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Perceived Criticism in Relation to the Dialectical Behavior Therapy Network Training in a Residential Program: A Pre-Post Study

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Abstract

Perceived Criticism (PC) is a transdiagnostic construct that captures the patients' perception of criticism. PC seems to be a reliable predictor of negative clinical outcomes concerning recurrence of symptoms or relapse in a broad range of stress-related psychiatric disorders and is thought to be related to underlying stress-related psychobiological vulnerabilities. Dialectical Behavior Therapy (DBT) is a treatment targeting these stress-related psychobiological vulnerabilities. In this pilot study we focus on the possible change in Perceived Criticism due to a (residential) DBT network training. This study follows a pre-post design where PC is recorded in 33 patients (mean age 25 years) and 61 relatives during 8 group sessions of a DBT network training, as part of a residential DBT program. The degree of perceived criticism is systematically assessed using the Perceived Criticism Measure, a two item self-report questionnaire that assesses mutual (perceived) criticism from patients and network members. Overall scores of the perceived criticism measure decrease significantly for both patients and relatives after following the DBT network training. More specific, item scores of both patients and relatives concerning how critical they are towards the other and how critical they thought the other was of them also decreased significantly after following the DBT network training. Findings suggest that a DBT network training as part of a residential DBT program may be instrumental in decreasing levels of perceived criticism. We recommend further exploration of Perceived Criticism as a possible moderator in effect size studies in randomized controlled clinical trials on DBT and in more fundamental research on the putative mechanisms of behavioral change such as improved perspective taking, and the evaluation of social cues.

Key words: perceived criticism, emotion dysregulation, biological vulnerabilities, Dialectical Behavior Therapy, contextual neuropsychology.

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Novelty and Significance

What is already known about the topic?

- Perceived Criticism is a transdiagnostic construct that captures the individual's perception of criticism assessed by the perceived criticism measure.
- The Perceived Criticism Measure seems to be a reliable predictor of negative clinical outcomes concerning recurrence of symptoms or relapse in a broad range of stress-related psychiatric disorders.

What this paper adds?

- The findings point at the possible value of a (residential) Dialectical Behavior Therapy network training for the reduction of perceived criticism in both patients and their relatives.
- This reduction might be considered as a protective condition with regard to possible negative clinical outcomes.

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Perceived Criticism (PC) is a transdiagnostic construct that captures the individual's perception of criticism. It reflects how critical a person believes a relative is towards them and is assessed by the Perceived Criticism Measure (PCM; Hooley and Teasdale, 1989). The PCM captures criticism and perceived criticism by two questions, respectively, "How critical are you towards your relative?" and "How critical do you think your relative is of you?". The PCM seems to be a reliable predictor of negative clinical outcomes concerning recurrence of symptoms or relapse in a broad range of stress-related psychiatric disorders (for an overview, see Masland & Hooley, 2015; Masland, Drabu, & Hooley, 2019; Renshaw, 2007). Furthermore, not only clinical outcomes for patients are associated with PC. Research suggests that high levels of expressed emotions (EE), including elevated criticism in challenging interpersonal dynamics, are associated with greater burden for caregivers of patients as well (Baily & Grenver, 2015; Kirtley, Chiocchi, Cole, & Sampson, 2019).

Little research has focused on the underlying mechanisms behind the predictive value of PC. Research suggests that PC is an independent construct (Masland *et alia*, 2019) and that both psychopathology and demographic characteristics do not explain the predictive value of PC (Hooley & Teasdale, 1989; Masland & Hooley, 2015; Masland *et alia*, 2019; Renshaw, 2007). Pulopulos, Boccagno, De Raedt, and Hooley (2021) had the substantiated hypothesis that the predictive value of PC might be related to the level of functioning of the stress regulation system. More specifically, in this study, the psychophysiological differences in response to a social stress task in young women with high and low PC were investigated. They found that women with a high PC score anticipate more on social threats and interpretations and have less active coping when they are exposed to socially stressful events. This supports the assumption that PC is indeed associated with underlying stress-related psychobiological vulnerabilities that contribute to its association with negative clinical outcomes. So far, research mainly focusses on understanding the underlying mechanisms and the construct of PC. Although Masland and Hooley (2015) recommended in their review that given the growing evidence that PC is a key transdiagnostic construct to understand clinical outcomes, future research should focus on altering PC in targeted interventions. Given the assumption of Pulopulos *et alia* (2021), a treatment targeting stress-related psychobiological vulnerabilities could be appropriate for altering PC.

Dialectical Behavior Therapy (DBT) is a treatment that focusses on psychobiological vulnerabilities. DBT is an empirically supported treatment program developed by Marsha Linehan for individuals with severe emotion dysregulation problems (Linehan, 1993, 2015). The biosocial theory assumes that the disruption of the emotional regulation is the result of a complex and longitudinal transaction between someone with emotional vulnerabilities (the biological component, the stress system) and their (invalidating) environment (the social component). Examples of the biological component include trait impulsivity (Beauchaine, Hinshaw, & Pang, 2010; Beauchaine & Gatzke-Kopp, 2012; Beauchaine & McNulty, 2013; Caspi & Silva, 1995), trait anxiety (Gray & McNaughton, 2007) and emotional sensitivity (Forbes & Dahl, 2005). Chronic and pervasive emotion dysregulation lead to the disruption of a person's emotional life on both an individual (identity, behavior, cognition) and interpersonal level (rejection, sensitivity, difficulties in belonging, cooperation, chronic loneliness and negative self-esteem) (Lis & Bohus, 2013).

As mentioned before, multiple papers suggest to give more attention to PC within clinical treatment (Kirtley *et alia,* 2019; Pulopulos *et alia*, 2021; Masland & Hooley 2015). Until now, few studies have focused on altering perceived criticism by a targeted

intervention. This current study is the first to pilot possible change in perceived criticism due to a (residential) DBT network training. It did so by including the DBT network training in an existing residential DBT program. The network training was given to patients and their relatives. To assess changes in interpersonal judgment, we measured perceived criticism with patients and their relatives before and after the network training. It was hypothesized that after following the DBT network training, patients and their relatives would be less critical of each other.

Method

Participants

This study comprises 33 female patients aged 17-50 (*M*= 25.3 years, *SD*= 8.6) who all participated in a step-down DBT program at Jelgersma Center for Personality Disorders, a therapy program based on Linehan's protocol (Linehan, 1993, 2015) modified for a residential setting by van den Bosch, Sinnaeve, Hakkaart-van Roijen, and van Furth (2014). This program consisted of 3 months residential DBT plus 6 months of outpatient DBT. All patients met the criteria for Borderline Personality Disorder (BPD) according to the Dutch version of the *Structured Clinical Interview for DSM-IV Axis II personality disorders* (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997; Weertman, Arntz, & Kerkhofs, 2000) and showed a severe level of borderline symptomatology (>24 on the *Borderline Severity Index* -BPDSI; Arntz *et alia*, 2003) with parasuicidal behavior present in the last month preceding the start of residential DBT. Other inclusion criteria were adequate understanding of the Dutch language and acceptable travelling distance from the study center in Leiden, the Netherlands. Exclusion criteria are described in van den Bosch *et alia* (2014) and included among others intellectual disabilities, major psychiatric disease, and previous DBT treatment.

The network training was considered as a part of the residential DBT program and took place within the first 3 months of the step-down DBT program. Participation in the network training was a free choice. It was permitted for patients to bring family members, partners, friends, or other persons of importance to them to the DBT network training and there was no restriction to the number of invitees. There were 33 patients that followed the network training and brought one or two relatives with them, two of them followed it without their relatives. The network group consisted of 61 relatives: mothers (*n*= 21), fathers (*n*= 16), partners (*n*= 11), sisters (*n*= 6) and friends (*n*= 7). All patients and network members were asked to sign a written informed consent about the use of the data for scientific purposes. Patients were informed about the residential program through an extensive script that was discussed during an appointment with a professional that was involved in the residential program. Patients were informed that all information would be anonymously processed, and all participants gave informed consent and permission to make video recordings of therapy sessions.

Measures

The Perceived Criticism Measure (PCM, Hooley & Teasdale, 1989), consists of two questions that are rated on a 10-point likert scale from not critical at all to extremely critical. The first question 'How critical do you thing your relative is of you?' has been used as a valid indicator of overall criticism in families (Hooley & Miklowitrz, 2017; Renshaw, 2007). The second question is 'How critical are you towards your relative?' Both patients and relatives self-rated their level of (perceived) criticism at

the start of the first DBT network session and after 16 weeks at the end of the last DBT network session. Although there is no recommended cut-off, higher scores reflect higher levels of criticism, a score above 6 raises concern about an increased relapse risk (Masland & Hooley, 215) and the measure appears to be most informative when relatives are persons whom patients live with (Renshaw, 2007).

Intervention

The residential DBT treatment program was centered around the standard elements of DBT: a weekly skills training and individual therapy. This program was supplemented with daily mindfulness classes, daily meetings concerning living together as a group, weekly drama therapy, weekly group sessions on validation skills and chain analyses. The program lasted for 3 months during which a support staff was present during office hours to help the patients apply DBT skills (van den Bosch *et alia*, 2014).

The DBT network training was based on the network training of Hoffman, Fruzzetti, and Swenson (1999) and consisted of 8 sessions of two hours including a break (see Table 1 for the content of the sessions). The DBT network training was led by experienced skills trainers from the DBT team who received supervision on a regular basis by a certified DBT clinician.

Table 1. Topic and goals of the DBT network training per session.

DBT network meeting	Topic	Goals
1 & 2	Psycho-education: information about BPD, DBT, emotion dysregulation, the biosocial theory, case management strategies.	Inform patients and relatives.
3	Mindfulness	Bring the emotional mind and rational mind into balance and come to a wise mind.
4	Interpersonal Effectiveness	Achieving desired changes, maintaining relations, and self-respect in interpersonal conflicts.
5	Emotion Regulation	Understanding emotions, decrease emotional vulnerability and emotional suffering.
6	Distress Tolerance	Overcome crisis by accepting both yourself and the present situation in a non-evaluating and non-judgmental way.
7	All DBT skills discussed previous	
8	All DBT skills discussed previous	

The structure of these sessions was identical starting with a mindfulness exercise, followed by an overview of the content of the current session, then a summarization of the theory of the previous session, a discussion of the homework assignments, short intermission, and lastly the introduction and practice of new theory. Participants were asked to prepare for a session by reading the corresponding chapter of the skills training manual. During each session an overview of the associated skills was presented, and homework assignments were discussed that corresponded with the module at hand. For instance, when interpersonal skills were subject, skills that were learned is how to describe a situation properly without judgements, express feelings, assert wishes, stay mindful, appear confident, negotiate, be gentle etcetera. They learned how to use these skills to deal with everyday issues, and subsequently how to practice these by filling in homework sheets together. At the end of the last meeting the group discussed how to continue practicing the DBT skills.

Procedure

All patients participated in an intensified adapted DBT program, which consisted of 3 months residential DBT plus 6 months of outpatient DBT (van den Bosch et alia, 2014). Patients could choose who they wanted to participate in the DBT network training. In clinical practice, this meant that mothers, fathers, partners, friends, and siblings were invited in person by the patients to join the DBT network training with them. At the start and at the end of the last network-training session everyone was asked to fill in the PC scale.

Data collection took place from 2012-2014, when residential DBT was provided by the *Jelgersma Centre*. In the last part of this period, the study of the effectivity of residential DBT treatment took place (Sinnaeve, van den Bosch, Hakkaart-van Roijen, & Vansteelandt, 2018) but the collection of data of the network training was not included in the study protocol. The scientific commission and the board of *GGZ Rivierduinen* agreed to support the execution of the data collection.

Data Analysis

Statistical analyses are performed with SPSS for windows version 22. The impact of the residential DBT network training is determined by paired sample *t*-tests. Scores of the perceived criticism measure before and after following the DBT network training were compared. All tests where two-tailed tests and alpha was set at $p < .05$. To determine the size of the effect, Cohen's *d* is calculated.

Results

First, the total score is examined, which includes the two PC items together. The perceived criticism scores of both patients (PCM-P) and relatives (PCM-R) were significantly higher before the DBT network training than after the training with a large effect (Table 2 and Figure 1).

Table 2. Scores of the Perceived Criticism scale (PC) for patients and relatives.

	Pre-Training	Post-Training	Outcomes			
	M (*SD*)	*M* (*SD*)	*T*	*Df*	*p*	Cohen's *d*
PCM-P (N33)	6.91 (1.84)	5.01 (1.47)	7.90	32	<.001	1.38
PCM-R (N61)	6.54 (1.40)	4.89 (0.99)	7.57	30	<.001	1.36

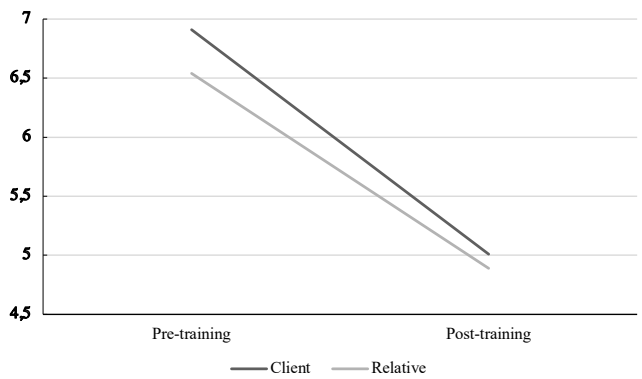

Figure 1. Pre and post scores of the Perceived Criticism scale for patients and relatives.

Next, differences in PC scale scores were also examined per item. The scores of both patients and their relatives concerning how critical they think the other is towards them decreased significantly following the DBT network training, with a large effect (Table 3). Furthermore, the scores of both patients and their relatives concerning how critical they are towards the other, also decreased significantly after following the DBT network training, with a large effect (Table 3).

Table 3. Scores of the subitems of the PCM for patients and relatives.

	Pre Training	Post Training	Outcomes			
	M (*SD*)	*M* (*SD*)	*T*	*Df*	*P*	*Cohen's d*
Item: "How critical do you think your relative is towards you?"						
PCM-P (*n*= 33)	7.48 (1.69)	5.27 (1.49)	7.16	32	<.001	1.25
PCM-R (*n*= 61)	6.91 (2.19)	5.30 (1.60)	6.21	30	<.001	1.12
Item: "How critical do you think you are towards your relative?"						
PCM-P (*n*= 33)	6.34 (2.39)	4.75 (1.92)	5.76	32	<.001	1.00
PCM-R (*n*= 61)	6.16 (1.43)	4.48 (0.96)	5.77	30	<.001	1.04

Discussion

To the best of our knowledge, this is the first study to examine the possible change in perceived criticism due to a (residential) DBT network training. We found a significant decrease of perceived criticism both in patients and relatives after following the DBT network training. More specific, the levels of how critical they think the other is towards them and how critical they are towards the other decreased significantly. Given the large effect sizes, this may be considered a relevant finding, although the specific mechanisms underlying the indicated change remain unclarified. The findings also show that perceived criticism rates for both patients and relatives are higher than 6 before the DBT network training. Although there is no official cut-off score, Masland and Hooley (2015) described an increased relapse risk by PC scores above 6. After following the DBT network training PC-levels dropped which might be considered a more desirable condition with regard to possible negative clinical outcomes. While the results of this exploratory study seem to be in line with our initial hypothesis that DBT would be a useful treatment for altering PC, any definitive conclusion would be preliminary.

From an explanatory perspective, first, emotion regulation capacity has to be mentioned. This transdiagnostic and dimensional construct is thought to play a key role in a broad range of mental illnesses (Sloan, Hall, Moulding, Bryce, Mildred, & Staiger, 2017; Caspi & Moffitt, 2018; Ruggero *et alia*, 2019; Mulay *et alia*, 2019). If we assume that PC is associated with underlying stress-related psychobiological vulnerabilities than it makes sense that DBT could alter PC rates because the development of DBT is based on the biosocial theory that relates to stress-related psychobiological vulnerabilities (Fruzetti, Shenk, & Hoffman, 2005; Sinnaeve *et alia*, 2021). The latest Cochrane meta-analysis about the effects of psychological treatments for BPD confirm that DBT is especially effective in reducing inappropriate anger and Non-Suicidal Self-Injury (NSSI) as well as in improving general functioning (Storebø *et alia,* 2020).

Another possible explanation for the predictive value of PC in treatment outcome, as mentioned by Masland and Hooley (2015), is because it measures how much criticism 'is getting through' to the individual (Hooley & Teasdale, 1989). It may be related to the amount of criticism there objectively is in the person's social environment, but it

may also be linked to the person's experience of what is meant as criticism and what leads to interpersonal disturbances. These disturbances have received significant attention in BPD research. Instability in relationships is one of the most profound symptoms in BPD (Gunderson, 2007, 2011). Individuals with BPD are likely to evaluate social cues in a negative way and to notice criticism or rejection where others would not (Domsalla, Koppe, Niedtfeld, Vollstädt-Klein, Schmahl, Bohus, & Lis, 2014). As a result, interpersonal problems develop. Since individuals with BPD are prone to feeling rejected or to experiencing criticism, they tend to avoid social relationships which ultimately result in feelings of abandonment or loneliness (Thome, Liebke, Bungert, Schmahl, Domes, Bohus, & Lis, 2016). Furthermore, it is known that family members of individuals with BPD themselves suffer, more than average, from affective and interpersonal problems like anger, affective instability, emptiness, intense unstable relationships and fear of abandonment (Gunderson, Zanarini, Choi-Kain, Mitchell, Jang, & Hudson, 2011). As a result, they are more likely to form an invalidating environment and a negative spiral of emotions and reactions between relatives and patients ensues whereby disruption of interpersonal contact leads to increased reactivity to social stressors (Deckers, Lobbestael, van Wingen, Kessels, Arntz, & Egger, 2015) and to higher rates of perceived criticism. Given previous research it is likely that both relatives and network members may have benefited from the DBT skills that they learned in the DBT network training.

Cognitive behavioral explanations for changes in PC would encompass changes in perspective taking, which is defined as the ability to see the world from both the own and the others' perspective (David, Bewernick, Cohen, Newen, Lux, Fink, Shah, & Vogeley, 2006). It is an important feature of social cognition and interpersonal communication that can be trained to help develop empathy and adequate reaction to others and consists of affective, cognitive and behavioral elements (Hendriks, Barnes-Holmes, McEnteggart, De Mey, Janssen, & Egger, 2016; Teding van Berkhout, & Malouff, 2016). As to the latter two, it could be that a change in perspective taking is directly influenced by role playing and group activities during the DBT network training since patients and family members are asked to take each other's perspective and learn and train new behavior and social skills during the various training sessions. These are forms of active learning (Van Ments, 1999) that are considered to be highly effective and superior to passive learning when developing new skills (e.g., Holsbrink-Engels, 2001; Bell, 2001). Finally, Montgomery-Graham (2016) shows that DBT enhances perspective taking skills by making automatic or indirect thoughts, feelings, and behavior more explicit, for example through the process of chain analysis. The combination of more explicit mentalization with interpersonal skills learned in DBT can help patients to better influence control their behavior instead of being led by impulsive, automatic responses.

While an important strength of this study is the fact that it has been conducted in a clinical setting and with a heterogeneous sample of patients representative for the population, there are several methodological and other limitations to this study that may hamper the generalization of its results and of which at least the following three need to be mentioned here. First and most importantly, because this pilot study on perceived criticism was conducted via convenience sampling, i.e., by integrating DBT network training in an existing residential DBT treatment program, we lacked the possibility of contrasting our findings with that of a control group, hence, there is no certainty whether the DBT network training or the residential DBT treatment causes specific altering in PC. Secondly, the PC scale is a two-item scale with straightforward content that has not been designed to yield refined differentiation between interpersonal contact in general or

criticism in a broad sense. It has been proven, however, to be a valid indicator of this transdiagnostic construct (Hooley & Miklowitrz, 2017; Renshaw, 2007). A final point is that the results may have been influenced by the fact that the residential DBT program was a national program with well-trained and experienced staff and highly motivated participants with high illness burden. These circumstances might have had a limiting effect on the external validity of the results.

Notwithstanding these limitations, the findings of the current pilot study point at the possible value of a (residential) DBT network training for the reduction of perceived criticism in both patients and their relatives. The underlying mechanisms causing change in PC remain unclarified. Multiple hypotheses are described in this paper and from the literature, there is growing evidence that perceived criticism is a key transdiagnostic construct to understand clinical outcomes. Involving PC more systematically in research on targeted treatments seems to be a logical step.

In future studies, particularly the underlying mechanisms that influence the change in perceived criticism should be investigated. The (added) value of the network training should be tested in a high-quality randomized controlled study (RCT) where patients enrolled in a standard DBT program randomly participate in the network training. An alternative for this RCT would be to use an interrupted time series design with a control group, given the fact that multiple DBT therapists in the Netherlands already give the network training. Measurements should take place throughout the whole study, preferably after every session, and have to contain instruments that capture change in BPD symptomatology, perspective taking and perceived criticism. This way, the relationship between DBT treatment, network training and perceived criticism can be further clarified.

References

Arntz A, van den Hoorn M, Cornelis J, Verheul R, van den Bosch WMC, & de Bie AJHT (2003). Reliability and Validity of the Borderline Personality Disorder Severity Index. *Journal of Personality Disorders*, *17*, 45-59. Doi: 10.1521/pedi.17.1.45.24053

Bailey RC & Grenyer BFS (2015). The relationship between expressed emotion and wellbeing for families and carers of a relative with Borderline Personality Disorder: Expressed emotion in borderline disorder. *Personality and Mental Health*, *9*, 21-32. Doi: 10.1002/pmh.1273

Beauchaine TP & Gatzke-Kopp LM (2012). Instantiating the multiple levels of analysis perspective in a program of study on externalizing behavior. *Development and Psychopathology*, *24*, 1003-1018. Doi: 10.1017/S0954579412000508

Beauchaine TP, Hinshaw SP, & Pang KL (2010). Comorbidity of attention-deficit/hyperactivity disorder and early-onset conduct disorder: Biological, environmental, and developmental mechanisms. *Clinical Psychology: Science and Practice*, *17*, 327-336. Doi: 10.1111/j.1468-2850.2010.01224.x

Beauchaine TP & McNulty T (2013). Comorbidities and continuities as ontogenic processes: Toward a developmental spectrum model of externalizing psychopathology. *Development and Psychopathology*, *25* (4pt2), 1505-1528. Doi: 10.1017/S0954579413000746

Bell M (2001). Online Role-Play: Anonymity, Engagement and Risk. *Educational Media International*, *38*, 251-260. Doi: 10.1080/09523980110105141

Caspi A & Silva PA (1995). Temperamental Qualities at Age Three Predict Personality Traits in Young Adulthood: Longitudinal Evidence from a Birth Cohort. *Child Development*, *66*, 486. Doi: 10.2307/1131592

Caspi A & Moffitt TE (2018). All for one and one for all: Mental disorders in one dimension. American Journal of Psychiatry, *175*, 831-844. Doi: 10.1176/appi.ajp.2018.17121383.

David N, Bewernick BH, Cohen MX, Newen A, Lux S, Fink GR, Shah NJ & Vogeley K (2006). Neural Representations of Self versus Other: Visual-Spatial Perspective Taking and Agency in a Virtual Ball-tossing Game. *Journal of Cognitive Neuroscience*, *18*, 898-910. Doi: 10.1162/jocn.2006.18.6.898

Deckers JWM, Lobbestael J, van Wingen GA, Kessels RPC, Arntz A, & Egger JIM (2015). The influence of stress on social cognition in patients with borderline personality disorder. *Psychoneuroendocrinology*, *52*, 119-129. Doi: 10.1016/j.psyneuen.2014.11.003

Domsalla M, Koppe G, Niedtfeld I, Vollstädt-Klein S, Schmahl C, Bohus M, & Lis S (2014). Cerebral processing of social rejection in patients with borderline personality disorder. *Social Cognitive and Affective Neuroscience*, *9*, 1789-1797. Doi: 10.1093/scan/nst176

First MB, Gibbon, M., Spitzer RL, Williams JB, & Benjamin LS (1997). *Structured clinical interview for DSM-IV® axis ii personality disorders SCID-II*. American Psychiatric Pub.

Forbes, E. E., & Dahl, R. E. (2005). Neural systems of positive affect: Relevance to understanding child and adolescent depression? *Development and Psychopathology*, *17,* 827-850. Doi: 10.1017/S095457940505039X

Fruzzetti AE, Shenk C, & Hoffman PD (2005). Family interaction and the development of borderline personality disorder: A transactional model. *Development and Psychopathology*, *17*, 1007-1030. Doi: 10.1017/S0954579405050479

Gray JA & McNaughton N (2007). *The neuropsychology of anxiety: An enquiry into the function of the septo-hippocampal system* (2 Ed). London: Oxford Univ. Press.

Gunderson JG (2007). Disturbed Relationships as a Phenotype for Borderline Personality Disorder. *American Journal of Psychiatry*, *164*, 1637-1640. Doi: 10.1176/appi.ajp.2007.07071125

Gunderson JG (2011). Ten-Year Course of Borderline Personality Disorder: Psychopathology and Function from the Collaborative Longitudinal Personality Disorders Study. *Archives of General Psychiatry*, *68*, 827-837. Doi: 10.1001/archgenpsychiatry.2011.37

Gunderson JG, Zanarini MC, Choi-Kain LW, Mitchell KS, Jang KL, & Hudson JI (2011). Family Study of Borderline Personality Disorder and Its Sectors of Psychopathology. *Archives of General Psychiatry*, *68*, 753-762. Doi: 10.1001/archgenpsychiatry.2011.65

Hendriks AL, Barnes-Holmes Y, McEnteggart C, De Mey HRA, Janssen GTL, & Egger JIM (2016). Understanding and Remediating Social-Cognitive Dysfunctions in Patients with Serious Mental Illness Using Relational Frame Theory. *Frontiers in Psychology*, *7*. Doi: 10.3389/fpsyg.2016.00133

Hoffman PD, Fruzzetti A, & Swenson C (1999). Dialectical Behavior Therapy-Family Skills Training. *Family Process*, *38*, 399-414. Doi: 10.1111/j.1545-5300.1999.00399.x

Holsbrink-Engels GA (2001). Using a computer learning environment for initial training in dealing with social-communicative problems. *British Journal of Educational Technology*, *32*, 53-67. Doi: 10.1111/1467-8535.00176

Hooley JM & Teasdale JD (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress, and perceived criticism. *Journal of Abnormal Psychology*, *98*, 229-235. Doi: 10.1037/0021-843X.98.3.229

Hooley JM & Miklowitz DJ (2017). Perceived Criticism in the Treatment of a High-Risk Adolescent. *Journal of Clinical Psychology*, *73*, 570-578.

Kirtley J, Chiocchi J, Cole J, & Sampson M (2019). Stigma, Emotion Appraisal, and the Family Environment as Predictors of Carer Burden for Relatives of Individuals Who Meet the Diagnostic Criteria for Borderline Personality Disorder. *Journal of Personality Disorders*, *33*, 497-514. Doi: 10.1521/pedi_2018_32_355

Linehan M (1993). *Skills training manual for treating borderline personality disorder*. New York: The Guilford Press.

Linehan M (2015). *DBT skills training manual* (Second edition). New York: The Guilford Press.

Lis S & Bohus M (2013). Social Interaction in Borderline Personality Disorder. *Current Psychiatry Reports*, *15*, 338. Doi: 10.1007/s11920-012-0338-z

Montgomery-Graham S (2016). DBT and Schema Therapy for Borderline Personality Disorder: Mentalization as a Common Factor. *Journal of Contemporary Psychotherapy*, *46*, 53-60. Doi: 10.1007/s10879-015-9309-0

Masland SR & Hooley JM (2015). Perceived criticism: A research update for clinical practitioners. *Clinical Psychology: Science and Practice, 22*, 211-222.

Masland SR, Drabu S, & Hooley JM (2019). Is perceived criticism an independent construct? Evidence for divergent validity across two samples. *Journal of Family Psychology, 33*, 133-142.

Mulay AL, Waugh MH, Fillauer JP, Bender DS, Bram A, Cain NM, Caligor E, Forbes MK, Goodrich LB, Kamphuis JH, Keeley JW, Krueger RF, Kurtz JE, Jacobsson P, Lewis KC, Rossi GMP, Ridenour JM, Roche M, Sellbom M, Sharp C, & Skodol AE (2019). Borderline personality disorder diagnosis in a new key. *Borderline Personality Disorder and Emotion Dysregulation, 6*, 1-16. Doi: 10.1186/s40479-019-0116-1.

Pulopulos MM, Boccagno C, De Raedt R, & Hooley JM (2021). Attenuated beta-adrenergic response to stress

and increased anticipation and perception of social threat in women high on perceived criticism. *Psychoneuroendocrinology, 133*, 105421.

Renshaw KD (2007). Perceived criticism only matters when it comes from those you live with. *Journal of Clinical Psychology, 63*, 1171-1179.

Ruggero CJ, Kotov R, Hopwood CJ, First M, Clark LA, Skodol AE, Mullins-Sweatt SN, Patrick CJ, Bach B, Cicero DC, Docherty A, Simms LJ, Bagby RM, Krueger RF, Callahan JL, Chmielewski M, Conway CC, De Clercq B, Dornbach-Bender A, Eaton NR, Forbes MK, Forbush KT, Haltigan JD, Miller JD, Morey LC, Patalay P, Regier DA, Reininghaus U, Shackman AJ, Waszczuk MA, Watson D, Wright AGC, & Zimmermann, J. (2019). Integrating the Hierarchical Taxonomy of Psychopathology (HiTOP) into clinical practice. *Journal of Consulting and CLinical Psychology, 87*, 1069. Doi: 10.1037/ccp0000452.

Sinnaeve R, van den Bosch WMC, Hakkaart-van Roijen L, & Vansteelandt K (2018). Effectiveness of step-down versus outpatient dialectical behaviour therapy for patients with severe levels of borderline personality disorder: A pragmatic randomized controlled trial. *Borderline Personality Disorder and Emotion Dysregulation*, *5*, 12. Doi: 10.1186/s40479-018-0089-5

Sinnaeve R, Vaessen T, Van Diest I, Myin-Germeys I, Van den Bosch LM, Vrieze E, KamphuiS JE, & Claes S (2021). Investigating the stress-related fluctuations of level of personality functioning: A critical review and agenda for future research. *Clinical Psychology & Psychotherapy, 28*, 1181-1193. Doi: 10.1002/cpp.2566

Sloan E, Hall K, Moulding R, Bryce S, Mildred H, & Staiger PK (2017). Emotion regulation as a transdiagnostic treatment construct across anxiety, depression, substance, eating and borderline personality disorders: A systematic review. *Clinical psychology review, 57*, 141-163. Doi: 10.1016/j.cpr.2017.09.002.

Storebø OJ, Stoffers-Winterling JM, Völlm BA, Kongerslev MT, Mattivi JT, Jørgensen MS, Faltinsen E, Todorovac A, Sales CP, Callesen HE, Lieb K, & Simonsen E (2020). Psychological therapies for people with borderline personality disorder. *Cochrane Database of Systematic Reviews*, *8*. Doi: 10.1002/14651858.CD012955.pub2

Teding van Berkhout E & Malouff JM (2016). The efficacy of empathy training: A meta-analysis of randomized controlled trials. *Journal of Counseling Psychology*, *63*, 32-41. Doi: 10.1037/cou0000093

Thome J, Liebke L, Bungert M, Schmahl C, Domes G, Bohus M, & Lis S (2016). Confidence in facial emotion recognition in borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment*, *7*, 159-168. Doi: 10.1037/per0000142

van den Bosch WMC, Sinnaeve R, Hakkaart-van Roijen L, & van Furth EF (2014). Efficacy and cost-effectiveness of an experimental short-term inpatient Dialectical Behavior Therapy (DBT) program: Study protocol for a randomized controlled trial. *Trials*, *15*, 152. Doi: 10.1186/1745-6215-15-152

Van Ments M (1999). *The effective use of role play: Practical techniques for improving learning*. London: Kogan Page Publishers.

Weertman A, Arntz A, & Kerkhofs M (2000). *Gestructureerd diagnostisch interview voor DSM-IV persoonlijkheidsstoornissen (SCID II)* [Structural and Clinical Interview for DSM-IV personality disorders (SCID II)]. Lisse, The Netherlands: Swets Test.

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