form only considered an open space to incorporate any intervention that the reviewer considers seeking this function. Intake interviews (one or two individual session previous to start DBT.ST) were the most frequent intervention found in programmes to improve patients' motivation, as mentioned in 12 resources, that is, 23% of the studies.

The 4-session *missing rule* is part of the therapy agreements. It contributes to keeping patients motivated to attend both group and individual sessions regularly; it was possible to obtain information about this topic from 38 studies (73.1%), where 71.2% had defined a rule. Of those, 13 (48,1%) considered three sessions, 11 (40.7%) four sessions, and only 3 (7.4%) had a 2-session missing rule. Other activities oriented to these functions are summarized in table 6.

<b>Study</b>	<b>Details of activities for enhancing patients' motivation</b>
Decker, 2019	<i>"Telephone calls were placed to participants who did not attend group sessions to encourage attendance."</i>
Holens, 2021	<i>"Participants had the option to use the time with their individual therapists to work on the DBT homework assignments, to discuss issues related to the DBT group, or to continue with any other therapy as usual"</i>
Martin, 2017	<i>"as-needed phone calls to review missed material and facilitate group attendance."</i>
Meaney Tavares 2013	<i>"Participants were also given a range of after-hours contacts developed after consultation with the participant, representing their individual requirements and preferences"</i>

Table 6. Details of activities for enhancing patients' motivation

### 2.5.2.d Function Ensuring Generalisation

Phone coaching: Regarding this DBT mode, 73.1% of the studies explicitly referred to whether they included or not phone coaching, and only 29% had phone coaching in their programmes. Almost all of them detailed the availability time, which restricted phone coaching to office hours only, whether by one of the group therapists or a case manager of the institution or team. Some studies described that another kind of non-DBT phone assistant

was provided; 10 studies mentioned they gave access to a 24/7 crisis line. Additionally, according to expert reviewers, five studies mentioned some activities that were oriented to ensure generalisation. These activities are summarised in table 7.

Study	Details of activities for ensuring generalization
Chugani, 2013	<i>"Many participants were able to access feedback on skills practice via telephone during business hours, during their individual sessions or via e-mail to a skills trainer"</i>
Heerebrand, 2021	<i>"Participants were provided with the option to have a copy of their "coping plan" (a document participants create detailing their personalized distress tolerance skills) uploaded to the Community Business Information System (CBIS), which may be accessed by the South Australian Department of Health Services, including crisis phone support."</i>
Lin, 2019	<i>"A closed Facebook community group was established for the group members in this study. After each group session, the group therapist posted the group summary and information regarding the next group intervention on the Internet platform. Moreover, participants shared their experiences of homework practice, and the therapist guided members on how to use the skills learned in the group. The network platform was used at least twice a week. Simultaneously, participants were encouraged to share via the social media platform how they coped with their life events using skills acquired from the CTG or DBTSTG sessions. Through this platform, the therapist helped participants generalize skills as solutions to their difficulties and reinforced their learning and applications "</i>
Sved-Williams, 2021	<i>"At the conclusion of each group session, mothers are reunited with their infants using structured activities and utilizing DBT skills the mothers have just learned in the formal group session, focusing particularly on the stresses of separation and reunion"</i>
Wilson, 2018	<i>"Women received additional skills support through their usual meeting with their perinatal team CPN [community psychiatric nurses] throughout the group programme to aid the implementation of skills at home. The frequency of these meetings was agreed on an individual basis according to need. All the CPNs received a minimum of 3 days training in DBT. If unsure about using a skill or wanting support to resist acting on an unhelpful urge, women were also able to call the team's duty telephone helpline for skills coaching Monday to Friday, 10 a.m. to 4 pm."</i>

Table 7. Details of activities for ensuring generalisation

2.5.2.e Function Structuring environment

*Case management:* Only three studies described structured case management, which was not described in any detail. According to expert reviewers, just one study reported an additional action destined to structure environment (see table 8).

<b>Study</b>	<b>Details of activities for structuring environment</b>
Sved-Williams, 2021	<i>"While the mother undertakes the formal DBT skills group learning session, her infants are cared for nearby by either staff or volunteers at HMH, using consistent primary-caregiver principles, or by childcare workers at the community sites by trained childcare practitioners."</i>
Wilson, 2018	<i>"A childcare crèche was provided."</i>

Table. 8 Details of activities for structuring environment

2.5.2.f Function Enhancing Therapists' Capabilities and Motivation

It was possible to obtain information about consultation team meetings in 38 studies, and in 68.4% there was this meeting in the DBT-ST programme. Additionally, in 2 studies, a non-DBT meeting with the staff was incorporated (in both cases, there were not DBT consultation team meeting available). Also, 24 studies (46%) detailed that their therapists received supervision, and another two offered another intervention oriented to complete this function, different from consultation team meeting and supervision (see table 9)

<b>Study</b>	<b>Details of activities Enhancing Therapists' Capabilities and Motivation</b>
Gayner, 1998	<i>"The co-therapists met after each group session to process counter-transference issues, provide support and feedback to each other, and plan for the next group session."</i>
Hart-Mitchell, 2008	<i>"Training days every four months"</i>

Table 9. Details of activities for enhancing therapists' capabilities and motivation

## 2.6 Discussion

Although limited, the results of this review call attention to both the widespread worldwide implementation of DBT-ST and the variety of ways that standard DBT has been adapted to DBT-ST. We cannot affirm whether they were effective or not but notice that there are uncountable and creative forms to accomplish DBT functions. According to this review, these adaptations are considerably extended in four continents and at least 15 different countries. Regarding the implementation setting, the university contexts programmes open an interesting way of reaching persons directly in their natural and most visited environments (Chugani, 2016). In turn, among novel clinical settings, the implementation in the perinatal context is also remarkable since it shows a creative alternative to improve motivation and tackle those specific factors that interfere with attendance and participation of patients (Greaves, 2021). What is more interesting from our perspective is the broad implementation of DBT-ST in public and routine settings, which may be the ones where these less expensive but effective adaptations could be more beneficial for contexts where restrictions and barriers exist for implementation.

Concerning patient diagnosis, many of the DBT-ST programmes we reviewed were not exclusively restricted to BPD only. In fact, in more than half of the studies, the sample consisted in patients with diagnoses broader than BPD, such as “emotional dysregulation” or “suicidality”, or other axis I mental disorders. This extension of the intervention to a broader group of diagnoses resembles the comprehensive standard DBT that is effective in patients with emotional dysregulation (Priebe, 2012), and other BPD-related eating disorders.

The programmes length was extremely variable, from 4 to 36 weeks. However, only 6 of the 52 studies (11.5%) extended for more than 24 weeks, corresponding to the training standard schedule's duration. The skills training group is the core mode for the function of enhancing patients' capabilities, which means the shorter the programme length, the fewer opportunities the patients may have to incorporate new skills. The minimum "doses" of DBT-ST, in terms of length, to be effective cannot be known through this scoping review, but according to the systematic review and meta-analysis mentioned, implementing versions as brief as 13 or 20 weeks is effective with statistically significant moderate effects for the primary outcomes of BPD severity (Stoffers-Winterling, 2022).

It was decided to summarise the information following the five DBT functions since it is highly useful to have them in view when designing adaptations to DBT (see adopt or adapt);

particularly in settings where it is not possible to implement a full DBT comprehensive programme with all modes. Standard DBT must achieve these five functions in any of the four DBT modes; however, the "distribution" of these responsibilities is not homogeneous and has no clear limits. For example, increasing the patient's abilities is achieved primarily in the skills training group, but also in individual therapy. In the same way, enhancing patient's motivation is almost wholly managed in individual therapy; however, the skills training group also deploys different strategies oriented to this function.

Regarding the skills modules, most of the programmes included all four modules, maintaining more or less the same proportion of standard DBT. However, almost all programmes briefer than 24 weeks did not set mindfulness modules between each other. They were presented in a single block at the beginning, which could be considered a challenging problem since mindfulness skills have a crucial role in the whole DBT therapy. It is worth mentioning that some programmes did not incorporate all the DBT modules; some even included only one. This is in line with some research streams forwarding modular interventions for BPD patients, adjusting intervention according to severity and the particular specific skills deficiencies of each patient (Choi-Kain, 2016).

Among other interventions identified by reviewers to enhance patients' capabilities was the DBT diary card. It is interesting considering that this is a tool used primarily by individual therapists to structure sessions, Unfortunately, it was not detailed if diary cards were checked during group sessions and how many patients completed them. However, it seems like a simple and easy strategy to implement, but there is not enough data that support that diary card helps to enhance capabilities.

The duration of the skills groups also varied significantly; this is an important point considering that the time in the group is the best opportunity to incorporate and strengthen new skills. Only 30% of programmes implemented the standard time proposed by Linehan in her Manual, that is 2.5 hours. Reducing group time requires adapting somewhere inside the sessions, either the skills number delivered for each session, reducing the time of any of the parts of four sections: (1) beginning ritual, (2) review of homework practice since the last session, (3) presentation of new material, and (4) a closing "wind-down.", or reduce certain therapeutic strategies. Linehan reports that shorter sessions (90 to 120 minutes) could be carried out in less severe populations (Linehan, 2015); however, we found in this review there were no significant differences between the average duration of programmes for BPD patients

versus "emotional dysregulation" patients (125 min versus 126 minutes respectively). Furthermore, Linehan states that for more severe patients, 1.5hrs is not enough. Considering also that the skills would be trained only once (not twice like the standard programming), emphasis should be placed on the acquisition and strengthening of skills through plenty of practice and revision opportunities (Koerner, 2021) which requires sufficient time.

Regarding the training of therapists, the form of training was also variable, not all of them had formal training from accredited agencies. We could not know whether the type of training determined the effectiveness of the treatment since it was not the aim of this review. What was observed in this review is that in the same programme, not everyone had the same level of training; for instance, sometimes the leader had formal training, while the co-leader had only informal education. It is important to consider that under the body of knowledge in DBT, intensive and comprehensive training is considered one of the fundamental elements for the delivery of treatment to adhere to the model and, in turn, to reach fidelity of the programme. Also, the weekly consultation team meeting, supervision and assessment therapists' adherence contribute to the fidelity of programmes. The literature indicates that competency-based training (intensive DBT training) is the most appropriate training to achieve this fidelity (Miga, 2018), although the most abbreviated training could be an appropriate strategy for a member who is just joining a programme and equipment already working.

## **2.7 Summary**

This chapter was a Scoping Review that aimed to collect data about how DBT-ST programmes have been implemented worldwide. By reviewing observational and interventional primary studies this study described several aspects and interventions inside each programme, such as: diagnosis, setting, length, skills training group duration, skills schedule, therapists' profession and training, consultation team meeting, phone coaching. At the same time, this review focused on any additional intervention that may help to enhanced programmes' DBT functions.

## **Chapter 3: Feasibility of a 13-week enhanced DBT skills training group via telehealth for borderline personality disorder in a public outpatient setting**

### **3.1 Introduction**

The scoping review in chapter 2 highlighted key areas for consideration in implementing DBT-ST. This chapter reports a qualitative study of the feasibility of an online DBT-ST intervention in a public outpatient service in Santiago of Chile, from the DBT therapists' perspective. After presenting a brief context of the current situation of Chile in the treatment of BPD and the ongoing intervention to assess, the therapists' views obtained by Interviews in group and then analysed considering the data presented in Chapter 2 and the state-of-the-art in DBT research.

### **3.2 Background and context**

#### *3.2.1 Current situation of treatments for borderline personality disorder in Chile and Hospital Dr. Sótero del Río*

Currently, in Chile, there are neither national plans nor guidelines for addressing borderline personality disorder. This gap is a substantial pending task, considering that other equally prevalent and disabling psychiatric pathologies, such as bipolar disorder and schizophrenia, are included in the national "GES programme". So, to date, there are only local initiatives in some hospitals or health services in the public health system.

The major public hospital in the Southeastern Health Service of the Metropolitan Region of Santiago, the Hospital Dr Sótero del Río (HSR), is the second largest in the country in the number of beds. The adult area of the Psychiatry and Mental Health Service of the HSR has two psychiatric intensive care units (PICUs), a Day hospital, a liaison psychiatry service that also covers the emergency service, and an outpatient service. The PICUs cover a catchment area of 665,027 adults; and the psychiatry outpatient service has a catchment population of 115,214 persons.

Since 2016 there has been a DBT unit with inpatient and outpatient programmes both interconnected. In turn, within the outpatient service, there are two programmes based exclusively on DBT-ST because no psychologists trained in DBT were available for individual therapy until 2022 (groups were led by psychiatrists with official DBT training). One of these outpatient DBT-ST groups has lasted 13 weeks and was developed to receive BPD patients

recently discharged from hospitalization units. Since the beginning of Covid-19 pandemic the DBT groups in both inpatient and outpatient programmes began to be delivered online by Zoom. Similarly, the inpatient DBT groups were also held online to connect the two PICUs and the therapists working from their homes. Not only did this new technology scenario increase the accessibility of inpatient interventions, but also the enhancement of the 13-week outpatient programme with some inpatient DBT interventions. In this way, two different DBT-ST outpatient programmes were implemented: a 24-week version and a 13-week-long intensive version. The 13-week intensive programme incorporated two group sessions from the inpatient programme, a psychoeducation group (1hr.) and a 3-week crisis survival group (1hr.). As it was previously said, neither of them included individual therapy. This 13-week intensive version was developed for the most severe patients referred from outpatient service. Given the favourable reception of this brief and intensive online version by therapists and patients, we decided to assess its effectiveness, feasibility, and acceptability rigorously. Thanks to some research funds obtained, this 13-week version was enhanced by hiring a mental health nurse to perform some phone interventions.

### *3.2.2 Rationale of assessing feasibility of local DBT-ST*

As was reviewed in Chapter 2, there are enough data supporting the effectiveness of DBT-ST for BPD patients (Stoffers-Winterling, 2022), as well as the different ways how it is possible to implement this kind of DBT adaptation.

From the 52 studies included in Scoping review in Chapter 2, only eight considered in their objectives assessing the feasibility or acceptability of the intervention. And from those, only one assessed feasibility from the therapists' views with qualitative methods (Hart-Mitchell, 2008). That study, through open-ended questions, asked about four areas: 1) the benefits of group treatment, 2) the benefits of DBT skills, 3) the use of materials and time in group sessions, 4) and areas for improvement. Although implementation science in DBT has not been yet fully explored, there is some data regarding standard DBT (Toms, 2019); however, in DBT-ST is scarce to inexistent.

In this scenario, it would be helpful to explore the feasibility of a DBT-ST intervention, not only regarding the global feasibility of the intervention, but also whether the skills training group, and the added components that sought to enhance the programme, were feasible for reaching more DBT functions.



### **3.3 Methodology**

#### *3.3.1 Research question*

Is an online enhanced 13-week DBT-ST for borderline personality disorder feasible in a Chilean public psychiatric service from therapists' perspective?

#### *3.3.2 Research objectives*

3.3.2a General objective To explore the experience of DBT therapists delivering an enhanced 13-week DBT-ST at HSR concerning its feasibility

##### 3.3.2.b Specific objectives relating the functions of DBT

- To explore DBT therapists' views on the feasibility of the intervention regarding its structure and global design.
- To explore DBT therapists' view on the skills training group to enhance patients' capabilities.
- To explore DBT therapists' views on the consultation team meeting to improve therapists' motivation and capabilities.
- To explore DBT therapists' views on the adapted phone coaching to ensure skills generalisation.
- To explore DBT therapists' views on check-in calls to address motivation and attendance-interfering problems.

#### *3.3.3 Participants*

Therapists from the online enhanced 13-week DBT-ST intervention for BPD patients at Hospital Dr. Sótero del Río in Santiago de Chile, inside a clinical research project were invited to participate after the end of a 5-month period of intervention. All therapists accepted and signed the consent form (Appendix 4). Details of the intervention in Appendix 5 and 6.

#### *3.3.4 Ethics approval*

Ethical approval was sought and received following review by the Bangor University Healthcare and Medical Sciences Academic Ethics committee (project number 2022-17116), with further approval from *Comité Ético Científico del Servicio de Salud Metropolitano Suroriente* en Chile.

### 3.3.5 Procedures

The interviews to therapists were conducted in group in Spanish and online (via zoom) by the author; afterwards, they were transcribed *verbatim* and translated into English. A guide of open-ended question was used to lead the groups (Appendix 7). To develop the interview script, and to guide the interview itself as well, the following three aspects were considered: mainly the five functions of DBT previously mentioned, but also data obtained from Scoping review about similar DBT-ST programmes, and taking account of particularities of the Chilean health system. In total, five sessions were performed to know the experience of all therapists: The first one with the whole therapeutic team, and then with “subgroups”; one Interviews to therapists with each couple of skills training co-therapists, one with the couple of crisis survival skills co-therapists, and another individual interview with the phone coach. The duration of each of those five sessions was 52 min., 45 min., 34 min., 16 min., and 32 min. respectively, with a total of 2 hours and 59 minutes.

### 3.3.6 Data Analysis

A framework analysis was used in this study to analysis content of Interviews to therapists according to Ritchie & Lewis (2014). Framework analysis is a suitable method for qualitative research in health interventions, and it involves seven stages: 1) Transcription, 2) familiarisation with the interview, 3) Applying the analytical framework, 4) Charting data into the framework matrix, 5) Coding, 6) Developing a working analytical framework, 7) Interpreting the data (Gale, 2013). Emergent themes and sub-themes were identified, then summarised under different themes and subthemes in table 11.

## 3.4 Results

### 3.4.1 Therapists

Demography and clinical background of therapist are summarised in table 10. Of the eight therapists, five worked most of their time in a public health centre in Chile, from who three were regular staff of HSR (n°4, 5, 8). Two therapists worked outside of Santiago, in other regions at 400 and 600 miles away, respectively. One therapist was Colombian and worked in from there.

Intervention	n	Gender	Degree	Age	Clinical Experience (Years)	DBT Experience (Years)	DBT training	Work setting
DBT Skills training group therapists	1	Female	Psychol.	26	3	2	a	Private
	2	Female	Psychol.	37	2	2	a	Public
	3	Female	Psychiat.	38	7	1	a	Public
	4	Male	Psychiat.	33	6	3	a,b	Public
Crisis survival group therapists	6	Female	Psychol.	43	6	6	c	Private
	5	Female	Psychol.	41	8	2	a,c	Public
Phone coach	7	Female	Nurse	29	6	3	a,b	Public
Supervisor	8	Male	Psychiat.	53	23	15	a,c	Private

Training: a: 10-day DBT intensive training, b: 2-year DBT diploma, c: 1-year DBT diploma

Table 10. Therapists characteristics

	Component of intervention	Themes	Sub-themes
1	<i>13-week DBT skills training group</i>	Duration	Time to teach skills
		Online Format	Formality
			Connectivity
			Accessibility
		Training in session	Homework assignment
			Chosen skills
Close versus open			
2	<i>3-week Crisis survival skills group</i>	Duration	Time to teach skills
		Online Format	
		Training in session	Chosen skills
3	<i>Check-in calls</i>	Benefits	
4	<i>Phone coaching</i>	Assigned therapist	
		Time availability	
		Burden	
5	<i>Consultation team meeting</i>	Function	
		Supervisor	
6	<i>Other aspects</i>	Manual	
		Cultural aspects	

Table 11. Themes and sub-themes

### 3.4.2 13-week DBT skills training group

3.4.2.a Duration of sessions: All the DBT-ST therapists considered that the duration of 1.5 hours was too short for the number of skills they taught in each session. Some therapists even mentioned that on some occasions they had to leave content for the next session, particularly in the first of the emotional regulation module:

*“Most of the sessions, we were stuck in the time(...) even having to leave content for the next session”. [therapist n°2]*

All the group therapists also observed that due to the shortness of the sessions, they had to adapt the way of teaching the skills, performing a more practical than expository style and more active and openly offering strategies than facilitating and eliciting from the same patients.

*“I started very «hands-on», from the beginning, which helped them get the message much faster. Maybe I explained a lot less of the theory or why doing radical acceptance, which has several points, but I think I was more effective” [therapist n°4]*

However, some therapists raised the point that longer sessions in the online format could be more tedious for patients and generate more distractions.

*“(...) but I have the impression that it will be too tedious, too boring for the patients to extend it further via online”. [therapist n°4]*

3.4.2.b Online Format: The online format was perceived mixed among therapists. Some did not observe any difficulty, while others did. Among the challenges observed, it was mentioned that some patients joined the session with their cameras turned off, which caused some therapists to decrease their motivation and difficulty in following their participation and emotional state.

*“It decreased my motivation because I wasn't seeing their faces. Indeed, their reactions are what one needs as feedback to interpret whether they understood or did not understand. As seeing how they emotionally react, they show that could need help”. [therapist n°2]*

At the same time, the non-attendance of the online format presented some challenges for therapists since patients were not “in flesh”. Among the difficulties that the therapists observed were the difficulty in perceiving patients' emotional reactions and non-verbal language in episodes of emotional distress and the impossibility of supporting them through physical interactions such as giving a handkerchief or palming the shoulder.

*“There are differences with face-to-face, mainly due to being able to «read» the other, regarding nonverbal, being able to realize how they walk and gesticulate”. [therapist n°2]*

On the other hand, another therapist mentioned that the non-attendance version reduced the “formality” of the group sessions and, in turn, that this would have caused unpunctuality and not being entirely focused. They also observed that some patients connected in non-ad-hoc circumstances for a group workshop, which would have prevented full participation in the groups (e.g. while driving, or from their workplace).

*“Sometimes I perceive that it takes away a bit this feeling of formality. (...) when you are in the presential version, it's like, «I must get there, and I must get there, well dressed, with my shoes on, my suitcase ready to work, with my materials». Here [online version], I perceive that this formality is removed a bit”. [therapist n°1]*

*“(...) sometimes she [patient] was driving a vehicle or waiting to go to the doctor with their son [while participating in a group]. There was not an entire attitude of being in favour of the Mindfulness exercise itself, so that generated a little anxiety for me”. [therapist n°3]*

Regarding internet connectivity, some therapists had problems, particularly those connected from their public health centres. This connectivity problem could cause a loss in the flow of the session.

*“It happened to me that I had a horrible connection at the hospital; sometimes, I had the chance to depart to my home [and connect there] (...) but I feel that I was the one who failed the most with the Internet”. [therapist n°3]*

However, in relation the accessibility of the online intervention, in the sense of allowing access from remote places, most therapists considered it one of the strengths of online format.

*“I think they had more accessibility; the patients could do it from home, and some were in their bed, which was also much more comfortable for them”. [therapist n°2]*

3.4.2.c Skills training inside session: One of the strategies highlighted by one of the therapists and the supervisor was to link the homework assignment with something from the real context of the patient, in order to increase the chance that the patients generalise the skills.

*“At the end of the session, when you try to tie the homework assignment with something from the patient's real context, it seems that that increases the chances that they practice it. Because they know that the following week the whole group will be watching what happened (...) with the father, with the girlfriend, etc, that is good. So, to increase the practice, always keep a little generalisation in mind at the end when they assign the homework”. [therapist n°8]*

The therapists generally felt that the skills were appropriately chosen. Regarding the core skills of the mindfulness module, some therapists considered that they could have been compressed into only two sessions, while the rest believed that distributing them in three sessions was good. Some therapists pointed out that it took more work for patients to understand the What and How skills, unlike the other skills, since these would not be usually in tune with the culture and the usual way of living.

*“I would have put together What and How skills” (...)“I would put them together [what and how]” (...) It became very extensive [mindfulness module] compared to the others [skills] that had less time”. [therapist n°3]*

*“But it didn't seem to me that in the session we were going to run out of time, like this is too long [to teach], or that we have to drag it out by force (...) not at all. In other words, it felt very natural, and the division seemed to me that corresponded to the time available for the session”. [therapist n°1]*

Regarding the interpersonal effectiveness skills, these were appreciated by some of the therapists since they connected with the most evident needs of the patients, so they would even add two other mindfulness skills, GIVE and FAST.

*“I also like the interpersonal ones a lot because, in general, it is the main complaint of the patients. So, if we can help them resolve their daily relationship with their mothers or partners, most examples are*

*always interpersonal rather than with themselves. If you ask me, I would add to the other two, GIVE and FAST(...) the DEAR MAN is essential, I wouldn't take it out". [therapist n°2]<sup>2</sup>*

There were also some remarks about the order of skills. One of the therapists pointed out that it had been quite abrupt to go directly from mindfulness skills to radical acceptance, without first teaching crisis survival skills, from the distress tolerance module, as is done in the standard version.

*"Because we went from Mindfulness to Radical Acceptance. So, that transfer was kind of rough, as well as difficult, because we went from a mindfulness thing, and, without thinking yet of making a change, we were already talking about accepting". [therapist n°2]*

Concerning the fact that there was no mindfulness skills module previous to all DBT modules, but only at the beginning, one of the therapists reported that they did not observe any difficulty in that the emotional regulation and interpersonal effectiveness module were not preceded by a mindfulness module, as in the standard version. They even considered that starting with any other modules would be more beneficial before teaching mindfulness.

*"I felt that it did not [affect entering the group without previously having a mindfulness module]. Even, it could have been beneficial because they started with skills of more daily use to advance then and understand the What and How skills with practice, so to speak". [therapist n°2]*

One of the therapists mentioned that it was difficult for her to teach What and How skills, but she believes that this difficulty would have been because the skill did not entirely make sense to her.

*"The What and How skills are difficult for me. I feel it isn't easy because I still do not integrate them. It is difficult for me to find the deep meaning that I assume it must have, but it is difficult for me to understand its relevance". [therapist n°3]*

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<sup>2</sup> "GIVE", "FAST" and "DEAR MAN" are acronyms of three skills from the DBT module of "Interpersonal Effectiveness". For more details see Linehan's Manual (2015).

In relation to the participation of patients in sessions, a pair of co-therapists highlighted that among the factors associated with greater incorporation of skills were punctuality, constant group attendance, and active session participation.

*“Among those [factors that improved patients’ capabilities] I noticed the most, there in the sessions, was setting examples, talking, arriving on time and attending more sessions in a row; I noticed that at the end, they could reflect and say they could use the skills. So that also makes me think that being able to attend all the sessions in a row, because the sessions talk to each other, and having that following, I believe that can be very useful. And yes, I noticed that those who were able to stay longer and follow them had more gain”. [therapist n°1]*

A pair of co-therapists said that it would have been ideal if all the patients had started the skills training group together simultaneously, as a close group instead of open.

*“I would have liked to have been able to start with the whole group of patients and have finished with the entire group. I feel that it would have favoured the cohesion among the patients.” [therapist n°3]*

### 3.4.3 3-week crisis survival skills group

3.4.3.a Duration of sessions: The most notable that therapists noticed was that a single hour for crisis survival skills training was insufficient, particularly in the third session. They reported that to achieve the objective, they had to pass the skills very quickly and in a highly hands-on way. Due to the above, they would have extended the group for at least 15 minutes.

*“It was always sort of vertiginous. I finally had to limit myself a lot. And even if I felt that something was unclear to someone, I could not stop myself. You had to keep on. So that was a challenge. It was all speedy. [therapist n°2]*

*“I would give 15 more minutes”. [therapist n°1]*

3.4.3.b Online format: The therapists indicated that she had no difficulties with the online format.

*“That it was online does not interfere”. [therapist n°1]*



3.4.3.c Skills training inside session The therapists considered that the skills chosen were fine and that, among them, the STOP skill would be the most effective and used by patients.

*“I saw that they [skills] did worked for them, that they did use them”  
(...) STOP is the star skill, STOP and TIPP<sup>3</sup>(...) Many patients told me the following week that it had been STOP the skill that worked for them”.*  
[therapist n°1]

The only difficulty they observed was that they could not review the homework assigned at the end of the third and last session, due to there they ended their participation in the crisis survival group.

*“I couldn't review the last three [skills] the following week because another group [of new patients] was starting”.* [therapist n°1]

#### 3.4.4 Check-in calls

Check-in calls were beneficial for patients, mainly for logistical aspects, such as answering questions and maintaining attendance. Regarding the motivational and environmental factors that interfered with attendance and participation, she stated that the check-in calls would have been instrumental in evaluating and identifying problems but only sometimes solving them. Additionally, it would have been helpful for some patients to assess skill use during the week.

*“The call itself was good, and I think it was important since the patient had only one day of group therapy. So, I thought it was good that apart from that [phone coaching], there was another instance where the patients linked that they were doing DBT and participating for some good reason”.* [therapist n°8]

*“It was also good to know why they were not going to therapy, whether because there was something interfering or it was simply the patient's motivation. The call to identify something [interfering with attendance] fulfilled the objective. But afterwards, it wasn't always achieved for me to intervene to improve that lack of motivation or improve what was interfering”.* [therapist n°8]

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<sup>3</sup> STOP and TIPP are acronyms of two skills from the DBT module of “Distress Tolerance”. For more details see Linehan’s Manual (2015).

*"I don't know how to say it. It was good that someone was there, like remembering and motivating. Only remember that this a good activity, being a cheerleader of all [patients], saying "come on, keep going!!" [therapist n°8]*

*"And the other thing I did was review the homework, I mean to check if they did it. Because they rarely did homework. I reminded them; however, I don't know if they then actually arrived with the homework done [to the group]". [therapist n°8]*

### 3.4.5 Phone coaching

Emergency calls or coaching calls aroused various reactions. Although extensively well-evaluated by the therapist in charge, at the beginning of the programme, it would have been more challenging to adapt herself to this intervention.

Phone coaching without being an individual therapist was a significant challenge for the therapist. At first, it was tough for her to do the intervention without knowing anything about the patient beforehand. For this reason, this condition forced the coach to extend the calls to learn more about the history of the patients and their current triggering events. In this sense, the therapist would consider it highly advantageous to have an individual instance before the start of the intervention to get to know the patient better.

*"Perhaps it was difficult for me at the beginning and throughout the call, but later I got to know the patient, and it became easier. In the beginning, it was challenging for me. (...) It was difficult for me to handle something without having any prior history. Not knowing anything, any context, or what led to this [maladaptive behaviours] was difficult for me. So, in the end, the coaching itself used to extended. [therapist n°8]*

*"I consider it difficult, maybe at first, but not impossible. I thought that if this is taken to the «real world», I would have liked or I would have felt better having another instance, to get to know better the patient, a little more. For instance, an individual meeting once [before starting the programme]". [therapist n°8]*

The availability time seemed appropriate to her, despite acknowledging that it might not be handy for patients since decompensations could occur outside office hours. But it could have been excessive and burdensome for a single coach to have continuous availability.

*“It was good. It was good for me. Because little by little, I started to feel more comfortable in the role of what I was doing. So, in the beginning, it was still difficult to accept it [restricted to office hours]”. [therapist n°8]*

At times she felt overloaded and found it helpful to use DBT skills for her well-being.

*“There was a week when I was not burnt but maybe about to be overwhelmed. (...) and I had to use many skills, my own skills, to be able to meet all the calls”. [therapist n°8]*

### 3.4.6 Consultation team meeting

All the therapists widely accepted the consultation team meeting in the programme as a valuable and effective intervention to maintain motivation and increase the capacities of the therapists.

*“It is evident how were fulfilled [functions of consultation meeting] (...) They [consultation meetings] were opportunities to learn very specific things that I keep from here, I have more skills as a therapist. And increase motivation, too, anyway. (...) we had the space to talk about it. I felt that we were listened to and understood and that they gave us some skills to get out of the situation”. [therapist n°4]*

In relation to the duration, according to the majority of group therapists, one hour was considered sufficient for the duration. However, the therapist in charge of carrying out the telephone interventions felt that she did not present everything she needed on several occasions due to a lack of time, especially during the programme's first weeks.

*“The consultation meeting was quite manageable, with one hour. We were like “done” versus what sometimes happens in a consultation meeting with many individual therapists who need to formulate much more or say much more”. [therapist n°2]*

Therapists considered a consultation team meeting exclusively for a skills training group-based programme without individual therapists was valid.

*Although in the consultation, when one treats patients individually, it is oneself who consults in the meeting, and one works on the difficulties*

*that one is having with the patient, I believe that it is also totally valid for the group therapists". [therapist n°4]*

The participation of a senior supervisor every two weeks was also highly well evaluated as a strategy to improve skills. Likewise, for the same supervisor, it was a challenge to generate this effect of empowering therapists while dialectically balancing delivering solutions and letting the therapists themselves reach the synthesis. At the same time, the fact that there was no supervisor every two weeks forced the therapists to solve the consulting questions by themselves.

*"I thought it was cool that he wasn't there [in all the meetings] (...) because it also allowed us to get by, and that felt good. I liked that, a bit of feeling also that independence, with his company. So, that format every other 15 or every other session seems fine to me". [therapist n°1]*

The therapist in charge of the telephone coaching was the only team member who presented difficulties in this instance. Despite she evaluated the consultation team meeting favourably. Sometimes she was unsure what to do with the information obtained from the calls, whether she should present them or not.

*"Sometimes I didn't know what to do with the information. Most of the time, I remained with the feeling that I couldn't tell or say what I had to say because of the time. (...) I was receiving information [from patients in emergency calls and check-in], and I didn't know what to do with it". [therapist n°8]*

### 3.4.7 Other aspects of programme

3.4.7.a Handouts book: The group therapists consider it helpful to have provided a manual for patients to motivate them to participate in the programme and facilitate participation in the skills training group.

*"It was more comfortable because we were online, and sometimes it was difficult to review on the same [the handouts in the electronic device] (...) it was much easier for them to go with the book while keeping their attention". [therapist n°2]*

3.4.7.b Cultural and language differences Despite speaking the same language, one of the DBT group therapists from Colombia observed minor difficulties in carrying out the skills training group concerning cultural differences, particularly in idioms used exclusively in Chile.

*“In the skills group, I did notice [the cultural difference] sometimes as a difficulty to generate such closeness with the patients, because I perceived myself as a little more outside of how the relationship is [in Chile] (...) the cultural thing was a challenge for me, and this of being able to use some phrase to make it clear, for example”.* [therapist n°1]

### **3.5 Discussion**

This study explored the feasibility from the perspective of therapists of a psychotherapeutic treatment based on a DBT skills training group (DBT-ST), enhanced by telephone interventions and psychoeducation, for patients with borderline personality disorder in the public health system in Chile. DBT-ST programmes have proven to be effective in reducing the manifestations of BPD; however, their feasibility in Chile had not been studied before, and less so in this enhanced version. Furthermore, enhancing this DBT-ST through telephone interventions and psychoeducation sought to close the gap in some of the DBT functions, particularly improving motivation and generalization of skills.

Although the results of this feasibility study cannot be generalized to every context or clinical population, they correspond to a first and promising step towards adapting an evidence-based psychotherapeutic intervention for borderline personality disorder in the public health setting in Chile. Furthermore, the therapist's experience in this study shows that this enhanced 13-week DBT-ST programme is feasible to implement in the Chilean public health service; however, it would require certain modifications to achieve an adequate intervention delivery.

The main concerns observed were related to the duration of the skills training sessions. On the other hand, the most evident challenges arose concerning the online format and the scope of the telephone interventions. And finally, the therapists found the major strength in the consulting team meeting.

Regarding the duration, except for one of the therapists, all agreed that 1.5 hours in the skills training group and 1 hour in the crisis survival skills group were insufficient to carry out the skills training properly. This view is not surprising considering that most known DBT-

ST programmes, as seen in Chapter 2, are 2 hours long. Likewise, Marsha Linehan has pointed out that group sessions shorter than that would be insufficient for patients with severe BPD. It was also quite evident that this restriction in duration required the therapists to adapt in the way of carrying out the training group, and to do it out in a more practical and faster way, without having been previously agreed in that way. We do not know if this adaptation impacted the objective of increasing patients' capacities. Still, it is an observation that should be considered when implementing programmes of this nature.

Regarding the online format, the COVID-19 pandemic context required this adaptation worldwide. The Hospital Dr. Sótero del Río Hospital was not oblivious to this need; otherwise, it would have been impossible to carry out the therapy. The literature accumulated in the two years of the pandemic regarding this format has indicated that it is accessible, acceptable, safe, and effective as face-to-face delivery (Lakeman, 2022). While we do not yet know patients' experiences in this particular study, in several respects, therapists identified several barriers or challenges that were not used to see in onsite versions and could interfere with skills training. The main challenge is precise with one of the DBT mindfulness skills, which are the "What skill" of "participate" and the "How skills" "one-mindfully". Although the online modality allows access to therapy for patients in remote areas or with mobility difficulties, it presents a new dialectical tension, in our opinion, that of being effective in the intervention versus increasing access. They are also aspects that must be considered if the intention is to maintain the online mode.

Add-on phone interventions, check-in calls and crisis coaching are poorly explored components in an DBT-ST programme. Until our knowledge in the review in chapter 2, no programme would have incorporated check-in calls, and only 28,9% would have included the option of telephone coaching. Both interventions were incorporated to enhance DBT functions by generalising skills with coaching and addressing motivational or logistical interference with check-in calls. According to the therapist in charge, both interventions would have been helpful for patients and feasible to implement. Some observations worth remarking on, the office hour availability would have allowed keeping the therapist motivated, and the check-in calls would have mainly fulfilled a cheerleading function and identified interfering factors with assistance; however, it was not always possible to solve them. Something interesting that had not been foreseen was the possibility of using check-in calls to

review skills during the week, which would collaborate with the function of strengthening and generalising skills.

One of the most valuable findings of this study is found in the therapists' perception and experience of the consultation team meeting, as well as the regular participation of a supervisor in it. Therapists broadly agreed on the impact on motivation and clinical skills generated by this instance, even for only one hour. It is known that treating patients with borderline personality disorder can lead to burnout, and, according to Marsha Linehan, having a consulting team meeting is essential for working with these patients (Linehan, 1993, p.108).

In conclusion, according to the therapists, a 13-week online DBT-ST programme, enhanced by telephone interventions, is feasible to implement. However, adapting some aspects further, such as the duration of skills training sessions, is advisable.

### **3.6 Summary**

This chapter was a feasibility study from DBT therapists' perspective on an online enhanced 13-week DBT-ST programme implemented at a public hospital in a low-income area of Santiago de Chile. The study used a framework analysis of Interviews to therapists and concluded that the intervention was feasible; however, some aspects of the programme that could improve were spotted, such as those related to group duration and online format.

## Chapter 4 – Synthesis and Overarching Analysis

This fourth and last chapter consists of a narrative synthesis of the findings in the Scoping review and feasibility study; and, after considering the epidemiology of BPD and the situation of public mental health provision in Chile, it presents recommendations for further implementations of DBT-ST programmes in the Chilean public health system.

Chapter 1 reviewed the nature of borderline personality disorder. Although not completely exhaustive, it exposed the psychopathology and clinical magnitude of BPD and its “burden of disease” to show that it corresponds to a public health problem like many other psychiatric disorders, such as bipolar disorder or schizophrenia. The Chapter also briefly reviewed DBT therapy as the psychosocial intervention with the most evidence for treating this illness. Furthermore, it tried to show that the intervention offers sufficient flexibility to be adapted in the public health context where there are extensive barriers and restrictions for implementing evidence-based psychological interventions. Then, also shortly, the Chapter exposed the situation in Chile, the state-of-the-art regarding the epidemiology of borderline personality disorder and its management at the national level.

The Chilean situation deserves special mention in this conclusive section. Although Chile is one of the countries in the region with the highest prevalence of psychiatric pathology and suicide (PAHO, 2021) and, in this sense, is one of the countries with the worst mental health status. Unfortunately, this problem has not been accompanied by adequate development in the investment and provision of mental health services (Vicente, 2012). This situation could be explained since no prevalence study in the community has included BPD. The only sizeable epidemiological study at the community level, the “Chilean Study of Psychiatric Prevalence” (ECPD from Spanish “Estudio Chileno de Prevalencia Psiquiátrica”), was carried out in the 90s and only included antisocial personality disorder, along with other psychiatric disorders (anxiety disorders, depression, bipolar disorder, schizophrenia, alcohol and substance use, among others) (Vicente, 2002). This study preceded the development of public health policies at a national level, like the AUGE programme, for other mental health problems, such as depression, schizophrenia, alcohol and drug use disorders from 2006, and subsequently, bipolar disorder from 2013. However, to date, no progress has been observed in developing programmes or guidelines for BPD, which is not surprising, partly due to this lack of knowledge about its epidemiology and impact. Similarly, the PAHO’s study “Burden of



Mental Disorders in the Region of the Americas” (2018) openly did not include BPD among mental disorders in its analysis. Finally, this invisibility of the problem reproduces discrimination and structural stigma at multiple levels towards BPD (Klein, 2022). This situation in Chile and Latin America contrasts notably with the case of Australia, known for the development of public policies and interventions oriented toward BPD. This country already recognized the specific disease burden of BPD in 2005 (Victoria, 2005) and revealed the need for greater awareness and treatment through two important national documents (Mental Health Council of Australia, 2005; Commonwealth of Australia, 2006).

It is urgent to advance in Chile in evidence-based psychosocial interventions to treat BPD and its comorbidities. Although international information seems minimally sufficient to establish the need for a national-level intervention, it is also necessary to increase knowledge on the epidemiology and course of this disease in Chile. Regarding the need for evidence-based interventions, the flexibility of DBT and its modular nature allows adapted implementations, to go forward, despite the Chilean public system’s budget and administrative and personnel restrictions. In this sense, the initiative that the Psychiatry and Mental Health Service at Hospital Dr. Sótero del Río (HSR) in Santiago de Chile carries out is highly valuable. The work of the DBT programme at HSR is remarkable since it provides care to a large population in a low-income area, but also for its role in spreading an excellent example to the rest of the country.

According to FONASA statistics, the outpatient clinic of the Psychiatry and Mental Health Service of HSR has a catchment population of 116,000 people over 15 years old, corresponding to those registered in the three geographically most close primary health centres. Considering international epidemiological studies, with a BPD community prevalence of 1.8%, the HSR should take care of 2,088 patients. However, since BPD presents a continuum of severity, by focusing on the most severe group, which is the one that has attempted to commit suicide anytime in life, that could be 30% (Grilo, 2021), the assigned population of severe BPD patients would narrow to 626 patients in the catchment area. Anyways, this number of seriously ill patients dramatically trespasses the clinical capacity of the outpatient clinic, so it is more than reasonable to opt for a shorter and less intense intervention, such as DBT-ST, to respond to the demand for care. It will be a further challenge for the institution’s authorities to staff the service with enough trained personnel to close the gaps, but in the meantime, a DBT-ST programme seems reasonable.

The DBT Unit at Hospital Dr. Sótero del Río (HSR) started in 2016 with an inpatient programme (Correa, 2018). Since then, it has gradually expanded by incorporating two DBT-ST programmes for adults and both inpatient and outpatient DBT-A (adolescents) programmes. However, all these programmes have been almost entirely based on DBT-ST, without individual interventions. The adaptations have been adjusted to the possibilities and opportunities given at each time, depending on the time availability, training of professionals, willingness of leader, etc. So, the adaptation and implementation of DBT at HSR have yet to be fully guided by the state-of-the-art, that is, what the literature suggests. For this reason, the need to know both how DBT-ST has been implemented in different parts of the world and the views of therapists of the current programme. Both needs were tackled in Chapter 2 and Chapter 3, a Scoping Review of how DBT-ST has been implemented, and a feasibility study through Interviews to therapists.

Regarding the Scoping Review, since the DBT adaptation is the final goal, it was especially desirable to have the DBT functions in mind for its accomplishment, as has already been reviewed in specialized texts (Koerner, 2021). Therefore, this author recommends the teams consider DBT functions and their relationship with DBT modes. Accordingly, this Scoping review sought to be informed by this guide to know which DBT function was seeking each of the modifications of reviewed DBT-ST programmes. Of course, it is impossible to know if these modifications (e.g., entrance interviews, coaching restricted hours, etc.) finally achieved these functions. Still, it is helpful for those who want to adapt and implement their programmes in adverse and restricted settings.

One of the first things that the Scoping Review confirms is the vast extension of this intervention worldwide and the great variety in its adaptation. This significant variability (extension of the programme, duration of sessions, choice of skills, phone coaching, and other strategies to fulfil DBT functions.) shows once again the flexibility and adaptability of DBT. However, it opens up a more significant challenge: Up to what point do modifications of each programme remain inside principles of therapy and adherence? And What minimal “dosage” of DBT is still sufficient to keep effectiveness? Needless to say, the question about “dosage” to keep effectiveness is subordinated to the therapeutic objective. This required “dosage” could vary depending on the sought clinical aim, for instance, to reduce self-injurious behaviours, to increase functionality, or to reduce identity disturbance.

There is much to point out regarding the “dosage” of the intervention. Unfortunately, the meaning of “dosage” in psychotherapy is not entirely clarified; some authors operationalise it in terms of the number and length of sessions (Spielmans, 2018), or number of sessions, treatment intensity or treatment duration (Kool, 2018). Similarly, the dosage is considered a potential moderator in Psychotherapy (Spielmans, 2018). In the case of DBT, since early, we knew that only a skills training group could be effective as an intervention compared to the treatment-as-usual, waiting list or other therapy; the first RCT included in the Scoping Review in Chapter 2 was Soler in 2005. But it was only in 2015 that Marsha Linehan published an RCT that studied head-to-head standard DBT versus DBT-ST and found that both were equally superior to only individual DBT therapy for NSSI, depression, and anxiety. Up to now, that study is the only RCT of standard DBT versus a DBT-ST. Likewise, regarding DBT dosage, just in 2022 McMain published a non-inferiority RCT of standard DBT 12 months versus 6 months showing similar effects in reducing NSSI. The question would be whether a DBT-ST, briefer than 12 months, for instance, 3 or 6 months, could be equally effective than a same-long standard DBT.

Given that it is impossible to know if each of the new modifications in DBT-ST fulfils the DBT functions, one indirect approach to discover it that seems reasonable is obtaining the experience of the therapists who develop the intervention. That is why a feasibility study of the intervention from the therapist's views through qualitative methodology was proposed for chapter 3. In this case, the experience of the intervention is already running in HSR, but it was possible to enhance it with some additional activities in the context of a Chilean research grant from the *Instituto Milenio para la Investigación en Depresión y Personalidad (MIDAP)*. These further modifications, mentioned in Chapter 3, consisted of adding: 1) 3-week introduction and psychoeducation group, 2) 3-week crisis survival skills training group, 3) weekly check-in calls, and 4) emergency phone calls. This thesis student, the programme coordinator, made this new adaptation before carrying out the scoping review and the feasibility study, which had pros and cons. On the Cons, the information obtained from these two studies (chapters 2 and 3), it could have been advantageous to perform the adaptations that will be proposed later. However, the coordinator already had experience in the local system and knowledge of the international literature enough to conduct modifications; so, we now have sufficient information to even improve the already "enhanced" version, which means a step forward in

the journey to develop a feasibility and effective treatment for BPD in the Chilean public health system.

#### **4.1 Clinical Recommendations for implementing DBT-ST in Chilean public health context**

With the information obtained from the Scoping review in Chap 2 and the feasibility study in Chapter 3, we will collect recommendations, the "top tips", for implementing a DBT-ST, with particular emphasis on the Chilean public system. These recommendations are restricted to the clinical aspects of the intervention, not to the implementation or evaluation processes that are beyond this thesis's scope. These recommendations include a new slight modified 13-week DBT skills schedule.

This is a multi-module programme composed of three group interventions: a major 13-week DBT skills training group, plus a 3-week DBT crisis survival skills training group and a 3-week introduction & psychoeducation group at the beginning of the programme, enhanced by two other phone interventions: check-in calls and emergency phone coaching. The multi-module nature of the programme allows it, eventually, to be implemented entirely but gradually, that is, in phases, or partially implemented. Another solution is to customise the intervention according to severity; while some patients (or relatives) may join only psychoeducation or crisis survival group, some may receive the "whole-pack" of the intervention. Implementation recommendations and adaptations are stated below.

##### *4.1.1 General principles*

4.1.1a Programme Length: A 13-week long programme corresponds to the briefest DBT-ST intervention that has shown effectiveness for BPD by an RCT in a clinical setting. Also, it properly fits with the human resources requirements established in Chile's national guidelines for secondary-level mental health centres or, literally, "*Modelo de Gestión Centro de Salud Mental Comunitaria*"<sup>4</sup> (Ministerio de Salud de Chile, 2018).

4.1.1b Therapists: Considering the international experience obtained in Scoping Review and Chile's national guidelines: Psychologists, trained in DBT through at least a 10-day intensive training or equivalent should lead the 13-week skills training group as co-therapists.

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<sup>4</sup> Translated to English: "Model of management for community mental health centres"

In addition, psychiatrists, social workers, occupational therapists, or mental health nurses with the same level of DBT training as psychologists could also lead the introduction & psychoeducation and crisis survival skills group.

4.1.1c Format: Face-to-face would be the ideal format, to facilitate attention and skills acquisition; however, it is also feasible to deliver it online if authorities consider that distance from the centre, access limitations, or mobility problems are preventing patient attendance. In this case, it is recommendable to ensure good connectivity.

#### 4.1.2 *Group interventions*

4.1.2.a Session duration: Skills training sessions should last no less than 2 hrs to have enough time to properly teach and practice all required skills, but no more than 2.5 hrs, otherwise patients' motivation and attendance could decrease. However, to optimise resources and not burden patients, sessions could vary among the type of them. For instance, the initial 3-week crisis survival skills group could involve only 1.5 or 2 hrs, and the 13-week skills training group 2.0 or 2.5 hrs. The 3-week introduction & psychoeducation group could last between 1 and 1.5 hrs since it does not require homework review nor practice in session.

Skills: Appendix 8 details the skills and content for groups that we recommend. The same three Core Mindfulness skills were condensed into two sessions at the beginning of the schedule; Interpersonal effectiveness skills were widened, incorporating GIVE and FAST involving three sessions instead of two. In the Emotion regulation module, the "ER6 Understanding and labelling emotions" session now does not include "ways to describe emotions". Skills and contents of Introduction & Psychoeducation and Crisis survival were not modified.

4.1.2.b Handout and Worksheet Manual It is highly recommendable that patients receive handouts and worksheet printed in advance.

#### 4.1.3 *Phone interventions*

4.1.3.a Check-in calls Weekly calls should be performed by a mental health nurse but could also be assigned to psychologists, social workers, and occupational therapists. They should take no more than 15 minutes and be ideally previously arranged for the day and time. Check-in calls should primarily address barriers that keep out of attendance or involvement in activities and homework, but also, if possible, it could be an opportunity to reinforce the use of skills inter-session or even generalise if were the case. The therapist responsible for this

intervention must be updated on the schedule, attendance, and homework programme, and should ideally know the patient's individual formulation if that were the case.

4.1.3.b Emergency phone coaching: Ideally, this intervention should be in charge of the mental health nurse or social workers of the centre, because their roles inside the team are generally more flexible than the rest, and they spend less time in long individual sessions (e.g. psychotherapy or psychiatry controls). Something that could help to avoid burnout would be to spread responsibilities and split time "on call", either by days or weeks, or blocks of the day. The therapist in charge should know the patient's formulation, if that were the case. The first problem to assess and manage in calls is safety or suicidal risk, and then if possible and necessary, the use of skills in crisis or challenging situations. Regarding time availability, although the "office hours" regime does not cover all the moments when the patients are at risk, before the lack of enough research on the field, it is reasonable to offer it if possible. At the same time, patients should be encouraged to call the public "hotline" called "*Salud Responde*"<sup>5</sup> in case they present emotional or suicidal crises during out-of-office hours or weekends.

#### *4.1.4 Consultation team meeting*

This weekly meeting should be considered compulsory for the programme since working with BPD patients challenges teams and puts them at risk of burnout, stigmatising and getting hostile toward patients. One hour meeting seems enough in the case of an only group programme, however, if phone activities are included it should be considered to extend the meeting to 1.5hrs. In addition, it is very recommendable that the team invite a senior supervisor monthly or fortnightly.

#### *4.1.5 Additional interventions*

The following interventions should be considered to enhance some DBT functions of the programme, considering that they are compatible with Chile's national guidelines for secondary-level mental centres:

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<sup>5</sup> A close translation to English: "Health Answers".

#### 4.1.5.a To Improve patients' motivation

- Individual intake interviews, ideally by two members of the team.

#### 4.1.5.b To Interventions to improve patients' capabilities

- Diary card
- Homework workshops

#### 4.1.5.c To improve therapist's motivation and capabilities

- Training days for team.

#### 4.1.5.d To structure environment

- Case management.

## **4.2 Limitations**

For this thesis, we were could not display clinical data from patients, both quantitative and qualitative results, since ethics approval from Bangor University was granted after the start of the intervention. However, the MIDAP project did obtain permission from the local ethic committee in Chile on time, so we expect to present those results in another place. On the other hand, It would have been ideal to have included patients' experiences to elaborate recommendations. Additionally, the feasibility study in chapter 3 did not include one of the components of the intervention, the introduction and psychoeducation group, because this thesis student led that intervention. We hope these clinical recommendations work as a first step in the journey to implement evidence-based psychotherapy for BPD in Chile. This is a long way for the mental health system in the country,

## **4.3 Further research horizon and final personal comments**

After visiting several topics related to BPD and DBT adaptations all along this piece of research, we can collect several blind spots in knowledge about BPD, and its management, particularly in Chile. In this regard, here several lines of research could be proposed. At least the main three would be the following:

Firstly, one of these lines would be the epidemiology and burden of BPD in Chile. To continue implementing complex interventions in mental health is vital to know about the course and impact of mental disorders in the community. Unfortunately, although there is

data from international studies, we don't know anything about BPD in Chile, and we should not assume that the behaviour of a disease is the same in places so different.

Secondly, after this first approach, it seems mandatory to assess the effectiveness and cost-effectiveness of a DBT-ST in the Chilean public system (informed by the recommendations that emerged in this thesis). In simple, now that we know it is feasible, we need to see if it is effective. We do need to learn more about evidence-based interventions for BPD in the public health system in Chile.

Thirdly, but not less importantly, we should know more about the science of implementation concerning DBT in public systems. DBT is a complex intervention, and as such, implementing it is not straight and simple to achieve, even less in public system in developing countries.

Finally, as a corollary, this thesis project embedded in the Master by research of the School of Medical and Health Science at Bangor University emerges after close to 15 months of work. Although it looks like only some things appear on these pages, there are uncountable hours of work. Many hours at a desk, studying, writing (in another language, which has been a considerable challenge), supervising, and meetings with people in Chile. Online meetings with therapists, centre directors, patients, colleagues, and other researchers. After this large enterprise, I confirm my goal, the one for which I decided to come to Bangor University to study, of doing my best to make this treatment effective and accessible to BPD patients in vulnerable conditions of my country.



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## Appendix 1: DSM-5-TR criteria for Borderline Personality Disorder

### DSM-5-TR Diagnostic Criteria Borderline Personality Disorder

A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

1. Frantic efforts to avoid real or imagined abandonment. (Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.)
2. A pattern of unstable and intense interpersonal relationships characterised by alternating between extremes of idealisation and devaluation.
3. Identity disturbance: markedly and persistently unstable self-image or sense of self.
4. Impulsivity in at least two areas that are potentially self-damaging (e.g. spending, sex, substance abuse, reckless driving, binge eating). (Note: Do not include suicidal or self-mutilating behaviour covered in Criterion 5.)
5. Recurrent suicidal behaviour, gestures, or threats, or self-mutilating behaviour.
6. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
7. Chronic feelings of emptiness.
8. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
9. Transient, stress-related paranoid ideation or severe dissociative symptoms.

Adapted from America Psychiatry Association (2013)

## Appendix 2: Scoping review data-charting form

EVIDENCE SOURCE DETAILS	
First Author (lastname, name)	
Publication Year	
Title	
Type of Source (journal, thesis)	
Name of Source (name journal, thesis university)	
Study design	
Country of intervention	

PATIENTS CHARACTERISTICS	
Main Diagnosis	"1": Only BPD; "2": BPD spectrum included (emotion dysregulation, subsyndromatic BPD, suicidal); "DNA": Data not available
Which assessment instrument was used for diagnosis confirmation?	"In case ""yes"": detail, in case ""no"": N/A"
Any special observation about participants or setting?	

### DBT PROGRAM CHARACTERISTICS (structured by DBT functions)

1) Function Enhancing patients' capabilities	
Did the study describe week frequency of skills training group sessions?	"0": no; "1": yes
Number of sessions per week	In case "yes": number of sessions per week, in case "no": N/A
Did the study describe skills training sessions duration?	"0": no; "1": yes
Sessions duration	In case "yes": hours, in case "no": N/A
Did the study describe the DBT Skills modules incorporated in the program?	"0": no; "1": yes
DBT modules	In case "yes", detail the incorporated skills modules: MF, DT, ER, IE
Did the study describe which specific DBT skills were taught in the program?	"0": no; "1": yes
Skills details	In case "yes": detail skills (free text); in case "no": N/A
Did the program incorporate structured BPD Psychoeducation?	"0": no; "1": yes ; "DNA": data not available
Number of Psychoeducation Sessions	In case "yes": number of sessions, In case "no" or "data not available ": N/A
Psychoeducation topics	Detail psychoeducation topics if were published (free text)
Was there any <u>DBT-informed intervention</u> to enhance patients capability (e.g. diary card)	if yes: describe (free text), if not: N/A
Other observations	if yes: describe (free text), if not: N/A

2) Function Improving patients' motivation	
Was there any DBT-informed intervention to improve patients' motivation? (e.g. intake individual interview, check-in calls)	if yes: describe (free text), if not: N/A
Other observations	if yes: describe (free text), if not: N/A

3) Function Ensuring generalization	
Did the program incorporate DBT phone coaching for skills generalization?	"0": no; "1": yes; "DNA": data not available
Time availability of Phone Coaching	In case "yes": detail type of availability (e.g 24/7 or office time; all days or working days) in case "no" or "data not available": N/A
Phone coaching staff	In case "yes": detail who perform coaching (e.g: one or more therapists, therapist profession), in case "no" or "data not available": N/A
Did the program offer another type of phone assistance?	"0": no; "1" yes ; "DNA": data not available
Type of phone assistance	In case "yes": detail type assistance (e.g hot-line) in case "no" or "data not available": N/A
Was there any DBT-informed intervention to ensure generalization?	if yes: describe (free text), if not: N/A
Other observations	if yes: describe (free text), if not: N/A

4) Enhancing therapists' skills and motivations		
Did the program incorporate DBT consultation meeting (CM) for therapists?	"0": no; "1" yes ; "DNA": data not available	
Frequency of CM	In case "yes": "W": weekly; "F": fortnightly; "M": monthly in case "no" or "data not available": DNA	
Duration of CM	In case "yes": hours in case "no" or "data not available": DNA	
Did the program offer another type of meeting for therapists (non DBT CM)?	"0": no; "1" yes ; "DNA": data not available	
Did the program offer supervision for therapists (non DBT CM)?	"0": no; "1" yes ; "DNA": data not available	
Was there any DBT-informed intervention to enhance therapists' skills and motivation?	if yes: describe (free text), if not: N/A	
Other observations	if yes: describe (free text), if not: N/A	

5) Function Structuring the environment		
Did the study describe the whole program length?	"0": no / "1": yes	
In case "yes", what was the whole program length?	number of weeks (if described in months: one month = 4 weeks)	
Did the program have a defined missing rule?	"0": no; "1" yes ; "DNA": data not available	
Number of sessions in missing rule	In case "yes": number of sessions, in case "no" or "data not available ": N/A	
Characteristic of missing rule	In case "yes": "A": accumulated; "C": consecutive In case "no" or "data not available ": N/A	
Type of program	"SA": Stand-alone; "AO": Add-on; "DNA": data not available	
At what point did patients incorporate to program?	"1": Beginning program only; "2": Beginning module; "3" anytime; "DNA": data not available	
Were there any structured case management intervention?	"0": no; "1": yes; "DNA": Data no available	
Type of case management	In case "yes", detail intervention (free text); in case "no" or "data not available": N/A	
Did the study describe the therapists' profession?	"1" yes ; "0": no "DNA": data not available	
therapists' professional degree	In case "yes": "MD": Psychiatrist; "Psy": Psychologist "Nrs": Nurse Social; "SW": Social Worker; "OT": Occupational therapist; "Res": Psychiatry resident; "C" Counselor; "GP" General practitioner In case "no" or "data not available ": N/A	
Did the therapists receive DBT training?	"0": no; "1" yes ; "DNA": data not available	
Therapists DBT training	In case "yes": "0": no details; "1": 5-day foundational DBT training or equivalent; "2": 10-day intensive DBT training or equivalent In case "no" or "data not available ": DNA	
In case of non English speaking country, or a especial ethnic population, Were there any cultural adaptation of content and/or material? (2)	"0" no / "1" yes ; "DNA": data not available; "N/A": Not apply for study	
Was there any DBT-informed intervention to structure environment?	if yes: describe (free text), if not: N/A	
Other observations (e.g. group size)	if yes: describe (free text), if not: N/A	





## Appendix 4: Consent form for therapists

### Evaluation of a brief telehealth dialectical behaviour therapy skills training group for borderline personality disorder in a public service in Chile

#### CONSENT FORM for THERAPISTS

Participant ID Number: \_\_\_\_\_

Name of Investigators: Matías Correa-Ramírez

1. I confirm that I have read and understood the **STUDY INFORMATION SHEET** for the above study.
2. I have had the opportunity to discuss and ask questions about the study.
3. I understand that my participation is voluntary and that I am free to withdraw at any time. A decision to withdraw will not affect your statutory rights.
4. I agree to take part in by being interviewed for the above study.
5. I agree for my anonymised interview to be used (and audio recorded) for accurate analysis.
6. I agree to the use and reporting of direct anonymous quotations from my interview chat.

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Researcher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## **Appendix 5: Online enhanced DBT-ST programme details**

The intervention is based on a 13-week DBT skills training group; however, other activities were added to enlarge the DBT functions of this programme, two additional groups and two phone interventions for patients, and consultation team meeting for therapists. These six components started at the same week and were performed online by the application Zoom.

### **Therapists**

All group interventions were delivered by a couple of DBT therapists (psychologists and psychiatrists) trained either by a “10-day DBT intensive training” by DBT Iberoamerica or a 2 or 1-year DBT diploma degree. The Introduction & Psychoeducation group was in charge of the programme director and author. The 13-week DBT-ST and the 3-week crisis survival group were each delivered by a couple of DBT therapists. In the case of the 13-week DBT-ST, there were two groups in parallel on separate days and with different therapists. The phone coaching and check-in call were performed by a mental health nurse trained with a 2-year DBT diploma degree and with experience in an inpatient DBT programme. All in all, the team was composed by 8 professionals plus the supervisor.

### **Setting**

Outpatient setting in the Psychiatry and Mental Health Service which is at Hospital Dr. Sótero del Río (HSR) in Puente Alto, a low-income and vulnerable area in Santiago de Chile. The telehealth intervention will be delivered by the platform “Zoom” ([www.zoom.us](http://www.zoom.us)) which is installed in every computer at HSR.

### **Inclusion criteria**

1. Adults, age 18 years or more, with diagnosis of borderline personality disorder according to DSM-IV criteria
2. Receiving active psychiatric treatment in their respective outpatient service with a psychiatrist available to be contacted by the DBT team or the research team.

### **Exclusion criteria**

(These inclusion criteria are the same used by the routine DBT unit at HSR)

1. Psychotic disorders classified in ICD-10 (F20-F29).
2. Antisocial Personality Disorder according to DSM-IV.
3. Substance use disorder.
4. Problematic alcohol use or alcohol dependence
5. Bipolar Disorder in current manic or hypomanic episodes
6. Cognitive impairment or dementia.
7. Intellectual disability.
8. Unstable medical condition.

## Components of intervention

### 1) DBT skills training group

This 13-week group worked as a DBT standard skills training group, involving all its sections: (1) beginning mindfulness exercise, (2) review of homework practice since the last session, (3) presentation of new material, and (4) a "wind-down" closing. The aim was to improve patients' capabilities through four DBT modules. The crisis survival skills from the distress tolerance module were not included here because they were taught in a specific 3-week group (see below). Additionally, this programme fitted to the administrative guidelines for public community mental health centres in Chile that considers only one 3-month of group therapy for each patient. The skills were chosen partially following Soler's 13-week schedule included in Linehan's Manual (2015) (Appendix 6). Patients received a skills manual in Spanish Spiral-bound edition. Patients had only 13 weeks to complete the cycle and were not allowed to extend their participation if they did not attend any of the sessions, except in case of hospitalisation. The duration of sessions was 1.5 hrs.

### 2) Introduction & Psychoeducation group

The aim of this group was to introduce and orientate participants to the programme, as well as teaching about the nature of BPD and biosocial theory. This group sought to enhance motivation to start treatment. (Appendix 6). Length: First 3 weeks. The duration of sessions was 1 hour.

### 3) Survival Crisis skills training group

This group aimed to endow patients with new behavioural skills from the beginning of treatment to cope with suicidal and self-injuring urges and emotional crises. This group was open and ongoing (Appendix 6). The rationale is that the patients commonly referred to the programme during severe crises, and no therapists can teach crisis survival skills while waiting until the distress tolerance module begins, so the team observed the need to deliver these skills from the beginning. In order not to burden patients with too many hours a week, this group was shortened to just 60 minutes. Regarding the length, the cycle lasted three weeks, which was compulsory; afterwards, it continued in "drop-in" mode until the end of treatment, so the patients could join in case themselves or the clinical team considered it necessary to reinforce survival crisis. The duration of sessions was 1.5 hrs.

### 4) Check-in calls

This activity consisted of one weekly phone call scheduled with the patient for a determined day and time, the same for all weeks of treatment. This call aimed to address attendance-interfering problems, either motivational or logistical ones. There was not a predetermined call duration, but it was expected to last at most 20 minutes. These calls were in charge of a mental health nurse trained in DBT.

### 5) Phone DBT coaching

The phone coaching was meant to ensure the generalisation of DBT skills but with some adaptations that differed from standard DBT phone coaching. It was available only during office time, Monday to Friday, from 9am to 4pm and was delivered by only one DBT therapist. The phone calls were in charge of the mental health nurse that performed the check-in calls and were available during the 13 weeks of treatment.

## 6) Consultation team meeting

The consultation team meeting was held weekly for one hour, including all therapists. Additionally, a DBT trainer from Behavioral Tech supervised the meeting fortnightly. The sessions followed the standard structure of DBT consultation team meetings.

### **Intervention rules**

In the first session of the introduction and psychoeducation group, the patients were oriented and asked to follow these rules:

- Be punctual when connecting.
- Participate with the camera on and in a quiet and private place.
- Be sober, do not use substances during the programme nor in sessions.
- Show willingness to engage in sessions, participate and follow recommendations in both group sessions and calls.
- Respect therapists and other participants
- Keep Confidentiality about participants and contents of others' stories.
- Give their best to attend all sessions and respond check-in calls.
- Do not establish sentimental or camaraderie relationships between each other patients during the treatment period.
- Accept that in case of 3 consecutive missed sessions in the same group, the team will examine the continuity in treatment; after four successive absences, the patient will be withdrawn from the programme.
- Have a responsible carer aware of the treatment and available to be contacted in case of emergency.

Specific rules related to phone coaching:

- Follow "to the letter" all the instructions indicated by the nurse during the call.
- If the nurse does not respond to the patient immediately, do their best to use learned skills while waiting for the call-back.

## Appendix 6: Schedule and contents of group interventions of DBT-ST programme

Week	DBT Skills
	Mindfulness Skills
1	M1: Goals of Mindfulness Practice M2: Overview: core Mindfulness Skills M3: Wise Mind: States of Mind
2	M4: Taking Hold of Your Mind: "What" Skills
3	M5: Taking Hold of Your Mind: "How" Skills
	Distress Tolerance Skills - Reality Acceptance
4	DT10: Overview: reality acceptance Skills DT11: Radical acceptance DT11b: Practicing radical acceptance, Step by Step DT12: Turning the Mind
5	DT13: Willingness DT14: Half-Smiling and Willing Hands
	Emotion Regulation Skills
6	ER1: Goals of emotion regulation ER2: Overview: understanding and naming emotions ER3: What emotions Do for You ER4: What Makes it Hard to regulate Your emotions ER5: A Model for Describing emotions ER6: Ways to Describe emotions
7	ER7: Overview: changing emotional responses ER8: Checking the Facts
8	ER10: Opposite action ER11: Figuring out opposite actions
9	ER12: Problem Solving ER13: Reviewing opposite action and Problem Solving
10	ER14: Overview: reducing Vulnerability to emotion Mind ER15: Accumulating Positive emotions in the Short Term ER16: Pleasant events list
11	ER17: Accumulating Positive emotions in the long term ER18: Values and Priorities list
	Interpersonal Effectiveness Skills
12	IE1: Goals of interpersonal effectiveness IE2: Factors in the Way of interpersonal effectiveness
13	IE5: Guidelines for objective effectiveness: getting What You Want (Dear Man)

Week	Crisis Survival DBT Skills
1	DT1: Goals of Distress Tolerance DT2: Overview: crisis Survival Skills DT2: When to use crisis Survival Skills DT4: The STOP skills DT5: Pros and cons
2	DT6: Tip Skills: changing Your Body chemistry DT6a: using cold Water, Step by Step DT6b: Paired Muscle Relaxation, Step by Step
3	DT7: Distracting DT8: Self-Soothing DT9: improving the Moment

Week	Introduction & Psychoeducation group
1	Introduction and orientation: <ul style="list-style-type: none"> <li>- Welcoming to programme</li> <li>- Infusing hope and inviting to choose a goal along treatment.</li> <li>- Orientation to therapeutic objectives of treatment: Incorporating and generalisation of taught skills</li> <li>- Presenting programme components and their characteristics, including manual.</li> <li>- Explaining programme rules and their rationale</li> </ul>
2	Psychoeducation part 1: <ul style="list-style-type: none"> <li>- Emotion dysregulation</li> <li>- Borderline personality disorder symptoms</li> <li>- Psychiatric comorbidities</li> <li>- Onset and course</li> <li>- Basic epidemiology</li> </ul>
3	Psychoeducation part 2: <ul style="list-style-type: none"> <li>- Linehan's Biosocial theory</li> <li>- basic role of trauma in BPD development</li> <li>- basic neurobiology of BPD</li> <li>- final treatment commitment</li> </ul>

## **Appendix 7: Interviews to therapists' guide**

To all therapists

What did you think of the skills training group?

What did you think of the duration of the skills training group?

What do you think of the skills chosen for skills training?

Is there anything else you would like to mention about the skills training group?

What did you think of the crisis survival group?

What did you think of the duration of the crisis survival group?

What do you think of the skills chosen in the crisis survival group?

Is there anything else you would like to mention about the skills training group?

What did you think of the consultation team meeting?

What did you think of the duration of the consultation team meeting?

What do you think of the participation of a supervisor in the consultation team meeting?

Is there anything else you would like to mention about the consultation team meeting?

To nurse phone coach

What did you think of the check-in calls?

What did you think of the emergency phone coaching calls?

Is there anything else you'd like to mention about calls?

## Appendix 8: Recommended DBT schedule and contents

Module	Week	DBT Skills
<b>Mindfulness Skills</b>		
Wise Mind; Mindfulness "What" Skills	1	M1: Goals of Mindfulness Practice
		M2: Overview: core Mindfulness Skills
		M3: Wise Mind: States of Mind
		M4: Taking Hold of Your Mind: "What" Skills
Mindfulness "What" and "How" Skills	2	M4: Taking Hold of Your Mind: "What" Skills (cont.)
		M5: Taking Hold of Your Mind: "How" Skills
<b>Distress Tolerance Skills - Reality Acceptance</b>		
Reality Acceptance	3	DT10: Overview: reality acceptance Skills
		DT11: Radical acceptance
		DT11b: Practicing radical acceptance, Step by Step
		DT12: Turning the Mind
Willingness; Half-Smiling; Willing Hands	4	DT13: Willingness
		DT14: Half-Smiling and Willing Hands
<b>Emotion Regulation Skills</b>		
Understanding and Labeling Emotions	5	ER1: Goals of emotion regulation
		ER2: Overview: understanding and naming emotions
		ER3: What emotions Do for You
		ER4: What Makes it Hard to regulate Your emotions
		ER5: A Model for Describing emotions
Checking the Facts	6	ER7: Overview: changing emotional responses
		ER8: Checking the Facts
Opposite Action	7	ER10: Opposite action
		ER11: Figuring out opposite actions
Problem Solving	8	ER12: Problem Solving
		ER13: Reviewing opposite action and Problem Solving
Increasing Positive Experiences (Short-Term and Long-Term)	9	ER14: Overview: reducing Vulnerability to emotion Mind
		ER15: Accumulating Positive emotions in the Short Term
		ER16: Pleasant events list
	10	ER17: Accumulating Positive emotions in the long term
		ER18: Values and Priorities list
<b>Interpersonal Effectiveness Skills</b>		
Understanding Obstacles; Clarifying	11	IE1: Goals of interpersonal effectiveness
		IE2: Factors in the Way of interpersonal effectiveness
DEAR MAN	12	IE5: Guidelines for objective effectiveness: getting What You Want (DEAR MAN)
GIVE; FAST	13	IE6: guidelines for relationship effectiveness: keeping the relationship (GIVE)
		IE7: guidelines for Self-respect effectiveness: keeping respect for Yourself (FAST)



<b>Module</b>	<b>Week</b>	<b>Crisis Survival DBT Skills</b>
Crisis Survival; Pros and Cons	<b>1</b>	DT1: Goals of Distress Tolerance
		DT2: Overview: crisis Survival Skills
		DT2: When to use crisis Survival Skills
		DT4: The STOP skills
		DT5: Pros and cons
TIP skills	<b>2</b>	DT6: Tip Skills: changing Your Body chemistry
		DT6a: using cold Water, Step by Step
		DT6b: Paired Muscle Relaxation, Step by Step
Distracting; Self-Soothing; Improving the Moment	<b>3</b>	DT7: Distracting
		DT8: Self-Soothing
		DT9: improving the Moment