Treatment-Resistant Borderline Personality Disorder

Christian Jonathan Haverkampf

***Abstract*—Borderline Personality Disorder (BPD) is a common mental disorder associated with high rates of suicide, severe functional impairment, high rates of comorbid mental disorders, intensive use of treatment, and high costs to society. In recent years, research findings have contributed to an improved understanding and therapy of these difficult-to-treat patients.**

In most cases a combination treatment, at least in the early phase and in more severe cases, of medication and psychotherapy is helpful. On the psychotherapeutic side, a communication-focused approach often shows superior results in clinical practice. Helping the patient create greater awareness and insight into internal and external communication patterns usually leads to greater insight into needs, values and aspirations and change in the communication patterns so that they can be met and the quality of life increased.

***Index Terms*—Borderline Personality Disorder, BPD, treatment resistant, diagnosis, treatment, medication, psychotherapy, psychiatry**

I. Introduction

BORDERLINE PERSONALITY DISORDER is a common mental disorder associated with high rates of suicide, severe functional impairment, high rates of comorbid mental disorders, intensive use of treatment, and high costs to society. Borderline personality disorder is associated with severe and stable functional impairment and characterized by a high risk of suicide. Patients have more functional impairment and higher use of treatment than do patients with major depressive disorder. The mortality rate from suicide is around one of ten. In recent years, research findings have contributed to an improved understanding and therapy of these difficult-to-treat patients.

Borderline personality disorder (BPD) is a debilitating mental disorder characterized by severe instability in affect, identity, interpersonal relationships, and behavioral dysregulation. Alongside a vast array of comorbidities, parasuicide (i.e. nonlethal intentional self-harming behaviors) and suicide are commonly associated problems. More than 75% of patients with BPD are believed to engage in deliberate self-harm. Suicide rates are estimated to be between 8% and 10%, almost 50 times higher than in the general population. Borderline personality disorder is the most common personality disorder in clinical populations, associated with intensive use of mental health services even in the absence of a full diagnosis. Functional impairment is considerable compared with other personality disorders and is enduring in the absence of a change in personality psychopathology.

Jonathan Haverkampf, M.D. works in private practice for psychotherapy and psychiatric medicine in Dublin, Ireland. The author can be reached by email at jonathanhaverkampf@gmail.com or on jonathanhaverkampf.ie.

II. Epidemiology

Statistics on the prevalence of borderline personality disorder vary widely, mostly between one in twenty and one in two hundred. Several problems, some of them conceptual in nature, some more practical, contribute to this enormous range. One reason may be that many individuals, particularly those with less severe form of BPD, never attend treatment, while another problem is the difficulty in defining where the proper diagnosis begins. As is true for most other psychiatric conditions, a diagnosis is not derived from a commonly accepted etiology, but induced from a bundle of symptoms, which are often nether clearly defined in their nature nor in their intensity.

There is no evidence that borderline personality disorder is more common in women. However, it may manifest differently in some symptoms in men and women. In clinical populations, borderline personality disorder is the most common personality disorder, with a prevalence of one out of then psychiatric outpatients and around one out of five inpatients. In a study of a non-clinical sample, around six percent could be diagnosed with borderline personality disorder. In primary care, the prevalence reported for borderline personality disorder was four-times higher than that in the general population, suggesting that individuals with this disorder are frequent users of general medical care.

III. Diagnosis

The symptom dimensions of BPD are as follows:

- Affective dysregulation
- Impulsive-behavioral dyscontrol
- Cognitive-perceptual distortions

According to the current psychiatric classification system in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), borderline personality disorder is characterized by a pervasive pattern of instability in interpersonal relationships, identity, impulsivity, and affect. For a diagnosis of borderline personality disorder, at least five of nine criteria must be met, which has been retained in the DSM-V. Suicidal tendency or self-injury and unstable relationships seem to be the most predictive features.

The DSM-5 defines the main features of BPD as a pervasive pattern of instability in interpersonal relationships, self-image, and affect, as well as markedly impulsive behavior. In addition, the DSM-5 proposes alternative diagnostic criteria for borderline personality disorder in section III, "Alternative DSM-5 Model for Personality Disorders". These alternative criteria are based on trait research and include specifying at least four of seven maladaptive traits.

The symptoms of BPD can be grouped into five main areas of dysregulation (Linehan): emotions, behavior, interpersonal relationships, sense of self, and cognition. Classically, BPD is associated with emotion dysregulation and affective lability internally and in interactions with others. The emotions that pose a challenge can include anger, sadness (fear of abandonment), helplessness and others. These dynamics then often lead to chaotic relationships and other unstable situations, particularly where there is an interpersonal aspect to them.

Unhelpful internal communication patterns and disturbed internal communication processes contribute to an unstable sense of self and identity issues. However, this is the result not of a loss of control or dysregulation in the stricter sense, but a lack of the right information in the right place at the right time.

Suicidal behavior, impulsive behavior, cognitive phenomena, including dissociative responses and narrow, rigid thinking, are all a result of unhelpful and maladaptive communication patterns, which make the world and the own sense of self seem more fragile and uncertain. Meaningful information creates a sense of certainty and security in the world, a lack of it a feeling of chaos.

IV. Course

Although more stable than major depressive disorder, borderline personality disorder seems to be less stable over time than expected for personality disorders. High rates of remission were reported in both short-term and long-term follow-up studies. The rate of remission does not seem to be affected by major depressive disorder. By contrast, the rate of remission of major depressive disorder does seem to be significantly reduced by co-occurring borderline personality disorder.

Affective features (e.g. anger, anxiety, depression) and interpersonal features indicative of abandonment and dependency seem to be the most prevalent and stable, whereas impulsive symptoms (e.g. suicide efforts, self-injury) and interpersonal features indicative of treatment regressions appear the least prevalent and consistent.

The intensity of the symptoms tends to decline over time. This also means that personality disorders such as borderline personality disorder become more correlated with each other and less distinct as individual disorders. Personality traits seem more unstable in patients with borderline personality disorder than in patients with other personality disorders, while changes in personality traits lead to changes in the borderline psychopathology, but not in the opposite direction.

Data from most studies show that patients with borderline personality disorder are not at higher than average risk for schizophrenia or bipolar disorder.

V. Comorbidity

Borderline personality disorder is regularly associated with comorbid axis I and axis II disorders. More than eighty percent of patients with borderline personality disorder meet criteria for having one or more 12-month axis I disorders, and more than seventy percent meet criteria for another lifetime axis II disorder.

Borderline personality disorder is most frequently associated with mood disorders, anxiety disorders, and disorders associated with substance misuse. With a lifetime prevalence of about forty percent, post-traumatic stress disorder is common but not universal in patients with borderline personality disorder, which questions the view of borderline personality disorder as a complex form of post-traumatic stress disorder. In clinical practice, one sees regularly patients with borderline personality disorder who never subjectively experienced any major traumata.

Borderline affects men and women, probably at similar rates. Any differences in its diagnosis may also be due to the differences in which it manifests. Men may have more substance abuse and a greater tendency for dissocial behavior, while women may tend more towards eating disorders and self-harm.

About a quarter of patients with borderline personality disorder have good psychosocial functioning, but almost 80% lose this level of functioning over time and do not regain it. Personality disorders have a negative effect on the treatment outcomes of various axis I disorders.

VI. Life Experience

Patients with borderline personality disorder report many negative events (e.g. trauma, neglect) during childhood and substantially more adverse events than do patients with other personality disorders. However, no close association between these experiences and the development of psychopathological changes in adulthood has been identified. For this reason, an interaction between biological (e.g. temperamental) and psychosocial factors (e.g. adverse childhood events) will probably provide the best explanation of how the condition develops, consistent with results from recent studies of gene/environment interaction in this disorder. The figure shows the biopsychosocial model of borderline personality disorder.

VII. The Disconnect

Whether the sense of an inner void or losing connectedness with others, both point to a deficit in connecting and communicating with oneself and others. The exchange of meaningful messages is severely affected in borderline personality disorder. In the better functioning patients, it may be that communication with oneself and others is only less functional to a degree that it does not interfere with life to a major extent. (Haverkampf, 2010a)

VIII. Biology and Environment

It is usually assumed that the biology and the environment interact in a way that creates a higher risk to develop the condition. Since internal and external communication patterns are a result of biological traits and acquired and merged patterns, borderline personality disorder, or any personality disorder, usually is a result of biological and socioenvironmental factors. Communication patterns develop, change and fade over an entire life-time and so can lead to varying types and intensities of symptoms or unhelpful cognitive and behavioral patterns, which also includes the processing and working with the own emotions and those of others.

The high emotional sensitivity, high reactivity and extreme reactions, and a slow return to baseline, have often been interpreted by dysregulation. However, this overlooks the fact that autoregulatory systems are present also in someone with BPD. However, the information these regulatory systems use seems different in patients with borderline personality disorder. Research has indicated differences among control participants and patients with BPD in volume and activation of the amygdala and hippocampus, which are all implicated in emotion control. However, even if there is biological predisposition for variations in the emotional control system, how it reacts depends on the information from the inside and the outside. It is also possible that slight morphological variations lead to information which maintains or even increases the divergence from a population not affected by BPD.

An environment that has maladaptive patterns in communicating emotions, and other meaningful information, internally or externally, usually displays a greater tendency towards explosiveness, punishing silence, emotional abuse, and other communication strategies that are not only hurtful but also doomed to fail because what is supposed to get communicated never is. The result is that individuals feel misunderstood, hurt and disconnected. Children who are more likely to see actions and behaviors around them in reference to themselves, feel the negative emotions, the hurt, the pain, the helplessness, the lack of a secure feeling in the world and the disconnectedness, but without the tools to communicate them, in silence. Over time, any emotional regulation system can be expected to break down, because communication as a main regulatory mechanism is missing.

A. Genetic factors and neurobiology

Evidence has emerged that genetic factors contribute to the development of borderline personality disorder; however, no specific genes have yet been clearly identified as causative. A moderate heritability for some core traits has been reported. In studies of twins, heritability scores for the full diagnosis were 0.65 to 0.75, consistent with heritability estimates for personality disorders in general (40%–60%).

Impulsive aggression, common in patients with borderline personality disorder, is associated with reduced serotonergic responsiveness, and some genes that might be linked to psychopathological changes in the disorder are involved in the serotonergic system. Thus, the serotonin system is the neurotransmitter system of greatest interest in these patients and is the assumed site of action for specific selective serotonin-reuptake inhibitors. A correlation between variations in the sequence coding for the serotonin transporter gene and development of borderline personality disorder has been reported, but its significance is still unclear. Presence of the short allele of 5-HTTLPR can also indicate a poor treatment response to fluoxetine in patients with borderline personality disorder. Polymorphisms in 5-HTTLPR might also modulate the association between serious life events and the development of impulsivity in patients.

Another gene that has been implicated in impulsive aggression and suicidal behavior is the tryptophan hydroxylase gene (TPH), which encodes the first enzyme in serotonin biosynthesis. Two isoforms are known— TPH-1 and TPH-2. Patients with borderline personality disorder have a higher frequency of two of eight polymorphisms in TPH-2 than do controls. Also, in a case-control study, patients with borderline personality disorder had a greater frequency of polymorphisms in the variable number tandem repeat of the high-activity

monoamine oxidase A gene promoter allele than did healthy volunteers.

Thus, abnormalities in the functioning of the serotonin neurotransmission system seem to underly the impulsive aggressive symptoms, and this defect might be associated with specific genetic risk factors. However, there is also data from patients with borderline personality disorder without comorbid post-traumatic stress disorder, that there may be a greater suppression of cortisol, interpreted as increased feedback inhibition of the hypothalamic-pituitary-adrenocortical axis.

IX. Treatment

The American Psychiatric Association's practice guideline recommends psychotherapy as the main treatment of borderline personality disorder, with pharmacotherapy as an adjunctive component of treatment that targets state symptoms during periods of acute decompensation and trait vulnerabilities. The psychotherapy should achieve long-term stability in thought and emotional patterns, while the medication can take the edge off in the short- and medium-term.

X. Pharmacotherapy

Drug treatment of patients with borderline personality disorder (BPD) is common but often not supported by high-quality research. There is some evidence for beneficial effects of second-generation antipsychotics, mood stabilizers and omega-3 fatty acids, but the existing data is far from painting a coherent overall picture. Since no medication is licensed specifically for BPD, prescribing for BPD is technically off-label.

Guidelines differ on recommendations pertaining to pharmacotherapy. Specific to second-generation antipsychotic (SGA) use, the 2001 American Psychiatric Association guidelines, the oldest of available guidelines, recommend a low-dose antipsychotic for management of cognitive-perceptual symptoms. The 2007 World Federation of Societies of Biological Psychiatry guidelines state that moderate evidence is available supporting the use of SGAs for treatment of cognitive-perceptual symptoms, and impulse behavior control. The 2012 National Health and Medical Research Council guidelines, which are the most recent guidelines, argue that there is a lack of sufficient reliable evidence to formulate an evidence-based recommendation to support the use of a particular agent to target specific outcomes. The 2009 National Institute for Clinical Excellence guidelines recommend against any medications used specifically for BPD, in an attempt to decrease possible polypharmacy.

Because of the significant comorbidity with depression, anxiety and other conditions, a significant quantity of the medication may not be prescribed off-label, however.

The antidepressants amitriptyline and imipramine have shown to be more effective than placebo for some symptoms of depression, but not for other symptoms of borderline personality disorder. Few differences between monoamine oxidase inhibitors (phenelzine) and placebo were reported. Phenelzine reduced hostility, but not depression.

In one RCT, fluoxetine was not clearly more effective than placebo for depression, but a beneficial effect on anger was reported. In another RCT, beneficial effects of fluvoxamine on mood shifts were reported, but not on aggression or impulsivity. In some studies, the typical antipsychotic haloperidol was more effective than placebo for several symptoms, but results vary.

Haloperidol seems to be more effective than tricyclic antidepressants (amitriptyline) for hostility and schizotypal symptoms. Phenelzine was more effective than haloperidol for some symptoms (e.g. depression, anxiety, schizotypal symptoms), but not for others (e.g. impulse control).

In two RCTs, the atypical antipsychotic olanzapine was more effective than placebo for several, but not all, symptoms; however, in another RCT, no superiority of olanzapine over placebo was reported. Olanzapine monotherapy and olanzapine combined with fluoxetine were more effective than fluoxetine alone for depression and impulsive aggression. This combination had no advantage over olanzapine monotherapy. Ziprasidone had no superiority over placebo.

One reason for the different findings among second generation antipsychotics could be that patients with different symptom patterns are included. The fear of losing oneself, that is the connection with oneself, for example, may be very different from the fear of losing connection with others and the world, which is related to the efficacy of external communication. (Haverkampf, 2010b, 2010a)

Beneficial effects on depression, aggression, and other symptoms were reported in some RCTs, but not in others. Many of the findings are based on single RCTs or on small samples of patients. Some studies (e.g. of olanzapine) included only female patients. Only a few studies included long-term follow-ups.

Additional psychotropics tend to be added to existing regimens in efforts to augment existing regimens, perpetuating psychotropic polypharmacy in this patient population. Studies have shown rates of 40% to 57% of BPD patients taking 3 or more standing psychotropic medications, illustrating that psychotropic polypharmacy is a serious issue in this population. However, psychotropic polypharmacy is not supported by evidence and should be avoided whenever possible.

Anticonvulsants have been found to be more effective for women than for men in treating both affective dysregulation and impulsive-behavioral dyscontrol symptoms, while antipsychotics were more effective in longer trials on cognitive perceptual symptoms, suggesting a slowly progressive efficacy of these compounds on this symptom dimension.

1) Affective Dysregulation

For affective dysregulation, the highest efficacy so far has been shown for anticonvulsants. It appears to be less for antidepressants and rather small for second generation antipsychotics (SGAs).

2) Impulsive-behavioral dyscontrol

For impulsive-behavioral dyscontrol, RCTs demonstrated the highest effect size for anticonvulsants and a lower effect size for both FGAs and SGAs.

SSRIs and antidepressants in general cannot be considered as first-line treatments for impulsive-behavioral dyscontrol and affective dysregulation symptoms because of their inefficacy on impulsivity.

Anticonvulsant medication should be considered as first-line agents in treating both impulsive-behavioral dyscontrol and affective dysregulation symptoms, at least in women.

3) Cognitive-perceptual distortions

For the cognitive-perceptual symptom dimension, in both RCTs and open-label trials, only antipsychotics proved to be effective; the existing literature does not indicate any significant efficacy for anticonvulsants and antidepressants.

B. Second Generation Antipsychotics

Antipsychotics have gained more prominence in the treatment of bipolar disorder over time. There is probably no difference in efficacy between FGAs and SGAs in treating cognitive-perceptual symptoms, but a better tolerability of SGAs is generally acknowledged.

1) Clozapine

Available evidence suggests that clozapine may be beneficial on an individual basis for the management of self-injurious behavior and aggression to others in BPD. Further improvements noted are total scores of Brief Psychiatric Rating Scale (BPRS) and Clinical Global Impression (CGI) scale, as well as decreased hospitalization lengths of stay. The most pronounced changes appear to occur within the first six months of clozapine treatment. With the lack of high-quality evidence, it is difficult to formulate a strong recommendation advocating for the use of clozapine.

2) Olanzapine

Olanzapine routinely shows a significant reduction in anger/hostility/aggressiveness, affective instability, suicidal and self-mutilating behavior, and paranoia/dissociation. Due to its serotonergic affinity, may also have a mild antidepressant effect. Furthermore, there may be evidence to suggest that olanzapine may alleviate anxiety and paranoia/psychoticism. A dose of 10 mg, sometimes only 5 mg, is often used, which is usually also sleep inducing.

3) Quetiapine

Quetiapine appears to have a significant improvement on aggression/hostility, anxiety, and depression. Further open-label studies have also demonstrated general symptom improvements as measured by various rating scales, including ZAN-BPD, CGI, BPRS, the Social and Occupational Functioning Assessment Scale, the Borderline Personality Disorder Severity Index (BPDSI), and the Symptom Checklist (SCL-90-R). However, conflicting reports exist on how effective quetiapine is at controlling impulsive symptoms of BPD.

4) Risperidone

Current data have suggested that many symptoms of BPD may be ameliorated with risperidone, including also hostility and suspicion, and to a lesser degree depression and anergia. Similar results have been demonstrated, indicating potential for risperidone in controlling symptoms of aggression and anxiety.

5) Aripiprazole

A double-blind, placebo-controlled study (N = 52), found that 15 mg/d during an 8-week period significantly improved BPD symptoms as measured by the SCL-90-R, Hamilton Anxiety Rating Scale, Hamilton Depression Rating Scale, and State-Trait Anger Expression Inventory. Symptoms of obsessive-compulsive traits, depression, anxiety, aggression/hostility, social insecurity, paranoid thinking, and psychoticism showed particular improvement. Two follow-up studies demonstrated that improvements remained consistent across all scales in the aripiprazole group versus the placebo group, as well as augmentation therapy to sertraline. Aripiprazole may be a viable option, given the favorable results of these initial smaller studies.

6) Ziprasidone, Arsenapine and Paliperidone

It is still difficult to say how effective arsenapine, ziprasidone and paliperidone are in the treatment of borderline personality disorder

XI. Psychotherapy

Several methods of psychotherapy are available for patients with borderline personality disorder—e.g. cognitive behavioral, interpersonal, or psychodynamic treatments.

Several psychotherapy approaches were specifically developed for the disorder, most notably dialectical behavior therapy (DBT), cognitive behavior therapy (CBT), and psychodynamic treatments, such as mentalization-based therapy or transference-focused psychotherapy. Each approach appears to be more effective than treatment as usual for BPD-related problems, such as suicidality or parasuicidal behavior, while there also seem to be little differences in effectiveness among them. It is possible that therapies have to be fitted to the individual patients.

In studies comparing dialectical behavior therapy with treatment as usual, dialectical behavior therapy was more effective in measures of self-harm, parasuicidal behavior, suicidal ideation, and others. However, the number of patients still meeting the diagnostic criteria of borderline personality disorder did not differ. This may point to the 'stability in instability' in borderline personality disorder, but also indicate that the underlying dynamics and internal and external communication patterns are changed by this treatment method less than what would be required for a clear remission. Since a substantial remission in borderline personality disorder is possible, the latter may be true to some extent.

Improvements in borderline personality disorder are commonly followed by improvements in major depressive disorder, and this is also the sequence that should be followed in treatment. Therapy for a depression without adequately addressing the BPD is often quite ineffective. Changes in personality traits seem to be followed by changes in personality disorder psychopathology.

Communication as the Key

Specific forms of psychodynamic psychotherapy and DBT, but also brief cognitive behavioral therapy, appear superior to treatment as usual in several clinically relevant parameters. Adding brief cognitive behavior therapy to treatment as usual seems to be superior to treatment as usual alone. There is no solid evidence that one form of therapy is clearly better than another.

According to follow-up studies, effects of psychotherapy are stable over time. However, the available forms of psychotherapy do not yet lead to remission of borderline personality disorder for most patients to the point where the criteria for the diagnosis are no longer fulfilled.

Skills Training

The skills training component in DBT seems to be superior to non-manualized methods at least in the short-term. However, in the long-term the patient needs to develop patterns of interacting with oneself and others that are not only directed at a reduction in symptoms, but also towards a better functioning in pursuing individual needs, values and aspirations.

Compared with client-centered therapy, dialectical behavior therapy has in at least one study shown to be superior in reducing parasuicidal behavior, suicidal ideation, and general psychiatric severity. No superiority of dialectical behavior therapy over client-centered therapy was identified for anxiety.

In an RCT with sample sizes of ninety for both groups, both dialectical behavior therapy (DBT) and a well specified and psychodynamically informed clinical management provided significant improvements with no differences between treatments.

The Therapist

Psychotherapeutic methods require different levels of competence from the therapist. Strictly manualized approaches may demand the lowest level of experience, while psychodinaic and psychoanalytic methods require a very high level of individual experience. Results from a RCT indicated that schema-focused therapy was superior to transference-focused psychotherapy. However, differences in therapist competence ratings indicate that transference-focused psychotherapy might have been less competently implemented than schema-focused therapy.

A. Dialectical-Behavioral Therapy (DBT)

A dialectical tension occurs when an initial proposition or thesis is opposed by a contradictory antithesis. In the case of BPD, one of the most frequent dialectical tensions is that a behavior, such as self-injury, is both functional (it helps the patient temporarily reduce distress) and dysfunctional (the self-injury produces negative effects on health and interpersonal functioning and is associated with risk of suicide in the long run). Acceptance, behavioral change, mindfulness practice and validation are important elements in DBT.

The dialectical tension is resolved by finding the synthesis, or rather what is being left out of the thesis and antithesis, by using skills that help the patient reduce stress and do not produce negative long-term effects. DBT helps patients find the synthesis to their behavioral dilemmas with the hope that

the patient will be both validated and learn more skillful behaviors. DBT sets out to work with the dialectical tension between acceptance and change that benefits the patient.

Behavior therapy is used to define treatment targets and specify therapy interventions to help patients change their behavior. Treatment is designed to help patients to acquire affective, cognitive, physiologic, and behavioral response repertoires for effective performance. DBT seeks to accomplish this through modeling and behavioral rehearsal of effective behavior, psychoeducation, coaching and feedback, and homework assignments. Behavioral principles of conditioning, reinforcement, and shaping, and pay particularly close attention to the factors that maintain behaviors, such as reinforcers of self-injurious behavior, classically conditioned avoidance behavior, and aversive consequences of more effective behavior.

Wise Mind

DBT helps patients find the balance between a state of being caught up in emotions (i.e. emotion mind) and a state of being devoid of emotions and strictly rational (i.e. reasonable mind). The synthesis is termed "wise mind." Wise mind incorporates both the passion, conviction, and intuition of emotion with the logic and empiricism of rationality. Patients are asked to use their wise mind to perceive reality, accept it and guide their behavior. To do this, patients practice mindfulness, where they quiet themselves and become more acutely aware of the world around them. Exercises are used to observe and describe the world without judgment.

DBT utilizes motivational enhancement to reinforce therapeutic progress and remove factors that may interfere with effective behavior. Motivational enhancement is necessary as effective behaviors are often blocked by over-learned emotional responses, behavioral and cognitive patterns, or environmental contingencies that discourage effective behavior or encourage dysfunctional behavior.

Methods to increase motivation include cognitive modification, contingency management, and exposure-based strategies. The goal of enhancing generalization is to ensure that skillful responses developed in therapy are transferred to patients' lives in the world outside of therapy. Therapy interventions for enhancing generalization include phone and E-mail consultation, homework practice, in vivo interventions, and patient review of therapy tapes outside of sessions. With these methods, a therapist may increase the chances that a behavioral pattern that typically leads to self-injurious behavior is interrupted and changed by a more skillful response.

Structure plays a more important role in DBT than in other therapeutic approaches, reinforcing treatment progress and not dysfunctional behavior. Interventions for structuring the environment may include interactions between the patient and the clinic director or other administrators, case management, and family or marital interventions. Each week patients are given a DBT diary card to fill out daily. The diary card is a daily record that tracks self-injurious and suicidal behaviors and urges, drug use, daily emotions, and skills use. Therapists typically scan the card at the beginning of each session to deter-mine what will be discussed in therapy.

Modularity

The multicomponent nature of DBT (individual therapy, group skills training, between-session telephone coaching, and a therapist consultation team) lends itself to dismantling in clinical settings. Group skills training in DBT is frequently offered alone or, in community mental health settings, with standard case management instead of DBT individual therapy. Other clinicians, often those in private practice, offer DBT individual therapy without any DBT group skills training.

Manualization

The problem with DBT and most CBT models is that their approach to specific topics or content is highly manualized. This leaves little room for the communication process itself, which interestingly is not manualized, even though it is the component which brings about change. A manualized approach may specify that the patient should be asked about what thought causes sadness, but it is not the topic of the question which causes change. It is that the patient learns how to put together a meaningful message about the sadness she experiences when a certain thought comes up, and to transmit this information internally and externally. Once she feels she can do it, the new strategy will be memorized and cause a long-term change. A manualized approach can work if it works on this higher level of encouraging individuals to develop and implement their own internal and external communication patterns.

Insight

The problem is that there is more investigation into what makes various forms of psychotherapy, whether CBT, DBT, psychodynamic, IPT or another flavor, work than into what makes them work, which is maybe of even greater relevance.

Since very different forms of therapy that work with vastly different techniques can work given the right patient and the right therapist, it may be that Sigmund Freud's original concept of the 'talking cure', the communication processes and dynamics between therapist and patient gives a helpful clue to what works, because all forms of therapy, even the ones which do not rely on verbalization, use communication between therapist and patient, and vice versa as the unifying ingredient in their work.

However, even interpersonal therapies, such as IPT, focus more on interaction concepts that describe aspects of a person, such as roles, than the dynamic process of information

exchange, where changes can be highly relevant for the individual's success in getting needs, values and aspirations met, and as a consequence for his or her quality of life.

Individualization

In individual DBT, the therapists have an explicit ranking of behaviors to target in treatment. However, the set of tools is highly structured, which imposes limits on how far the therapy can be tailored to the individual. Although each patient has one individual therapist who is responsible for treatment planning, monitoring, and ensuring progress, integration of all modes of therapy, consulting to the patient on how to have effective interactions with other treatment providers, and the management of all life-threatening behaviors and crises, this is more an individualization in management rather than in working with the patient's internal communication dynamics. The individual therapist must strike a balance between validation of a patient's behavior and changing behavior to become more effective, but this requires identifying individual needs, values and aspirations by elucidating a patient's internal and external communication patterns.

DBT individual therapists utilize the first several sessions of therapy as a trial orientation phase with the commitment to adhere to treatment agreements. Therapists often use techniques developed in social psychology research to solicit and strengthen commitment, such as moving from smaller to larger or from larger to smaller commitments or having the patient arguing for rather than against commitment. While this may be technically effective, however, for a more lasting commitment, which is needed in BPD, it seems important to work with individualized motivation founded on greater insight into the inner dynamics of the individual patient. (Haverkampf, 2010b) This, however, requires a greater focus on the individual aspects of the relationship between patient and therapist with the aim to create an understanding and safe environment in which this information can be made aware and shared.

B. Group Skills Training

The aim of group sessions with skills training is to decrease any behaviors that may destroy the group, which fulfills the more general overarching purpose of helping the patient to interact better with others and the own person. Beyond any behavior that may destroy the group, such as patient violence during group, the top priority is to teach skills. A typical format for skills group is to meet for 2.5 hours, with the first half of group dedicated to skills homework review and the second half dedicated to teaching new skills.

DBT explicitly addresses skills deficits by systematically teaching four sets of skills labelled mindfulness, interpersonal effectiveness, emotional regulation, and distress tolerance. Self-regulation skills are woven into all areas of skills training. However, this can only complement the individual work on creating more awareness and insight into needs, values and aspiration and internal and external communication patterns to satisfy them. Otherwise the motivation for the group trainings may be transitory, as well as for the entire treatment program. This will be discussed more in depth below.

C. Mindfulness

Being mindful means being aware and present in the present, focusing on one thing at a time in a nonjudgmental way and the ability to reflect on a thought and emotion without getting caught up in it. Several techniques have been developed to help a patient acquire these skills. Interpersonal effectiveness skills are designed to help patients be successful in reaching their goals (e.g. obtaining their objectives, improving or maintaining relationships, or maintaining self-respect) in interactions. Emotion regulation skills involve teaching patients to decrease unwanted or ineffective emotional responses and increase positive emotions. Distress tolerance is a set of skills specifically designed to help patients survive crises as well as accept a life with many unwanted characteristics.

However, the foundation of mindfulness is quite simple and straightforward. It is an awareness of information flows. Once one can identify flows of information for what they are, it is less likely that one gets caught up in the content. Recognizing that a sensory perception or an emotional signal contains a meaningful message creates the necessary distance to become more mindful of it and the meaning it contains. The ability to perceive flows of information inside and all around through a wide spectrum of channels and in myriads of forms brings about a greater awareness for oneself and for others. The world then becomes a richer and more connected place which is particularly helpful in BPD with its experiences of disconnectedness and loneliness, which contributed largely to the instability. A greater focus and more awareness for meaningful messages and facts on the inside and on the outside also increases the sense of groundedness in BPD.

D. Psychodynamic Psychotherapy

In three studies, psychodynamic psychotherapy was more effective than treatment as usual for most outcome measures. In one trial, the effects of mentalization-based treatment in a partial hospital setting might have been confounded by duration of partial hospitalization, which was longer in the mentalization-based treatment condition. In one RCT, however, this treatment was superior to manual driven structured clinical management for primary (suicidal and self-injurious behaviors, treatment in hospital) and secondary outcome measures (e.g. depression, general symptom distress, interpersonal functioning). Psychodynamic psychotherapy was reported in one RCT to be as equally effective as an interpersonal group therapy. In another RCT that compared

transference-focused psychotherapy, dialectical behavior therapy, and psychodynamic supportive psychotherapy, transference-focused psychotherapy and dialectical behavior therapy reduced suicidal tendency to the same extent. Transference-focused psychotherapy was superior to dialectical behavior therapy in some measures of affect regulation, impulsivity, and attachment.

E. Communication-Focused Therapy (CFT)

Communication lies very much at the foundation of this condition and many others. The author has developed communication-focused therapy (CFT) to directly work with communication.

Communication-Focused Therapy (CFT) was developed by the author to focus more specifically on the communication patterns between patient and therapist through awareness, reflection, experimentation and insight. The central piece is that the sending and receiving of meaningful messages is at the heart of any change process. CBT, psychodynamic psychotherapy and IPT do not work directly with the communication process, which, however, is fundamental to any lasting change in the patient.

Communication consists of the sending and receiving of information and the encoding and decoding of meaning. All living organisms not only process information, but are continuously engaged in sending and receiving it, whether in an exchange with the external world or within themselves. The result of these communicated messages is some change on the inside or in the world around. The communication patterns one uses with oneself and with others can thus have a significant influence on interpersonal relationships, and in general on the quality of life.

Psychotherapy is working with and through communication. Change happens when information is understood and identified as relevant and meaningful. The information can come from within the patient, from the therapist or be generated in the interaction space between therapist and patient. However, to be meaningful the message has to have a novel element. Once a meaningful message is received, decoded and understood (it resonates), it brings about a change in the organism, even if only tiny, and leaves a trail, such as being memorized, which is then enduring. A change can then also influence how the person receives, processes and sends information in the future. This can then lead to a host of changes within and outside the individual, such as improvements in negative self-talk, at the work-place or in relationships. Just to see this happening can provide a patient suffering with BPD new found confidence and the motivation to continue the therapeutic process.

1) The Fear of Change

Patients suffering from BPD often have communication patterns with themselves and the environment which are unhelpful. The necessity of change but the greater ability of the patient to self-validate can seem to be in conflict, but they are not from a communication perspective. Changes in internal and external communication patterns lead to changes in interaction but also increase the likelihood that a patient can receive and process information that is validating to him or her.

Change can cause anxiety because it seems to bring temporarily more uncertainty into a person's life. However, working with communication processes more directly reduces fears because the increase in experienced connectedness reduces anxiety. One has to remember that it is after all the disconnectedness in BPD which causes anxiety, fear and the existential crisis. The connectedness here refers to the expectation of future communication. Patients with BPD are often unsure about their connectedness with others. Shifting the patient's message flows into the center of attention creates expectations in the patient, while the therapeutic setting provides the promise for communication in the future. The particular relationship between two people, in this case patient and therapist, may facilitate a defined range of interactions, but it is communication which ultimately makes, maintains and can break the relationship. Thus, working constructively and in meaningful ways with communication patterns, the patient feels are relevant to him or her, can transform the therapeutic relationship into a great working relationship that brings greater insight on both sides, and helps the patient overcome the BPD symptoms.

When change is adaptive, it can help align an individual better with the environment. This brings greater stability in the long-run. Especially in BPD it is important that patients can experience the stabilizing effect of these changes. As the emotions are signals in which the nervous system integrates a large amount of information with the objective to bring about an adaptive change, hence being called an "e-motion", working with the patient on the emotional communication is an important component of the change process. The objective is the free communication of emotional messages, at least within the patient, so that the patient can more accurately identify the own emotions and use this information for more relevant, better adapted and more meaningful change.

2) Change

The basic change that needs to occur is greater awareness for the own internal and external communication patterns, which then provides some insight into the overall communication structures. One's basic parameters, the individual needs, values and aspirations are reflected in the more global structures of the internal information flows. It is important to remember that a basic value is not directly stored

information, but stored information about communication patterns and about the processing of information.

For borderline personality disorder various therapeutic approaches have been used with varying success. Since the term is derived from psychoanalytic psychotherapy, a lot of treatment models have originated in that school of thought. CBT has been applied in the form of DBT, which is now widely used in hospitals and outpatient situations. There is significant support for the efficacy of standard dialectical behavior therapy (DBT) for the treatment of suicidal individuals with borderline personality disorder (BPD). However, most of these therapies do not directly address the communication processes which lead to the symptoms of the disorder.

The instability experienced in BPD is related to the maladaptive communication with oneself and others. This can lead to internal and external disconnects which then cause even more fear and anxiety. Even though patients with BPD experiences getting overwhelmed by too much emotional information, the actual problem is that messages are decoded and interpreted differently. Since this leads to a deficit in adaptive information, the next message which is interpreted against the background of this information will also be maladaptive. Ultimately, the system becomes unstable.

3) *Communication at the Core*

All present therapeutic approaches focus little on the processes that really lead to changes, the sending, receiving, and understanding of information. Understanding information requires seeing meaning and relevance in it. Patients with BPD often seem to have difficulties to get to the meaning of messages they receive, whether in the form of emotions or otherwise. Getting distracted easily and being overwhelmed by too many things going on simultaneously are a result of seeing not seeing enough meaning in things, which is a consequence of maladaptive communication patterns with oneself and others.

The fear of losing a relationship or bond with another is a consequence of perceiving too little rather than too much meaning in aspects of the relationship. The less relevant aspects of the relationship seem, the more fragile one will judge it, at least subconsciously. Projecting one's doubts in the partner just increases the fear of losing the relationship. Since meaning is derived from the communication of information, the task is to develop better communication strategies, especially those for interpreting and analyzing messages contained in information received from others and oneself through various communication channels, the senses, the autonomous nervous system, thoughts or emotions and situations and events, and so forth.

4) *Borderline Personality Disorder*

Borderline personality disorder (BPD), also known as emotionally unstable personality disorder, is a long-term pattern of abnormal behavior characterized by unstable relationships with other people, unstable sense of self, and unstable emotions. There is often frequent dangerous behavior, a feeling of emptiness, self-harm, and an extreme fear of abandonment. Symptoms may be brought on by seemingly normal events. The behavior typically begins by early adulthood and occurs across a variety of situations. Substance abuse, depression, and eating disorders are commonly associated with BPD.

Interpersonal messages or thoughts about interpersonal relationships are the main events that lead to emotional instability and feelings of losing oneself and the world, often as described as experiencing or falling into a void. From this description, one can already see the enormous role played by communication in the pathogenesis of BPD. Communication-focused therapy (CFT) is targeted at working directly with the communication systems that give rise to the maladaptive communication patterns in BPD.

5) *The Void*

The emptiness in BPD is usually quite symptomatic, and self-harm is often a reaction to feel oneself again. Relationships often tend to be unstable, not because an individual with BPD is less able to have one, but because the interaction with another person, or the memory of it, give a feeling of connectedness, which prevents the sensation of an ensuing emptiness, and its loss feels like an existential loss to the person with BPD.

The emptiness and sense of void often seems to be lying over strong emotions. It is a defensive void at the surface, like a blanket that has been thrown over the unruly emotions underneath it. Since there is a disconnect from oneself, the emotions are ill-defined and scary in the sense that they may cause disturbance or damage to the individual. This fear of a core part of oneself keeps the vicious cycle turning, in which fears of fundamental aspects of oneself cause additional fear, distancing from the self, more disconnect, even more fears, more emptiness, more fears, and so on. Communication is the key to break through this pattern.

6) *Patterns of Communication*

Individuals with BPD have patterns of communicating with others which often do not seem to work well for them. The patterns are frequently quite rigid in making an interaction about one or a few messages, such as confirmation of the stability of a relationship. This lack of openness probably contributes significantly to the symptoms and relationship difficulties an individual with BPD experiences.

7) Systems of Communication

Systems of communication are what gives rise to the individual communication patterns. (Haverkampf, 2010a, 2010b) Some of these may be biologically predetermined to a significant extent. An autistic person, for example, may never become a flamboyant extrovert. However, there is usually a significant freedom to change communication patterns within a communication system. Developing these new communication patterns happens through awareness for the existing ones and shaping and experimenting with new ones. The therapeutic setting offers the space to do that.

Before discussing communication-focused therapy further, it may be helpful to take a brief look at the preferred treatment model at the time of this writing.

8) Understanding Borderline Personality Disorder

Individuals suffering from BPD experience significant instability because of the importance they attach to connectedness with themselves and others, which is due to an experienced less effective communication of meaningful information. The communication patterns used by patients with borderline personality disorder, whether internally or externally, are not as helpful in providing conscious experience with the meaningful information that can stabilize and fill the perceived emptiness. This is probably due to a combination of variations in the systems of communication on a more general level and individual communication patterns on a more specific level.

While one sees the dynamic of the communication patterns, one can only infer the more general communication systems in place. Psychodynamic psychotherapy and its offshoot self-psychology are two approaches that attempt to develop and understanding for components of these larger communication systems, although this is done focusing more on content. From a communication-focused perspective the flow of information increases the perceived levels of meaning, and the experience of the flow of information is an important determinant of mental health.

An approach to BPD is thus to support the patient's reflective and introspective processes with the aim of developing better internal and external communication patterns and thus to help the patient to see more meaning in the interactions with oneself and others. Through questioning interactions that do not work and reflecting on these and apparent conflicts between own needs, values and aspirations and what interactions with oneself and others actually deliver, the motivation increases to try out modified or new patterns. An awareness of the own communication patterns, both internally and externally, also helps build confidence in oneself and in the interaction processes with another.

9) 'Existential Crisis'

The sense of an 'existential crisis' is quite common in BPD, when a person feels disconnected from oneself and others and feels as if falling into a deep, dark, empty place. This is the result when meaningful information cannot be accessed or only partially. If meaningful information can be communicated internally and externally it fills the void. Now, there can be various psychological and neurobiological explanations and etiologies why this information is not available to the extent needed. However, whatever techniques are used so that the patient uses more helpful communication patterns can lead to a decreases in symptoms and a remission in symptoms, partially though the feedback from being in a more meaningful relationship with oneself and others.

The void is a feeling that communication links, have been severed, internally and externally. This causes a loss in the experiences of safety and a comforting security as the metaphorical anchors and connections with the world become invisible. When the effectiveness of internal and external communication is substantially lost, a loss of faith in communication with oneself and the environment as an instrument to satisfy one's own needs, desires, values and aspirations can be a further consequence. This loss of faith in the effectiveness, or 'power', of communication can deepen the existential crisis. The individual feels muted and disconnected from the part of the self that holds everything together, namely communication, at the same time. It is also a crisis of meaning when the communication of meaningful messages is reduced or cut off, a crisis of meaning about oneself and the world.

This existential crisis which occurs at the lowest moments in the life of someone suffering from BPD can be prevented with modifications to an individual's communication patterns. Therapeutic work on these communication patterns can also be done when a patient is in a crisis situation, but then the therapist should add enough support when working on awareness and experimentation with communication.

10) Meaning

Individuals suffering from the type of anxiety ne often sees in BPD often see less meaning in the things they do. In therapy an important part is to rediscover meaning and find it in the things that are relevant to the patient. Relevant is anything that is close to his or her values, basic interests, aspirations, wants, wishes and desires.

Meaning helps to make the world more interesting and counter the sense of emptiness and void. It also what can motivate individuals to engage in intrapersonal and interpersonal communication. But seeing meaning in a message also requires that one is open to receiving a message and to interpreting it in a helpful way. This in turn depends on one's ability to reflect on communication and to gain insight from engaging in it. Therapy can be helpful in promoting

one's metacognitive skills of developing insight into communication processes and to experiment with them in a safe and protected setting. By promoting the identification of meaning in everyday messages, anxiety is reduced and motivation to be in contact with others, and through it with oneself, is increased.

11) The Fear of the Message

BPD often means that there is a greater fear or anxiety about extracting the meaning from a message. One reason for the fear might be that identifying and decoding a message could reflect more distance to another person or myself, in other words, that the content of it is less meaningful and relevant. The reason for this again lies in the maladaptive communication patterns which provide less information and make others and oneself appear less meaningful. As there is less or less accurate contextual information for new messages, they are less likely to be fully understood and meaning to be identified, and adaptive change is less likely. BPD is a vicious cycle of incomplete or distorted information from maladaptive communication patterns.

12) Learning to Communicate

Any manualized psychotherapeutic approach which does not directly address a person's communication patterns, will not be individualized enough. It is like giving an engineering student a manual on how to build a screwdriver, whether this is useful to her or not, rather than to really teach her engineering, which would allow her to build whatever she wants. The fit of the specific manual also depends on the accuracy of the diagnosis, which tends to be too unspecific, based on symptoms rather than the underlying problems, and notoriously unreliable, especially if the therapist is still inexperienced.

CFT focuses on the processes that lead to the symptoms, communication patterns which are maladaptive. Through helping a patient get a better sense and understanding for how communication works and what it does for the individual, he or she can begin to shape the communication pattern on the inside and on the outside more actively. Patterns and strategies can be seen, understood and reflected upon, which not only leads to greater insight, but to greater abilities in forming and implementing better communication patterns and strategies, which help the person to feel better and reduce the signals that something is 'out of sync', the symptoms of the mental health condition, such as in BPD.

13) The Emotions are not the Problem

The emotional signals are not what causes BPD symptoms, as we have seen above. The disconnection from or distortion of important information, which can be found in BPD as well as several other mental health conditions, is the cause of uncertainty, and thus feelings and fears that reflect that, which can then turn into a vicious cycle which can no longer regulate itself. Several symptoms in BPD, such as the classical sense of void, the fear of losing oneself or disintegrating, or not being strong enough to withstand emotional stresses, can be explained quite easy with this disconnection. Unfortunately, most schools of psychotherapy treat communication like a black box, which is assumed to do its thing and accepted as a given, thus neglecting that this is where answers can be found and with which lasting change can be brought about.

Learning to communicate requires becoming aware of it and reflecting on it, as well as using it in novel ways to make it work for oneself. This does not change the person or any of the basic parameters, values, needs and aspirations, but it makes living with and towards them more effective. In the case of BPD, the resultant greater sense of stability, emotionally, cognitively, in respect to the present or future, and otherwise, is instrumental and effective in reducing the symptoms.

14) Reconnecting

Better communicating with oneself and others is an important technique towards reconnecting with oneself and the world, which also increases self-confidence, a strengthened sense of self, and increases the sense of effectiveness in getting one's needs and wants met. In the process, many patients also rediscover basic interests, values and old aspirations. All this helps to rebuild a stronger sense of self, which helps to put the more intense emotional ups and downs BPD patients experience into perspective.

Reconnecting means becoming more aware of the information coming from within oneself, whether emotional or otherwise. It also means becoming better at identifying it and being able to put it into words or communicate it in another way. This can be worked on within a therapeutic setting. The therapist could, for example, discuss how the patient feels the own emotions and experiences talking about them with others. This can be combined with practicing to observe how the patient communicates about the own emotions in the therapy. Important is that the patient becomes more aware of how emotional signals are noticed and identified and what action then follows. Since an emotional signal is a call to new action or a change in action, it needs to be communicated somehow.

15) Values, Needs and Aspirations

These basic parameters are, as already mentioned, variables determined by larger communication structures. In the brain, what one values and aspires to is not stored in a specific location, but a feature of and embedded in the neural network in many locations. Needs that go beyond such very basic biological needs as hunger or thirst are also a feature of the

network. The more a patient has insight into these basic parameters, the easier it becomes to make decisions which adds to the sense of stability in patients with BPD. A greater emotional stability usually follows from this as well. Insight into these parameters also helps to make better decisions regarding interpersonal relationships, which also increases the sense of stability.

The most common way to identify these basic parameters in CFT is to identify how a patient experiences different situations and how he or she interacts with others. This provides information on the internal and external communication patterns and the emotional and other information from inside. It also shows how an individual interacts with the environment, and where changes in communication patterns can make it easier for the patient to identify the own basic parameters, the needs, values and aspirations.

16) Losing the Fear of Communication

Good and meaningful communication requires the ability to send meaningful messages and to receive them. This means openness about oneself and the willingness to engage with the other are important. The fear of engaging with communication is usually a result of not understanding it, or understanding it only partially. Exploring communication patterns, reflecting on meaning and relevance, and helping the patient experience a safe communication environment in which he or she can be creative and innovate usually leads to a decrease in the fear and anxiety in the patient.

17) Openness

People with BPD often have difficulties with openness because they do not have a good image of themselves. The sense of self does not feel as complete or as whole and this leaves areas of uncertainty or outright bad memories. This is often another reason why the bond or connection with another feel important to the patient. However, this need can lead to restrictiveness and rigidity out of fear that something, including one's own needs and wishes, can interfere with existing interpersonal connections. The connection with oneself is not experienced as supportive enough if an existing interpersonal bond breaks.

A greater ability to interpret messages from others, rather than making assumptions and then shying away from reading the message, helps to build a greater sense of stability, which makes openness easier. The simplistic assumptions about interpersonal relationships are probably strategies that worked partially at some point in the past to protect the individual and their sense of self. Over time, however, they can lead to superficial relationships and a fear of depth and meaning. In the therapeutic setting a patient can investigate and explore these strategies and experiment with new ones, both as a mental exercise and in the therapeutic relationship with the therapist. This makes openness easier, reduces anxiety, and allows the patient to experience the benefits of greater openness.

18) Engagement

The next step form openness is engagement, which means encoding and sending meaningful messages out into the world. Patients suffering from BPD who manage their condition better all seem to have in common that they take an active interest in communicating with the world around them. One might say that the ability to communicate more freely means that the condition is less severe. However, it rather seems that they experience the same emotional instability, void and even an occasional existential crisis, but that they still keep engaged. On a closer look, it appears that they often are more motivated to engage, which means they see a greater benefit in engaging with others.

To see a greater benefit in engaging with other requires seeing a benefit in communicating. This can be furthered in therapy using the usual techniques to help the patient become more aware of the own communication patterns and the effect they can have on the environment. An approach to overcome the fear of communicating with oneself and others has been briefly discussed above. In any case, it is important to offer a safe and holding environment in which the patient can engage with the therapist in different ways and reflect on various situations in everyday life in which he or she engages with others. Experimentation with communication patterns is an important way to increase the interest in and reduce the fears of engaging with others.

One fear of engaging and sending out messages to others can be due to the fear of revealing something about oneself to others, which is particularly strong if one has already a negative view of oneself. As the work with internal communication helps to lower doubts and anxiety about oneself, work on the external communication helps to get more of a sense of control over one's communication with the world.

19) Meaningful Messages as the Instrument of Change

Communication is the vehicle of change; the instruments are meaningful messages which are generated and received by the people who take part in these interactions. Patients with BPD are not only interested in interactions with others, but they often feel the need for interpersonal connections even more than their friends and colleagues. From the discussion above, the most plausible explanation is that they only partially understand messages from themselves and others, which makes them more dependent on interactions which they feel they can get the messages they so crave. This is not to say that there is a higher for certain messages, which, for example,

also play a role in attachment, but that they are not understood and processed in someone with BPD as fully as in someone without.

Seeing meaning is the result of communication processes on the outside and on the inside. It requires understanding a message and perceiving something as relevant, though not necessarily in this order. Helping patents with BPD to see more relevance and meaning in interpersonal interactions, mainly by helping them to understand them better, reduces the anxiety and fears around interpersonal relationships. It thereby creates a greater sense of safety and security in the world and makes it also a more predictable place. Insight and understanding communication, as well as engaging in it, is the key to this.

XII. Pharmacotherapy with psychotherapy

The benefit of a combination of pharmacotherapy and psychotherapy in borderline personality disorder is unclear. Fluoxetine combined with dialectical behavior therapy provided no additional benefit compared with dialectical behavior therapy plus placebo. In one study, olanzapine added to dialectical behavior therapy provided an additional benefit compared with dialectical behavior therapy, although no differences were reported in another study in favor of the combined treatment. The combination of interpersonal therapy and fluoxetine was superior to fluoxetine plus clinical management.

XIII. Future perspectives

Despite conceptual coherence, borderline personality disorder seems to be a heterogeneous diagnostic category that is less stable and distinct over time than expected. These findings raise questions of both how to conceptualize this disorder and how to implement it in future versions of DSM as a form of personality pathology that is both enduring and distinct from other personality disorders. Furthermore, the discussion on whether a categorical or a dimensional model best suits personality disorders is ongoing. However, form the above said it should be clear that a communication perspective can contribute not only to a better understanding of the impairment and underlying dynamics of the disorder, as well as its 'stable instability' and the experience of disconnectedness from oneself and the world around, but that it also offers clues on how to design treatment approaches that work.

The results of the Collaborative Longitudinal Personality Disorders Study (CLPS) suggest reconceptualizing personality disorders as hybrids of stable personality traits and as intermittently expressed symptomatic behaviors that are attempts to cope with or defend against or compensate for these pathological traits (e.g. self-harm to reduce affective tension). However, when viewed from a communication perspective the distinction between personality traits and symptomatology is no longer important, as personality is viewed as the set of communication patterns an individual uses in the interactions with herself or himself and others. Even the nurture vs nature dichotomy becomes an academic question from a communication viewpoint, keeping in mind that due to the high plasticity of the brain the communication of information both changes and is changed by the neural network of the brain. The instability in borderline personality disorder comes from ineffective internal and external communication, which contributes to the intensely felt sense of disconnectedness in BPD. Psychotherapy is thus the obvious central pillar of treatment, while medication can be the additional support which helps bridging fears and transcending emotional and thought patterns that stand in the way of healing the condition.

More work is needed to understand the neurobiology of interpersonal dysfunction and attachment in borderline personality disorder. The available findings of neuroimaging studies lend support to the assumption of a dysfunctional frontolimbic network in borderline personality disorder. The exact molecular nature of this dysfunction is not yet clear. Future studies should include individuals who do not have borderline personality disorder (i.e. healthy controls and patients with axis I disorders or other personality disorders) to establish the specificity of findings.

High quality studies on pharmacotherapy are needed to improve the empirical support for its use in patients with borderline personality disorder, including studies of long-term effects and studies of the combination of pharmacotherapy and psychotherapy.

Conflicts of Interest

The author declares that he has no conflicts of interest.

References

Addis M, Linehan MM. Predicting suicidal behavior: psychometric properties of the Suicidal Behaviors Questionnaire. Poster presented at: Annual Meeting of the Association for the Advancement Behavior Therapy; November 2-5, 1989; Washington, DC.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders DSM-IV. Washington, DC: American Psychiatric Association, 1994.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington (VA):

American Psychiatric Association;2013.

American Psychiatric Association Practice Guidelines. Practice guideline for the treatment of patients with borderline personality disorder. American Psychiatric Association. Am J Psychiatry. 2001;158(10 Suppl):1-52. PubMed PMID: 11665545.

Altamura AC, Moliterno D, Paletta S, Buoli M, Dell'Osso B, Mauri MC, et al. Effect of quetiapine and norquetiapine on anxiety and depression in major psychoses using a pharmacokinetic approach. Clin Drug Investig. 2012;32(3):213-9. DOI: https://doi.org/10.2165/11597330-000000000-00000.

American Psychiatric Association. Practice Guidelines for the Treatment of Patients with Borderline Personality Disorder. Washington, DC: American Psychiatric Association; 2001.

Adityanjee A, Brown E, Thuras P. Quetiapine in patients with borderline personality disorder: an open-label trial. Ann Clin Psychiatry. 2008;20:219-226.

Barnicot K, Savill M, Bhatti N, Priebe S. A pragmatic randomised controlled trial of dialectical behaviour therapy: effects on hospitalisation and post-treatment follow-up. Psychother Psychosom. 2014;83(3):192-193.

Bateman A, Fonagy P. Effectiveness of partial hospitalization in the treatment of borderline personality disorder: a randomized controlled trial. Am J Psychiatry 1999; 156:1563–1569.

Bateman A, Fonagy P. Treatment of borderline personality disorder with psychoanalytically oriented partial hospitalization: an 18-month follow-up. Am J Psychiatry 2001; 158:36–42.

Bellino S, Paradiso E, Bogetto F. Efficacy and tolerability of quetiapine in the treatment of borderline personality disorder. J Clin Psychiatry. 2006;67(7):1042-6. DOI: https://doi.org/10.4088/JCP.v67n0705.

Bellino S, Paradiso E, Bogetto F. Oxcarbazepine in the treatment of borderline personality disorder: a pilot study. J Clin Psychiatry. 2005;66:1111-1115.

Bellino S, Paradiso E, Bogetto F. Efficacy and tolerability of aripiprazole augmentation in sertraline-resistant patients with borderline personality disorder. Psychiatry Res. 2008;161:206-212.

Bellino S, Paradiso E, Bozzatello P, et al. Efficacy and tolerability of duloxetine in the treatment of patients with borderline personality disorder: a pilot study. J Psychopharmacol. 2010;24:333-339.

Bellino S, Paradiso E, Bogetto F. Efficacy and tolerability of quetiapine in the treatment of borderline personality disorder: a pilot study. J Clin Psychiatry. 2006;67:1042-1046.

Bellino S, Paradiso E, Bogetto F. Efficacy and tolerability of aripiprazole augmentation in sertraline-resistant patients with borderline personality disorder. Psychiatry Res. 2008;161(2):206-12. DOI: https://doi.org/10.1016/j.psychres.2007.07.006.

Bellino S, Bozzatello P, Rinaldi C, Bogetto F. Paliperidone ER in the treatment of borderline personality disorder: a pilot study of efficacy and tolerability. Depress Res Treat. 2011;2011:680194. DOI: https://doi.org/10.1155/2011/680194.

Bender DS, Dolan RT, Skodol AE, et al. Treatment utilization by patients with personality disorders. Am J Psychiatry. 2001;158:295-302.

Benedetti F, Sforzini L, Colombo C, et al. Low-dose clozapine in acute and continuation treatment of severe borderline personality disorder. J Clin Psychiatry. 1998;59:103-107.

Benedetti F, Sforzini L, Colombo C, Maffei C, Smeraldi E. Low-dose clozapine in acute and continuation treatment of severe borderline personality disorder. J Clin Psychiatry. 1998;59(3):103-7. DOI: https://doi.org/10.4088/JCP.v59n0302.

Beri A, Boydell J. Clozapine in borderline personality disorder: a review of evidence. Ann Clin Psychiatry. 2014;26(2):139-44. PubMed PMID: 24812651.

Binks CA, Fenton M, McCarthy L, et al. Pharmacological interventions for people with borderline personality disorder. Cochrane Database Syst Rev. 2006;(1):CD005653.

Black DW, Zanarini MC, Romine A, Shaw M, Allen J, Schulz SC. Comparison of low and moderate dosages of extended-release quetiapine in borderline personality disorder: a randomized, double-blind, placebo-controlled trial. Am J Psychiatry. 2014;171(11):1174-82. DOI: https://doi.org/10.1176/appi.ajp.2014.13101348.

Bogenschutz MP, Nurnberg HG. Olanzapine versus placebo in the treatment of borderline personality disorder. J Clin Psychiatry. 2004;65(1):104-9. DOI: https://doi.org/10.4088/JCP.v65n0118.

Bogenschutz MP, Nurnberg GH. Olanzapine versus placebo in the treatment of borderline personality disorder. J Clin Psychiatry. 2004;65:104-109.

Bohus M, Haaf B, Stiglmayr C, Pohl U, Bohme R, Linehan M. Evaluation of inpatient dialectical-behavioral therapy for borderline personality disorder: a prospective study. Behav Res Ther 2000; 38:875–887.

Bongar B. The Suicidal Patient: Clinical and Legal Standards of Care. Washington, DC: American Psychological Association; 1991.

Bridler R, Häberle A, Müller ST, Cattapan K, Grohmann R, Toto S, et al. Psychopharmacological treatment of 2195 in-patients with borderline personality disorder: a comparison with other psychiatric disorders. Eur Neuropsychopharmacol. 2015;25(6):763-72. DOI:

https://doi.org/10.1016/j.euroneuro.2015.03.017.

Bryk AS, Raudenbush SW. Hierarchical Linear Models: Applications and Data Analysis Methods. Newbury Park, CA: Sage; 1992.

Carrasco JL, Palomares N, Marsá MD. Effectiveness and tolerability of long-acting intramuscular risperidone as adjuvant treatment in refractory borderline personality disorder. Psychopharmacology. 2012;224(2):347-8. DOI: https://doi.org/10.1007/s00213-012-2880-0. PubMed PMID: 23052570.

Carter GL, Clover K, Whyte IM, Dawson AH, D'Este C. Postcards from the EDge project: randomised controlled trial of an intervention using postcards to reduce repetition of hospital treated deliberate self poisoning. BMJ 2005; 331:805–807.

Carter GL, Clover K, Whyte IM, Dawson AH, D'Este C. Postcards from the EDge: 24-month outcomes of a randomised controlled trial for hospital-treated self-poisoning. Br J Psychiatry 2007; 191:548–553.

Chengappa KN, Ebeling T, Kang SJ. Clozapine reduces severe self mutilation and aggression in psychotic patients with borderline personality disorder. J Clin Psychiatry. 1999;60:477-484.

Chengappa KNR, Ebeling T, Kang JS, Levine J, Parepally H. Clozapine reduces severe self-mutilation and aggression in psychotic patients with borderline personality disorder. J Clin Psychiatry. 1999;60(7):477-84. DOI: https://doi.org/10.4088/JCP.v60n0710.

Clarkin JF, Levy KN, Lenzenweger MF, Kernberg OF. Evaluating three treatments for borderline personality disorder: a multiwave study. Am J Psychiatry 2007; 164:922–928.

Coccaro EF, Kavoussi RJ. Fluoxetine and impulsive aggressive behavior in personality-disordered subjects. Arch Gen Psychiatry. 1997;54:1081-1088.

Coombs DW, Miller HL, Alarcon R, Herlihy C, Lee JM, Morrison DP. Presuicide attempt communications between parasuicides and consulted caregivers. Suicide Life Threat Behav. 1992;22(3):289-302.

Cowdry RW, Gardner DL. Pharmacotherapy of borderline personality disorder. Alprazolam, carbamazepine, trifluoperazine, and tranylcypromine. Arch Gen Psychiatry. 1988;45:111-119.

de la Fuente JM, Lotstra F. A trial of carbamazepine in borderline personality disorder. Eur Neuropsychopharmacol. 1994;4:479-486.

Dunn LM. Peabody Picture Vocabulary Test–Revised. Circle Pines, MN: American Guidance Service; 1981.

Egger M, Davey Smith G, Schneider M, et al. Bias in meta-analysis detected by a simple, graphical test. BMJ. 1997;315:629Y634.

Ferreri MM, Loze J Y, Rouillon F, Limosin F. Clozapine treatment of a borderline personality disorder with severe self-mutilating behaviors. Eur Psychiatry. 2004;19(3):177-8. PubMed PMID: 15158928.

First MB, Spitzer RL, Gibbon M, Williams JBW. Structured Clinical Interview for Axis I DSM-IV Disorders–Patient Edition (SCID-I/P). New York: Biometrics Research Dept, New York State Psychiatric Institute; 1995.

First MB, Spitzer RL, Gibbons M, Williams JBW, Benjamin L. User's Guide for the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II). New York: Biometrics Research Dept, New York State Psychiatric Institute; 1996.

Frankenburg FR, Zanarini MC. Clozapine treatment of borderline personality disorder: a preliminary study. Compr Psychiatry. 1993;34:402-405.

Frankenburg FR, Zanarini MC. Divalproex sodium treatment of women with borderline personality disorder and bipolar II disorder: a double-blind placebo-controlled pilot study. J Clin Psychiatry. 2002;63:442-446.

Frankenburg FR, Zanarini MC. Clozapine treatment of borderline patients: a preliminary study. Compr Psychiatry. 1993;34(6):402-5. DOI: https://doi.org/10.1016/0010-440X(93)90065-C.

Friedel RO, Jackson WT, Huston CS, May RS, Kirby NL, Stoves A. Risperidone treatment of borderline personality disorder assessed by a borderline personality disorder-specific outcome measure. J Clin Psychopharmacol. 2008;28(3):345-7. DOI: https://doi.org/10.1097/JCP.0b013e318173083e.

Frogley C, Anagnostakis K, Mitchell S, Mason F, Taylor D, Dickens G, et al. A case series of clozapine for borderline personality disorder. Ann Clin Psychiatry. 2013;25(2):125-34. PubMed PMID: 23638443.

Furokawa TA, Barbui C, Cipriani A, et al. Imputing missing standard deviations in meta-analyses can provide accurate results. J Clin Epidemiol. 2006;59:7-10.

Goldberg SC, Schulz SC, Schulz PM, et al. Borderline and schizotypal personality disorders treated with low-dose thiothixene vs placebo. Arch Gen Psychiatry. 1986;43:680-686.

Glynn RJ, Buring JE. Ways of measuring rates of recurrent events. BMJ 1996; 312:364–367.

Gueorguieva R, Krystal JH. Move over ANOVA: progress in analyzing repeated-measures data and its refl ection in papers published in the Archives of General Psychiatry. Arch Gen Psychiatry 2004; 61:310–317.

Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry. 1960;23:56-62.

Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol. 1959;32(1):50-55.

Harley R, Sprich S, Safren S, Jacobo M, Fava M.

Adaptation of dialectical behavior therapy skills training group for treatment-resistant depression. J Nerv Ment Dis. 2008;196(2):136-143.

Haverkampf, C. J. (2010a). *Communication and Therapy* (3rd ed.). Dublin: Psychiatry Psychotherapy Communication Publishing Ltd.

Haverkampf, C. J. (2010b). *Inner Communication* (3rd ed.). Dublin: Psychiatry Psychotherapy Communication Publishing Ltd.

Hawthorne G, Herrman H, Murphy B. Interpreting the WHOQOLBref: preliminary population norms and effect sizes. Soc Ind Res 2006; 77:37–59

Hedges LV, Holkin I. Statistical Methods for Meta-Analysis. New York, NY: Academic Press; 1985.

Henderson S, Andrews G, Hall W. Australia's mental health: an overview of the general population survey. Aust N Z J Psychiatry 2000; 34:197–205.

Herpertz SC, Zanarini M, Schulz CS, Siever L, Lieb K, Möller HJ. World Federation of Societies of Biological Psychiatry (WFSBP) guidelines for biological treatment of personality disorders. World J Biol Psychiatry. 2007;8(4):212-44. DOI: https://doi.org/10.1080/15622970701685224. PubMed PMID: 17963189.

Herpertz SC, Zanarini M, Schulz CS, et al. WFSBP Task Force on Personality Disorders; World Federation of Societies of Biological Psychiatry (WFSBP). World Federation of Societies of Biological-Psychiatry (WFSBP) guidelines for biological treatment of personality disorders. World J Biol Psychiatry. 2007;8:212-244.

Hollander E, Tracy KA, Swann AC, et al. Divalproex in the treatment of impulsive aggression: efficacy in cluster B personality disorders. Neuropsychopharmacology. 2003;28:1186-1197.

Hollander E, Allen A, Prieto Lopez R, et al. A preliminary double-blind, placebo-controlled trial of divalproex sodium in borderline personality disorder. J Clin Psychiatry. 2001;62:199-203.

Ingenhoven T, Lafay P, Rinne T, et al. Effectiveness of pharmacotherapy for severe personality disorders: meta-analyses of randomized controlled trials. J Clin Psychiatry. 2010;71:14-25.

Hirvikoski T, Waaler E, Alfredsson J, et al. Reduced ADHD symptoms in adults with ADHD after structured skills training group: results from a randomized controlled trial. Behav Res Ther. 2011;49(3):175-185.

Kavoussi RJ, Liu J, Coccaro EF. An open trial of sertraline in borderline personality disordered patients with impulsive aggression. J Clin Psychiatry. 1994;55:137-141.

Kavoussi R, Coccaro E. Divalproex sodium for impulsive aggressive behavior in patients with personality disorder. J Clin Psychiatry. 1998;59:676-680.

Kernberg OF, Michels R. Borderline personality disorder. Am J Psychiatry. 2009;166:505-508.

Kirsch I, Deacon BJ, Huedo-Medina TB, et al. Initial severity and antidepressant benefits: a meta-analysis of data submitted to the Food and Drug Administration. PLoS Med. 2008;5(2):e45.

Khuri AI, Mathew T, Sinha BK. Statistical Tests for Mixed Linear Models. New York, NY: John Wiley & Sons; 1998.

King County Mental Health, Chemical Abuse and Dependency Services. King County mental health plan policies and procedures. Revision 2004-R1. 2015 version. http://www.kingcounty.gov/healthservices/MentalHealth/Policies%20and%20Procedures.aspx. Accessed …

Kjellander C, Bongar B, King A. Suicidality in borderline personality disorder. Crisis 1998; 19:125–135.

Kliem S, Kröger C, Kosfelder J. Dialectical behavior therapy for borderline personality disorder: a meta-analysis using mixed-effects modeling. J Consult Clin Psychol. 2010;78(6):936-951.

Koenigsberg HW, Reynolds D, Goodman M, et al. Risperidone in the treatment of schizotypal personality disorder. J Clin Psychiatry. 2003;64:628-634.

Koons CR, Chapman AL, Betts BB, O'Rourke B, Morse N, Robins CJ. Dialectical behavior therapy adapted for the vocational rehabilitation of significantly disabled mentally ill adults. Cognit Behav Pract. 2006;13(2):146-156.

Koons CR, Robins CJ, Tweed J et al. Effi cacy of dialectical behavior therapy in women veterans with borderline personality disorder. Behav Ther 2001; 32:371–390.

Kutcher S, Papatheodorou G, Reiter S, et al. The successful pharmacological treatment of adolescents and young adults with borderline personality disorder: a preliminary open trial of flupenthixol. J Psychiatry Neurosci. 1995;20:113-118.

Lambert D. Zero-inflated Poisson regression, with an application to defects in manufacturing. Technometrics. 1992;34:1-14.

Large M, Sharma S, Cannon E, Ryan C, Nielssen O. Risk factors for suicide within a year of discharge from psychiatric hospital: a systematic meta-analysis. Aust N Z J Psychiatry. 2011;45(8):619-628.

Lieb K, Vo¨llm B, Ru¨cker G, et al. Pharmacotherapy for borderline personality disorder: Cochrane systematic review of randomised trials. Br J Psychiatry. 2010;196:4-12.

Lieb K, Zanarini MC, Schmahl C, et al. Borderline personality disorder. Lancet. 2004;364:453-461.

Loranger AW. International Personality Disorder Examination (IPDE) Manual. White Plains, NY: Cornell Medical Center; 1995.

Linehan MM, Comtois KA, Brown MZ, Heard HL, Wagner A. Suicide Attempt Self-injury Interview (SASII): development, reliability, and validity of a scale to assess suicide attempts and intentional self-injury. Psychol Assess. 2006;18(3):303-312.

Linehan MM. Cognitive/behavioral treatment of borderline personality disorder. New York: Guildford, 1993.

Linehan MM, Goodstein JL, Nielsen SL, Chiles JA. Reasons for staying alive when you are thinking of killing yourself: the Reasons for Living Inventory. J Consult Clin Psychol. 1983;51(2):276-286.

Linehan MM. Cognitive-Behavioral Treatment of Borderline Personality Disorder. New York, NY: Guilford Press; 1993.

Linehan MM. DBT Skills Training Manual.2nd ed. New York, NY: Guilford Press; 2014.

Linehan MM, Schmidt H 3rd, Dimeff LA, Craft JC, Kanter J, Comtois KA. Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. Am J Addict 1999; 8:279–292.

Linehan MM, Dimeff LA, Reynolds SK et al. Dialectical behavior therapy versus comprehensive validation therapy plus 12-step for the treatment of opioid dependent women meeting criteria for borderline personality disorder. Drug Alcohol Depend 2002; 67:13–26.

Linehan MM, McDavid JD, Brown MZ, et al. Olanzapine plus dialectical behavior therapy for women with high irritability who meet criteria for borderline personality disorder: a double-blind, placebo-controlled pilot study. J Clin Psychiatry. 2008;69:999-1005.

Linehan MM. DBT Skills Training Handouts and Worksheets. New York, NY: Guilford Press; 2014.

Linehan MM, Comtois KA, Ward-Ciesielski EF. Assessing and managing risk with suicidal individuals. Cognit Behav Pract. 2012;19(2):218-232.

Linehan MM, Comtois KA. Lifetime parasuicidal count-2. Seattle: University of Washington, Behavioral and Therapy Clinics, 1996.

Linehan MM, Wagner AW, Cox G. Parasuicide history interview: Comprehensive assessment of parasuicidal behaviour. Seattle: University of Washington. 1989.

Linehan MM, Armstrong HE, Suarez A, Allmon D, Heard HL. Cognitive-behavioral treatment of chronically parasuicidal borderline patients. Arch Gen Psychiatry. 1991;48(12):1060-1064.

Linehan MM, Comtois KA, Murray AM, et al. Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. Arch Gen Psychiatry. 2006;63(7):757-766.

Linehan MM, Armstrong HE, Suarez A, Allmon D, Heard HL. Cognitive-behavioral treatment of chronically parasuicidal borderline patients. Arch Gen Psychiatry 1991; 48:1060–1064.

Linehan MM, Heard HL, Armstrong HE. Naturalistic follow-up of a behavioral treatment for chronically parasuicidal borderline patients. Arch Gen Psychiatry 1993; 50:971–974.

Linehan MM, Comtois KA, Murray AM et al. Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs therapy by experts for suicidal behaviors and borderline personality disorder. Arch Gen Psychiatry 2006; 63: 757–766.

Loew TH, Nickel MK, Muehlbacher M, et al. Topiramate treatment for women with borderline personality disorder: a double-blind, placebo-controlled study. J Clin Psychopharmacol. 2006;26:61-66.

Loranger AW, Janca A, Sartorius N. Assessment and diagnosis of personality disorders. Cambridge: Cambridge University Press, 1997.

Lynch TR, Morse JQ, Mendelson T, Robins CJ. Dialectical behavior therapy for depressed older adults: a randomized pilot study. Am J Geriatr Psychiatry. 2003;11(1):33-45.

Lynch TR, Morse JQ, Mendelson T et al. Dialectical behavior therapy for depressed older adults: a randomized pilot study. Am J Geriatr Psychiatry 2003; 11:33–45.

Markowitz PJ, Calabrese JR, Schulz SC, et al. Fluoxetine in the treatment of borderline and schizotypal personality disorders. Am J Psychiatry. 1991;148:1064-1067.

Markowitz PJ, Wagner S. Venlafaxine in the treatment of borderline personality disorders. Psychopharmacol Bull. 1995;31:773-777.

Martín-Blanco A, Patrizi B, Villalta L, Gasol X, Soler J, Gasol M, et al. Asenapine in the treatment of borderline personality disorder. Int Clin Psychopharmacol. 2014;29(2):120-3. DOI: https://doi.org/10.1097/YIC.0000000000000004.

McGlashan TH, Grilo CM, Sanislow CA et al. Two-year prevalence and stability of individual DSM-IV criteria for schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders: toward a hybrid model of axis II disorders. Am J Psychiatry 2005; 162:883–889.

McMain SF, Links PS, Gnam WH, et al. A randomized trial of dialectical behavior therapy versus general psychiatric management for borderline personality disorder. Am J Psychiatry. 2009;166(12):1365-1374.

Meares R, Stevenson J, Comerford A. Psychotherapy with borderline patients: I. A comparison between treated and

untreated cohorts. Aust N Z J Psychiatry 1999; 33:467–472.

Mercer D, Douglass AB, Links PS. Meta-analyses of mood stabilizers, antidepressants and antipsychotics in the treatment of borderline personality disorder: effectiveness for depression and anger symptoms. J Pers Disord. 2009;23:156-174.

National Collaborating Centre for Mental Health. Borderline personality disorder: the NICE GUIDELINE on treatment and management. National Clinical Practice Guideline No. 78. Leicester: British Psychological Society & Royal College of Psychiatrists;2009.

National Collaborating Centre for Mental Health. Borderline Personality Disorder: Treatment and Management. Full Guideline. Clinical Guideline 78. NICE, 2009 (http://www.nice.org.uk/nicemedia/pdf/CG78FullGuideline.pdf).

National Health and Medical Research Council. Clinical practice guideline for the management of borderline personality disorder. Melbourne: National Health and Medical Research Council;2012.

Neacsiu AD, Eberle JE, Kramer R, Wiesmann T, Linehan MM. Dialectical behavior therapy skills for transdiagnostic emotion dysregulation: a pilot randomized controlled trial. Behav Res Ther. 2014;59:40-51.

Neacsiu AD, Rizvi SL, Linehan MM. Dialectical behavior therapy skills use as a mediator and outcome of treatment for borderline personality disorder. Behav Res Ther. 2010;48(9):832-839.

Nickel M, Nickel C. Topiramate treatment of aggression in female borderline personality disorder patients: a double-blind, placebo-controlled study. J Clin Psychiatry. 2004;65:1515Y1519.

Nickel M. Treatment of aggression with topiramate in male borderline patients. A double-blind, placebo-controlled study. Biol Psychiatry. 2005;57:495-499.

Nickel MK, Muehlbacher M, Nickel C, et al. Aripiprazole in the treatment of patients with borderline personality disorder: a double-blind, placebo-controlled study. Am J Psychiatry. 2006;163:833-838.

Nickel MK, Muehlbacher M, Nickel C, Kettler C, Gil FP, Bachler E, et al. Aripiprazole in the treatment of patients with borderline personality disorder: a double-blind, placebo-controlled study. Am J Psychiatry. 2006;163(5):833-8. DOI: https://doi.org/10.1176/ajp.2006.163.5.833.

Nickel MK, Loew TH, Gil FP. Aripiprazole in treatment of borderline patients, part II: an 18-month follow-up. Psychopharmacology. 2007;191(4):1023-6. DOI: https://doi.org/10.1007/s00213-007-0740-0.

Nose` M, Cipriani A, Biancosino B, et al. Efficacy of pharmacotherapy against core traits of borderline personality disorder: meta-analysis of randomized controlled trials. Int Clin Psychopharmacol. 2006;21: 345-353.

Olabi B, Hall J. Borderline personality disorder: current drug treatments and future prospects. Ther Adv Chronic Dis. 2010;1(2):59-66. DOI: https://doi.org/10.1177/2040622310368455.

Oldham JM. Borderline personality disorder and suicidality. Am J Psychiatry. 2006;163:20-26.

Oldham JM. Practice Guideline for the Treatment of Patients with Borderline Personality Disorder. Arlington, VA: American Psychiatric Association; 2005.

Paris J. Is hospitalization useful for suicidal patients with borderline personality disorder? J Pers Disord 2004; 18: 240–247.

Paris J. Pharmacological treatments for personality disorders. Int Rev Psychiatry. 2011;23(3):303-9. DOI: https://doi.org/10.3109/09540261.2011.586993.

Parker GF. Clozapine and borderline personality disorder. Psychiatric Serv. 2002;53(3):348-9. DOI: https://doi.org/10.1176/appi.ps.53.3.348-a.

Pascual JC, Soler J, Puigdemont D, et al. Ziprasidone in the treatment of borderline personality disorder: a double-blind, placebo-controlled, randomized study. J Clin Psychiatry. 2008;69:603-608.

Pascual JC, Oller S, Soler J, Barrachina J, Alvarez E, Pérez V. Ziprasidone in the acute treatment of borderline personality disorder in psychiatric emergency services. J Clin Psychiatry. 2004;65(9):1281-3. DOI: https://doi.org/10.4088/JCP.v65n0918b.

Paton C, Crawford MJ, Bhatti SF, Patel MX, Barnes TRE. The use of psychotropic medication in patients with emotionally unstable personality disorder under the care of UK mental health services. J Clin Psychiatry. 2015;76(4):e512-8. DOI: https://doi.org/10.4088/JCP.14m09228. PubMed PMID: 25919844.

Pascual JC, Martín-Blanco A, Soler J, Ferrer A, Tiana T, Alvarez E, et al. A naturalistic study of changes in pharmacological prescription for borderline personality disorder in clinical practice: from APA to NICE guidelines. Int Clin Psychopharmacol. 2010;25(6):349-55. DOI: https://doi.org/10.1097/YIC.0b013e32833e23ed.

Pascual JC, Soler J, Puigdemont D, Perez-Egea R, Tiana T, Alvarez E, et al. Ziprasidone in the treatment of borderline personality disorder. J Clin Psychiatry. 2008;69(4):603-8. DOI: https://doi.org/10.4088/JCP.v69n0412.

Perrella C, Carrus D, Costa E, Schifano F. Quetiapine for the treatment of borderline personality disorder; an open-label study. Prog Neuro Psychopharmacol Biol Psychiatry. 2007;31(1):158-63. DOI:

https://doi.org/10.1016/j.pnpbp.2006.08.012.

Perrella C, Carrusa D, Costa E, et al. Quetiapine for the treatment of borderline personality disorder; an open-label study. Prog Neuropsychopharmacol Biol Psychiatry. 2007;31:158-163.

Platt S, Hawton K, Kreitman N, Fagg J, Foster J. Recent clinical and epidemiological trends in parasuicide in Edinburgh and Oxford: a tale of two cities. Psychol Med 1988; 18: 405–418.

Rathus JH, Miller AL. Dialectical behavior therapy adapted for suicidal adolescents. Suicide Life Threat Behav 2002; 32: 146–157.

Reich DB, Zanarini MC, Bieri KA. A preliminary study of lamotrigine in the treatment of affective instability in borderline personality disorder. Int Clin Psychopharmacol. 2009;24:270-275.

Rinne T, van den Brink W. SSRI treatment of borderline personality disorder: a randomized, placebo-controlled clinical trial for female patients with BPD. Am J Psychiatry. 2002;159:2048-2054.

Rocca P, Marchiaro L, Cocuzza E, Bogetto F. Treatment of borderline personality disorder with risperidone. J Clin Psychiatry. 2002;63(3):241-4. DOI: https://doi.org/10.4088/JCP.v63n0311.

Rocca P, Marchiaro L, Cocuzza E, et al. Treatment of borderline personality disorder with risperidone. J Clin Psychiatry. 2002;63:241-244.

Roepke S, Merkl A, Dams A, et al. Preliminary evidence of improvement of depressive symptoms but not impulsivity in cluster B personality disorder patients treated with quetiapine: an open label trial. Pharmacopsychiatry. 2008;41:176-181.

Roepke S, Merkl A, Dams A, Ziegenhorn A, Anghelescu I, Heuser I, et al. Preliminary evidence of improvement of depressive symptoms but not impulsivity in cluster B personality disorder patients treated with quetiapine: an open label trial. Pharmacopsychiatry. 2008;41(5):176-81. DOI: https://doi.org/10.1055/s-2008-1076730.

Romine A, Brown E, Thuras P, Lee S, Schulz SC. Quetiapine in patients with borderline personality disorder: an open-label trial. Ann Clin Psychiatry. 2008;20(4):219-26. DOI: https://doi.org/10.1080/10401230802467545.

Safer DL, Robinson AH, Jo B. Outcome from a randomized controlled trial of group therapy for binge eating disorder: comparing dialectical behavior therapy adapted for binge eating to an active comparison group therapy [published correction appears in Behav Ther. 2010;41(3):432]. Behav Ther. 2010;41(1):106-120.

Safer DL, Telch CF, Agras WS. Dialectical behavior therapy for bulimia nervosa. Am J Psychiatry 2001; 158:632–634.

Salzman C, Wolsfon A, Schatzberg A, et al. Effect of fluoxetine on anger in symptomatic volunteers with borderline personality disorder. J Clin Psychopharmacol. 1995;15:23-29.

Scheel KR. The empirical basis of dialectical behavior therapy: summary, critique, and implications. Clin Psychol Sci Pract 2000;7:68–86.

Schulz SC, Zanarini MC, Bateman A, Bohus M, Detke HC, Trzaskoma Q, et al. Olanzapine for the treatment of borderline personality disorder: variable dose 12-week randomised double-blind placebo-controlled study. Br J Psychiatry. 2008;193(6):485-92. DOI: https://doi.org/10.1192/bjp.bp.107.037903.

Schulz SC, Camlin KL, Berry SA, Jesberger JA. Olanzapine safety and efficacy in patients with borderline personality disorder and comorbid dysthymia. Biol Psychiatry. 1999;46(10):1429-35. DOI: https://doi.org/10.1016/S0006-3223(99)00128-6.

Schulz SC, Camlin KL, Berry SA, et al. Olanzapine safety and efficacy in patients with borderline personality disorder and comorbid dysthymia. Biol Psychiatry. 1999;46:1429-1435.

Schulz SC, Zanarini MC, Bateman A, et al. Olanzapine for the treatment of borderline personality disorder: variable dose 12-week randomised double-blind placebo-controlled study. Br J Psychiatry. 2008;193: 485-492.

Shoja-Shafti S. Treatment of borderline personality disorder with olanzapine. Arch Iran Med. 2006;9(4):403-5. PubMed PMID: 17061615.

Shoja-Shafti S. Treatment of borderline personality disorder with olanzapine. Arch Iranian Med. 2006;9:403-405

Simpson EB, Yen S, Costello E, et al. Combined dialectical behavior therapy and fluoxetine in the treatment of borderline personality disorder. J Clin Psychiatry. 2004;65:379Y385.

Soler J, Pascual JC, Campins J, Barrachina J, Puigdemont D, Alvarez E, et al. Double-blind, placebo-controlled study of dialectical behavior therapy plus olanzapine for borderline personality disorder. Am J Psychiatry. 2005;162(6):1221-4. DOI: https://doi.org/10.1176/appi.ajp.162.6.1221.

Soler J, Pascual JC, Tiana T, et al. Dialectical behaviour therapy skills training compared to standard group therapy in borderline personality disorder: a 3-month randomised controlled clinical trial. Behav Res Ther. 2009;47(5):353-358.

Soloff PH, George A, Nathan RS, et al. Progress in pharmacotherapy of borderline disorders. A double-blind study of amitriptyline, haloperidol, and placebo. Arch Gen Psychiatry. 1986;43:691-697.

Soloff PH, Cornelius JR, George A. Efficacy of phenelzine and haloperidol in borderline personality disorder. Arch Gen Psychiatry. 1993;50:377-385.

Stevenson J, Meares R. An outcome study of psychotherapy for patients with borderline personality disorder. Am J Psychiatry 1992; 149:358–362.

Stoffers JM, Vollm BA, Rucker G, Timmer A, Huband N, Lieb K. Psychological therapies for people with borderline personality disorder. Cochrane Database Syst Rev. 2012;8:CD005652.

Stroup WW. Generalized Linear Mixed Models: Modern Concepts, Methods and Applications. New York, NY: Chapman & Hall/CRC Press; 2012.

Stanley B, Brodsky B, Nelson JD, Dulit R. Brief dialectical behavior therapy (DBT-B) for suicidal behavior and non-suicidal self injury. Arch Suicide Res 2007; 11:337–341.

Stein D, Simeon D, Frenkel M, et al. An open trial of valproate in borderline personality disorder. J Clin Psychiatry. 1995;56:506-510.

Stoffers JM, Völlm BA, Rücker G, Timmer A, Huband N, Lieb K. Psychological therapies for people with borderline personality disorder. Cochrane Database Syst Rev. 2012;8:CD005652.DOI: https://doi.org/10.1002/14651858.CD005652.pub2.

Swenson CR. How can we account for DBT's widespread popularity? Clin Psychol Sci Pract. 2000;7(1):87-91.

Teicher MH, Glod CA, Aaronson ST, et al. Open assessment of the safety and efficacy of thioridazine in the treatment of patients with borderline personality disorder. Psychopharmacol Bull. 1989;25:535-549.

Telch CF, Agras WS, Linehan MM. Dialectical behavior therapy for binge eating disorder. J Consult Clin Psychol. 2001;69(6):1061-1065.

Torhorst A, Möller HJ, Bürk F, Kurz A, Wächtler C, Lauter H. The psychiatric management of parasuicide patients: a controlled clinical study comparing different strategies of outpatient treatment. Crisis. 1987;8(1):53-61.

Tritt K, Nickel C, Lahmann C. Lamotrigine treatment of aggression in female borderline-patients: a randomized, double-blind, placebo-controlled study. J Psychopharmacol. 2005;19:287-291.

Trull TJ, Stepp SD, Durrett CA. Research on borderline personality disorder: an update. Curr Opin Psychiatry 2003; 16: 77–82.

Valentine SE, Bankoff SM, Poulin RM, Reidler EB, Pantalone DW. The use of dialectical behavior therapy skills training as stand-alone treatment: a systematic review of the treatment outcome literature. J Clin Psychol. 2015;71(1):1-20.

van der Sande R, van Rooijen L, Buskens E, et al. Intensive in-patient and community intervention versus routine care after attempted suicide: a randomised controlled intervention study. Br J Psychiatry. 1997;171:35-41.

Van den Eynde F, Senturk V, Naudts K, et al. Efficacy of quetiapine for impulsivity and affective symptoms in borderline personality disorder. J Clin Psychopharmacol. 2008;28:147-155.

Van den Eynde F, Senturk V, Naudts K, Vogels C, Bernagie K, Thas O, et al. Efficacy of quetiapine for impulsivity and affective symptoms in borderline personality disorder. J Clin Psychopharmacol. 2008;28(2):147-55. DOI: https://doi.org/10.1097/JCP.0b013e318166c4bf.

Van den Eynde F, De Saedeleer S, Naudts K, Day J, Vogels C, van Heeringen C, et al. Quetiapine treatment and improved cognitive functioning in borderline personality disorder. Hum Psychopharmacol. 2009;24(8):646-9. DOI: https://doi.org/10.1002/hup.1075.

Villeneuve E, Lemelin S. Open-label study of atypical neuroleptic quetiapine for treatment of borderline personality disorder: impulsivity as a target. J Clin Psychiatry. 2005;66:1298-1303.

Villeneuve E, Lemelin S. Open-label study of atypical neuroleptic quetiapine for treatment of borderline personality disorder. J Clin Psychiatry. 2005;66(10):1298-1303. DOI: https://doi.org/10.4088/JCP.v66n1013.

Von Korff M, Ustun TB, Ormel J, Kaplan I, Simon GE. Self-report disability in an international primary care study of psychological illness. J Clin Epidemiol 1996; 49:297–303.

Verheul R, van den Bosch LM, Koeter MW, De Ridder MA, Stijnen T, van den Brink W. Dialectical behaviour therapy for women with borderline personality disorder: 12-month, randomised clinical trial in The Netherlands. Br J Psychiatry 2003; 182:135–140.

Walter M, Gunderson JC, Zanarini MC, et al. New onset of substance abuse disorders in borderline personality disorder over 7 years of follow-up: findings from the Collaborative Longitudinal Personality Disorders Study. Addiction. 2009;104:97-103.

Waterhouse J, Platt S. General hospital admission in the management of parasuicide: a randomised controlled trial. Br J Psychiatry. 1990;156:236-242.

White SJ, Freedman LS. Allocation of patients to treatment groups in a controlled clinical study. Br J Cancer. 1978;37(5):849-857.

WHOQOL Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. Psychol Med 1998;28:551–558.

Whyte IM, Dawson AH, Buckley NA, Carter GL, Levey CM. A model for the management of self-poisoning. Med J Aust 1997;167:142–146.

Wong MTH, Tye C. Low hospital inpatient readmission rate in patients with borderline personality disorder: a naturalistic study at Southern Health, Victoria, Australia. Aust N Z J Psychiatry 2005; 39:607–611.

Zanarini MC, Frankenburg FR, Dubo ED, et al. Axis I comorbidity of borderline personality disorder. Am J Psychiatry. 1998;155:1733-1739.

Zanarini MC, Frankenburg FR, Khera GS, et al. Treatment histories of borderline inpatients. Compr Psychiatry. 2001;42:144-150.

Zanarini MC, Frankenburg FR, Hennen J, et al. The longitudinal course of borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. Am J Psychiatry. 2003;160:274-283.

Zanarini MC. Update on pharmacotherapy of borderline personality disorder. Curr Psychiatry Rep. 2004;6:66-70.

Zanarini MC, Frankenburg FR, Hennen J, Silk KR. Mental health service utilization by borderline personality disorder patients and Axis II comparison subjects followed prospectively for 6 years. J Clin Psychiatry. 2004;65(1):28-36. DOI: https://doi.org/10.4088/JCP.v65n0105.

Zanarini MC, Schulz SC, Detke HC, Tanaka Y, Zhao F, Lin D, et al. A dose comparison of olanzapine for the treatment of borderline personality disorder. J Clin Psychiatry. 2011;72(10):1353-62. DOI: https://doi.org/10.4088/JCP.08m04138yel

Zanarini MC, Schulz SC, Detke H, Zhao F, Lin D, Pritchard M, et al. Open-label treatment with olanzapine for patients with borderline personality disorder. J Clin Psychopharmacol. 2012;32(3):398-402. DOI: https://doi.org/10.1097/JCP.0b013e3182524293.

Zanarini MC, Frankenburg FR. Olanzapine treatment of female borderline personality disorder patients. J Clin Psychiatry. 2001;62(11):849-54. DOI: https://doi.org/10.4088/JCP.v62n1103.

Zanarini MC, Vujanovic AA, Parachini EA, Boulanger JL, Frankenburg FR, Hennen J. Zanarini rating scale for borderline personality disorder (ZAN-BPD): a continuous measure of DSM-IV borderline psychopathology. J Pers Disord. 2003;17(3):233-42. PubMed PMID: 12839102.

Zanarini MC, Frankenburg FR. Olanzapine treatment of female borderline personality disorder patients: a double-blind, placebo-controlled pilot study. J Clin Psychiatry. 2001;62:849-854.

.