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Case Report

The utilisation of deep brain reorienting (DBR) in the treatment of two clients with dissociative identity disorder (DID)

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ABSTRACT

Objective: To (i) describe how the deep brain reorienting (DBR) theory can be applied in understanding the development of dissociative identity disorder (DID) and (ii) describe the implementation of the DBR method in two single cases with clients with DID.

Methods: This study aimed to assess the effectiveness of deep brain reorienting psychotherapy (DBR) related to the DBR theory as a lens of understanding of the development and treatment of DID, exemplified with two single-case vignettes of clients presenting DID. In the first part of the paper, the theory of DBR is briefly discussed in relation to the development of DID, a condition where severe relational trauma and adjacent childhood traumatisation is hypothesized to be connected to the development of the symptomatology. In the second part, two single-case studies with two DID-clients diagnosed with SCID-D aim to provide initial evidence of how clients with DID experienced and responded to DBR therapy as part of longer phase specific therapies. The client of case I was treated with 30 DBR sessions and the client of case II was treated with 70 DBR sessions. Their pre- and post-DBR treatment measures consisted of instruments to measure PTSD and complex PTSD symptoms, psychoform and somatoform dissociation, general symptomatology, and access to positive states of mind. The outcome measures were assessed through percentage of nonoverlapping data (PND) a nonparametric measure used to assess the effectiveness of interventions in single-case experimental designs (SCEDs). The clients also provided verbal and written statements regarding their experiences during and after the DBR intervention.

Results: After the introduction of DBR in their therapies, when measured by the posttraumatic checklist (PCL-5), the international trauma questionnaire (ITQ), the somatoform dissociation questionnaire (SDQ-5), the Dissociative Experiences Scale II (DES-II), the DES-taxon (DES-T), the Symptom Checklist–90 revised (SCL–90-R), the symptomatology of client I was significantly lowered on all measures apart from the SDQ-5 when analysed with PND. For client II the measurements on PCL-5, SDQ-5 and SCL-90-R were significantly lowered. Their self-assessed positive states of mind, measured with the PSOM-scale, were heightened. Both clients expressed that DBR was a valuable treatment modality through their summarized verbal and written statements.

Conclusions: After 30 respectively during 70 DBR sessions, the clients' dissociation and comorbid symptoms decreased significantly, as measured by self-assessments measures and analysed with PND. Thus, a preliminary cautious enthusiasm is reasonable. Clients with DID may benefit from DBR. Future research is required to address generalizability to a larger population of dissociative clients. To examine whether DBR can be a treatment of choice for highly dissociative clients, including DID, pilot studies followed by RCTs on the efficacy of DBR in treatment of dissociative disorders are warranted. Deepened phenomenological and neuroscientific assessments to verify the feasibility and change agency of DBR in treatment of dissociative disorders are asked for.

Introduction

Dissociative identity disorder (DID) is a disabling condition where treatments often are long and burdensome. Even if phase specific treatment is recommended (International Society for the Study of Trauma and Dissociation, 2011) and phase 1 treatment of dissociative disorders (Steele et al., 2005) is evidence based (Brand et al., 2022; Jepsen et al., 2013, 2014), the following psychotherapeutic working through of traumatic events is complex and demanding in this population. The DID client often experienced a plethora of attachment

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wounding, neglect and sexual and physical abuse and other childhood adversities. Shocking experiences, especially when young and un-attuned, can lead to a truncation of the active defences mediated in the dorsal and dorsolateral columns of the periaqueductal gray (PAG) in the midbrain (Corrigan et al., 2023), meanwhile the child developing a DID repeatedly is forced into neurochemical capping of overwhelming negatively loaded affects (Lanius et al., 2018). This might be the starting point of development towards structural dissociation (Kearney & Lanius, 2024; Corrigan et al., 2023), a condition where components of the personality have become divided from each other due to extreme stress (Van der Hart & Steele, 2023).

The development of DID is associated with interpersonal traumatisation, characterised by elevated levels of depersonalization and significant discontinuities in self-ownership and agency (DSM 5-TR 2022). Most individuals diagnosed with DID also meet the criteria for post-traumatic stress disorder (PTSD), particularly of a dissociative subtype (Lotfinia et al., 2020). However, the presence of more severe and early-onset abuse has been observed to differentiate DID from other trauma-induced disorders (Boon & Draijer, 1993; Dorahy et al., 2014) including adverse attachment experiences (Dutra et al., 2009; Farina et al., 2019; Lyons-Ruth et al., 2006). Raison and Andrea (2023) found in their systematic review of data from 1990 to 2022 that childhood trauma seemed more correlated to DID than other disorders. The prevalence of DID among the general population has been documented to range from 1 % to 1.5 % (Tyson & Brand, 2017; Loewenstein et al., 2024) and occurs in chronic outpatients with an average of 5 % (Loewenstein et al., 2024). The condition is often underdiagnosed (Brand et al., 2016a, 2016b; Hawayek, 2023).

Early and ongoing exposure to adverse childhood experiences (ACEs) (Felitti et al., 1998; Anda et al., 2006; Novais et al., 2021) was found to increase the levels of stress hormones during critical periods of development and attachment disruptions have been demonstrated to impinge on brain development (Herman, 2011; Schore, 2009). Child maltreatment led to complex refractory posttraumatic conditions, where maltreated individuals developed psychiatric disorders at an earlier age, have more comorbidities, greater symptom severity, and respond less favourably to treatments than non-maltreated individuals with the same primary DSM-5 diagnosis (Teicher et al., 2022). Furthermore, alterations in stress-susceptible brain regions, hypothalamic-pituit ary-adrenal (HPA) response, and inflammatory processes not discernible in their non-maltreated counterparts were found (Teicher et al., 2022). In addition, studies have identified resilience factors (Teicher et al., 2022). The dissociative use of the brain's functional networks speculatively constitutes part of these factors. Specific structural and functional brain alterations have been demonstrated in DID (Lotfinia et al., 2020; Purcell et al., 2024) including a hyperconnectivity of their central executive networks (CEN) to their default mode networks (DMN) (Lanius et al., 2020), supposedly helping them to use executive functioning to not register information from their own systems. At the same time, a hyperconnectivity of their PAG towards their sensorimotor networks (SMN), and of their posterior DMN to their SMN make the traumatised person prone to re-experiencing and relive trauma-related symptoms (Kearney et al., 2024). The hypothesis is that a lessened connectivity between the anterior and posterior nodes of their DMNs may explain the traumatized person's lowered ability to mentally 'time travel' and recall the past while maintaining a focus on the present (Bluhm et al., 2009; Kearney et al., 2023a; Kearney & Lanius, 2024). The dissociative phenomena and shutdown that dissociative persons struggle with in sessions and in life could be an effect of the mentioned alterations impacting the connectivity of their brain's macroscale networks. Such alterations occur in cases of early traumatisation (Blithikioti et al., 2022) and subsequently in DID (Chalavi et al., 2015a, 2015b; Purcell et al., 2024). It is argued that suddenly aversive experiences engage the locus coeruleus of the brainstem. Then a widespread noradrenergic activation mediated from the locus coeruleus impacts the thalamus and cortex such that the balance of functioning within the cortex becomes disturbed. A subjective experience of chronic dissociation and depersonalization results (Frau & Corrigan, 2025). In such experiences shock is likely an amplifier of the affects activated through the PAG. The shock response thus enhances learning. A learning that supposedly impacts how the brain's intrinsic networks will cooperate.

The sketched theoretical framework supports the use of the deep brain reorienting (DBR) method as a trauma therapy modality in treatment of DID, as depersonalization can be seen as a cortical adaptation to traumatic experiences (Kearney & Lanius, 2022), or an epiphenomenon of the brainstem's responses to them (Frau & Corrigan, 2025). These cortical adaptations might continue long after the initial stimuli have been withdrawn from the environment, and will, among other things, lead to an overdependence to past experience as compared to conscious awareness of here and now (Corrigan et al., 2023), a fragile experience of ownership of the body and trauma-impacted memory systems (Kearney & Lanius, 2024). Also, trauma-bound ego states are hypothesized to be intracortical phenomena due to earlier and ongoing neurochemical dissociation (Lanius et al., 2014).

According to Ledoux and Hofmann (2018) the most direct way to assess conscious emotions is through verbal self-report, a first-person-perspective (Nijenhuis, 2017) concretizing reality of human subjectivity and agency and the active and acting side of everyday practice (Schraube, 2014). From such perspective episodes of meeting in psychotherapy, understood as shared implicit mechanisms that allow changes in the implicit relational domain, are lived and remembered by clients in significant ways (Duarte et al., 2020). Though, when arousal or fright is unconscious or, since long truncated and capped through neurochemical dissociation (Lanius et al., 2014; Corrigan et al., 2023), we might need therapy methods that can reach and soothe that source of dysregulation. The underlying hypothesis of DBR Corrigan and Christie-Sands, 2020) suggests that the method targets the regulatory hubs of the brainstem and the midbrain. These structures regulate higher limbic and cortical regions of the brain. DBR can be defined as a whole-mind intervention in the treatment of DID, and a single case is published (Gerge et al., 2025).

The last part of the article will focus on two clinical vignettes with two clients with DID where DBR was incorporated in their therapies. DBR is a trauma therapy that pays particular attention to pre-affective shock experiences (Corrigan & Christie-Sands, 2020). As the antecedents of DID include numerous shocking and dysregulating experiences, it was of interest to investigate if DBR, a therapy model informed by the neuroanatomy and neurophysiology of the brainstem and the midbrain could be of help when easing and transforming longstanding residuals of severe childhood traumatization in DID. The shocking experiences included among other experiences in case I, eight out of 10 ACEs scores, and in case II, 10 out of 10 ten ACEs in up-bringings where children were violated with no soothing comfort. This have affected the two clients' subjective embodied sense of self and their life-worlds.

Dissociative identity disorder (DID)

The impact of childhood abuse and neglect on the personality and thus the neurobiology of the developing brain has been a subject of considerable research in recent years. Teicher et al., 2016b and Teicher et al. (2022) have highlighted how childhood traumatization impacts on the brain's neuroanatomy, while others have focused on the functional networks. The hyperconnectivity of the DMN and the CEN may underlie the failure to adaptively integrate aspects of identity and consciousness (Menon, 2023). Such excess corticolimbic inhibition may, according to Purcell et al. (2024) help the person with a PTSD of a dissociative subtype or DID-person to not feel the body. Consequently, when the active defences transition to a passive state (when the endoopioids are released according to Lanius et al. (2014) and Corrigan et al. (2023), the individual enters a state of numbing, mental disengagement and avoidance of interoception, often described as fading away. This unconscious strategy may offer a temporary alleviation of pain and suffering, yet it

can result in an elevated threat response. In the case of a traumatised child, the physiological and functional neurological changes may result in a persistent sense of fear, heightened arousal, and an escalation of stress responses, which can further compromise self-regulation, agency, and interpersonal relationships (Teicher & Samson, 2016a). Distinct neuroanatomy changes were found in DID (Blihar et al., 2020).

The development of DID may be associated with early childhood maltreatment that is perceived as inescapable (Loewenstein et al., 2024), and the presence of D-attachment is frequently observed (Lyons-Ruth et al., 2006). The younger and more dependent on malevolent others, the more detrimental it is for a young child, who, according to Lebois et al. (2022, 2023), may develop into an adult characterised by disruptions in the sense of self, perceptions and affective responses. DID is characterised by the presence of multiple distinct states of being (Putnam, 2016) within a single individual, each exhibiting varying degrees of interaction with intrusions that are characterised by trauma and depersonalization. The DID syndrome is regarded as biologically authentic with distinct neurobiological markers (Purcell et al., 2024), a long-lasting neurochemical response to threat and attachment dysregulation (Corrigan et al., 2023), a coping mechanism developed in early childhood (Loewenstein, 2023), and a phenomenologically distinct mode of existence (Reinders et al., 2014; Lebois et al., 2021, 2022). The phenomenon of DID can be conceptualised as a psychological response developed during early childhood as an adaptation to an interpersonal environment, where particularly caregivers are perceived as hostile or threatening (Liotti, 2013; van der Hart, 2018). It is hypothesised that an innate high capacity to enter hypnotic states and/or to dissociate is necessary for developing DID (Dell, 2009; Dorahy et al., 2014, 2015; Kluft, 1988, 1991; 2009, 2012; Purcell et al., 2024).

A DID person's sense of self is often characterised by states that switch between hypo-arousal and lowered levels of consciousness that, seemingly suddenly, shift to heightened arousal (Loewenstein et al., 2024; Lebois et al., 2022). These vicious and bewildering dynamics are burdensome. When different states of being (Putnam, 2016; Loewenstein & Putnam, 2023), supposedly related to a trauma-related structural dissociation (Van der Har et al., 2006; Van der Hart & Steele, 2023), shift this might depend on neurochemical dissociation (Lanius et al., 2014). In peritraumatic dissociation the ventrolateral PAG in the midbrain might exude endoopioids when active defence responses are not enough or are truncated. Such peritraumatic neurochemical dissociation might be the basis for development of structural dissociation and separate trauma bound ego states (Corrigan et al., 2023).

When meeting or being in looming situations, especially when a potential threat is close (Mobbs et al., 2007) the brain shifts from dominance of cortical functioning to a hierarchical subcortical mobilisation of defence responses (Corrigan et al., 2023) namely the defence cascade (Kozlowska et al., 2015; Terpou et al., 2019b) with active defences for fight and flight before passive defences becoming active when there is nowhere to escape to. Affective and defensive responses of the brain are mediated from the PAG in the midbrain and the hypothalamus. During unescapable fright, despair, immobility and collapse may follow, supposedly mediated through release of the endoopioids from the PAG. Neurochemical dissociation is a peritraumatic response to overwhelming affect mediated by both endocannabinoids and endoopioids (Corrigan et al., 2023). Kluft (1989) described the condition that follows as the "sitting duck syndrome" occuring when a child is unable to escape or confront adverse circumstances, leading to "the traumatic deformation of the observing ego and debasement of the mind's cognitive structures and schemata.", p 487. The chronic evocation of defence responses, that it once was not possible to act on, can, over time, engender profound feelings of helplessness and a negatively valenced PAG and a low capacity for self-soothing (Krystal & Krystal, 1988). Potentially the ability to disengage from sensory experiences through numbing was once a coping mechanism that helped to avoid being overwhelmed by unbearable pain when no adequate support was available from others. While such unconscious neurobiologically driven strategy may offer a temporary reprieve, this can potentially impede the development of a sense of self and hinder the ability to engage with life events from a first-person perspective (Lutz et al., 2024; Nijenhuis, 2017). This has long-lasting consequences and individuals with DID, diagnosed or not, frequently present to therapy as seemingly depressed and withdrawn, seeking to conceal their bewilderment associated with their shifting states of being, depersonalization and deficits in integrative capacity.

If the impact of psychological trauma and attachment wounds on the brain can be seen as the relational antecedents of DID, the essence of pathological dissociation is, according to Liotti (1999a, 1999b, 2009), a break in attention and consciousness leading to a breakdown of self-regulation. These neurochemically driven awake trauma-induced trance states (Gerge, 2009) once arose when the child was attachment seeking and threat responding in situations with no relief. The expressed or internally felt trance-like unintegrated states are common in persons with multiple internal schemas of disorganized attachment. If a child's early attachment relations are characterized by constant "affective communication errors" (Lyons-Ruth, 2003), the child will develop segregated or dissociative areas within Schimmenti (2023). These are considered to arise from adverse attachment experiences (Dutra et al., 2009; Farina et al., 2019; Lyons-Ruth et al., 2006) and childhood traumatisation (Brand et al., 2016a, 2016b). An upbringing with repetitive vehement traumatising events in a non-soothing environment will give attachment woundings as the child's needs are not met. Preverbal internal working models (Bowlby, 1973) as "I'm a bad child" will arise. Thus, shame and other primary affects (Panksepp, 1998) will contribute to a toxic mixture of emotional shock trauma that causes immediate disturbance of the subjective sense of the embodied self. Theoretically, shame can be considered a basic affect (Corrigan & Elkin, 2018; Lanius et al., 2014). When shocking events are repeated and the child is constantly abused and shamed a fright of being oneself can become chronified. Such chronified shame is a central aspect of emotion dysregulation in dissociative disorders and DID (Kearney & Lanius, 2024; Dorahy et al., 2015; Ford, 2025). According to Herman (2011) children with type-D attachment and betrayal trauma scripts (Yalch & Robbins, 2025), are more prone to a dissociative development, due to severe shame experiences when seeking attachment and comfort from unpredictable caregivers.

Frau and Corrigan (2025) described the neurobiological consequences of verbal abuse as a hyperactivation of the innate alarm system driving the depersonalization process. If the growing child on top of verbal abuse is exposed of several adverse childhood events (ACE; Felitti et al., 1998; Felitti, 2009; Hughes et al., 2017) the wise child experiencing utter helplessness and no help of others will, through neurobiologically driven inherent activation patterns stop recognising the experiences of the self. A growing self that experiences severe physical and sexual abuse in milieus with lack of care and emotional soothing, will be overwhelmed by generalised fear and shut down. To stay present with ongoing shock, aloneness, terror and panic is unbearable.

The rationale for incorporating deep brain reorienting in treatment of dissociative identity disorder

The dissociative disintegration in DID might be driven neurobiologically and impact hippocampus and prefrontal cortex (Van der Hart & Steele, 2023). If so, with the expanding knowledge of the importance of the midbrain and the brainstem as integrative hubs and their important ascending impact on the whole brain (Corrigan et al., 2023; Kearney & Lanius, 2022, 2024) DBR as a treatment modality ought to be of interest. Deep brain reorienting (DBR) (Corrigan & Christie-Sands, 2020; Corrigan et al., 2025) offers a psychotherapy method guided by the neuroanatomy of the brainstem and the midbrain aiming at addressing the deep brain's dysregulation. After the evidence-based stabilisation phase (Jepsen et al., 2013, 2014; Brand et al., 2022), where grounding together with activation of a good enough relational safety is established including self-soothing

techniques (Gerge, 2018), DBR seems to offer a treatment possibility. Potentially persons suffering from dissociative disorders can change their long-term structural dissociation and depersonalization through DBR treatment (Frau & Corrigan, 2025).

From a DBR perspective DID is considered the result of a genetic predisposition, attachment wounding in combination to vehement experiences in young age leading to an activation of ascending systems from the brainstem and the midbrain in response to adverse events when individuals are vulnerable, as small children are. When something is shocking or horrifying, the brainstem arouses the upper brain through ascending systems such as those from the locus coeruleus and the PAG (Corrigan & Christie-Sands, 2020; Corrigan et al., 2023; Frau & Corrigan, 2025). The DBR theory gives important hypotheses for the development of the D-attachment (Lyons-Ruth et al., 2006) through the activation of the superior and infferior colliculi in the midbrain in relation to the seeking system of the PAG, also in the midbrain, and the impulse to both search safety and flee from attachment figures that are frightening or frighted. Such overloaded seeking-system will expose the child to overwhelming impulses and would activate shock and horror responses (Corrigan & Christie-Sands, 2020). Frau and Corrigan (2025) proposed that if the adversity is sufficiently intense for to lead to limbic learning and disruption of normally integrated cortical functioning, it necessarily has its roots in intense arousal mediated from the brainstem, midbrain and hypothalamus, see also Terpou et al. (2019a, 2019b, 2020), and Kearney et al., (2023a) regarding the functions of the PAG. For dissociative clients who have shut down their felt sense of the body (Gendlin, 1978) and emotion awareness (Ford, 2025) the empirical recognition that exposure therapies might be contra-indicated needs to be taken in account (Hull & Corrigan, 2019; ISSTD, 2011; Loewenstein et al., 2024). Also, there are limitations of the evidence base for the treatment of complex PTSD according to Corrigan and Hull, (2015a, 2015b), for example high dropout rates, low feasibility and exclusion of clients with high comorbidities. According to Hull and Corrigan (2019) and Marek et al. (2018) there will, at best, be new learning of a top-down control from the prefrontal cortex to the amygdala and hippocampus extending the suppressive tendency already manifest in the brain of the traumatised person.

Probably DBR has the potential to induce changes in how we use our brain functions, including a shift towards reduced depersonalization, enhanced threat perception (when needed), and heightened levels of resourceful states (Panksepp, 2012). Speculatively DBR can target specific areas of the deep brain, thereby enhancing the coupling and de-coupling of the brain's functional networks (Kearney & Lanius, 2022; Lebois et al., 2021; Purcell et al., 2024). DBR is hypothesized to target the sequence of events that occurred in the brainstem and midbrain at the time of the traumatic event (Corrigan & Christie-Sands, 2000). At the time of the initial shock during a traumatic event a sequence of events happens in one area in the brainstem, the locus coeruleus, and two areas in the midbrain; the superior and inferior colliculi activate sensorimotor responses related to the initial appraisal of the threat. The colliculi initiate the response of the PAG (Corrigan et al., 2023).

Neocortically targeted therapeutic approaches alone, eg. cognitive or interpretive therapies, cannot reach the midbrain and the brainstem from where the dysregulation of the brain's physiology and network connectivity stems (Corrigan & Christie-Sands, 2020; Corrigan et al., 2023). When traumatic sensory information is stuck and cannot be integrated (Kearney & Lanius, 2022) or persons are overwhelmed by trauma-related flashbacks or intrusive thoughts (Kearney & Lanius, 2024) DBR seems promising (Kearney et al., 2023b; Purcell et al., 2024). The method has shown promise in one RCT regarding treatment of PTSD and associated symptomatology (Kearney et al., 2023b), one single case of depersonalization disorder (Frau & Corrigan, 2025), and one single case of DID (Gerge et al., 2025).

Case studies I and II

Ethical considerations

In this section two case vignettes will be presented where the clients provided informed consent for the publication of material detailing significant change processes that occurred during the final two years of their therapies, during which DBR was the primary therapeutic modality. The clients have given written informed consent to publish these case details. Permission to report client data was obtained verbally by the participants, who were fully informed about the purposes of these case reports. The participants were informed of how their data would be used and stored; they have read through earlier versions and this version of the article. They have agreed that the clinical vignettes, their assessments and comments on their therapy processes, including DBR therapy are publicly shared in a research journal.

Screening

Before starting treatment and before, under, and after the DBR treatment part of the therapies, the clients completed a set of measures to assess dissociation, traumatisation (Posttraumatic Checklist-Civilians, PCL-C (Weathers et al., 1993), Posttraumatic Checklist-5, PCL-5, PTSD Checklist for DSM-5 (Wortmann et al., 2016), International Trauma Questionnaire, ITQ (Cloitre et al., 2018), and other comorbidity symptoms. Apart from trauma-screening the following screening and diagnostic tools were used:

Somatoform Dissociation Questionnaire (SDQ-5, Nijenhuis et al., 1997, 1999) was derived from the SDQ-20. The five items of SDQ-5 as a group discriminated best of the SDQ-20 questions between patients with dissociative disorders and non-dissociative psychiatric comparison patients. The scores of SDQ-5 can range from 5 to 25. Scores over 8 indicate significant somatoform dissociation and a probable dissociative disorder. Nearly all dissociative disorder patients score over 11.

Dissociative Experiences Scale II (DES-II) and DES-T. The DES-II is a 28-item self-report measure with good validity and reliability (Bernstein & Putnam, 1986; Carlson et al., 1993). Items are rated on a scale from 0 to 100 % of the time. Mean scores below 30 % are indicative of low levels of dissociation, while scores between (30–44 %) indicate substantial dissociative symptoms consistent with possible dissociative disorders, and very high scores (45+ %) indicate extreme dissociative experiences, mostly observed in DID. The Dissociative Experiences Scale Taxon (DES-T; Waller & Ross, 1997) is an eight-item subscale of the full-scale DES and the overall score being the mean of the eight items. The DES-T distinguishes pathological dissociation more accurately than does the full-scale DES, with a cutoff score of 20 % capturing nearly 90 % of cases of DID and DDNOS (ISSTD, 2011).

The Symptom Checklist–90-R (SCL–90; Derogatis et al., 1974) is a widely used 90–item screening measure of general psychiatric distress with psychometric evaluations reported good, internal consistency (alpha coefficients 0.77 to 0.90), good test–retest reliability, and good concurrent, construct, and discriminant validity (Derogatis & Lazarus 1994; Derogatis et al., 1974). The SCL-90-R measure contains nine subscales: somatization, obsessive–compulsive, interpersonal sensitivity, depression, anxiety, anger–hostility, phobic anxiety, paranoid ideation, and psychoticism, and additional items. All items are rated on a 5–point scale of symptom distress, which ranges from "not at all" (0) to "extremely" (4). The scores of SCL-90-R can range from 0 to 360. The GSI—the average score for all 90 items—is an overall measure of psychiatric distress with established reliability and validity, the higher the values, the higher the degree of psychiatric suffering (Derogatis & Lazarus, 1994). In Swedish normal population values below 47 were found for adult women (Fridell et al., 2002) and the Swedish subscales of depression and anxiety are validated (Lundin et al., 2015). If a polysymptomatic presentation is found on SCL-90-R of patients with DD a SCID-D interview (Steinberg, 1993) is recommended as patients with

DID seemed to score above psychiatric non-dissociative clients (Steinberg et al., 2005).

The SCID–D–R (Steinberg, 1993) is a clinical interview with good–excellent interrater and test–retest reliability (interrater reliability kappa = 0.88 for the presence of a dissociative disorder; Steinberg, 2000) and very good discriminant validity for the assessment of dissociative symptom severity and dissociative disorders in a variety of populations (Drajer & Boon, 1999).

It is not only of interest to follow the symptom presentation and how psychiatric sufferings ease. Also, how resources come online and are heightened is an important aspect of monitoring therapy processes. For the latter the Positive States of Mind scale (PSOM; Horowitz et al., 1988; Adler et al., 1998) was used. The PSOM scale assesses experiences of focused attention, productivity, responsible caretaking, restful repose, sharing, and sensuous nonsexual pleasure during the past week e.g. "Being able to enjoy bodily senses, enjoyable intellectual activity, doing things you ordinarily like, such as listening to music, enjoying the outdoors, lounging in a hot bath". The scale includes six specific positive experiences, where the participants rate their experiences from the previous week with 0 to 3 points on each item with a total score ranging between minimum 0 and maximum 18. 12 points is considered good enough access of positive experiences, and 15 points very good. In a Swedish study Cronbach's alpha was 0.86, the scale was normally distributed and the mean values slightly higher (Bränström, 2013) than mean values reported for the US (Horowitz et al., 1988).

After respectively 5 (client I) and 10 DBR sessions (client I and II) self-assessments were taken, see Table 2 and Figs. 1 and 2, respectively Tables 3 and 4 and Figs. 3–5. For comparison between the persons of case I and II, see Figs. 6–8.

The outcome measures were assessed through visual analyses, a common method in single case experimental designs (SCED; Epstein & Dalleray, 2022). Also, percentage of nonoverlapping data (PND; Tarlow & Penland, 2016a, 2016b) was used. The PND is a nonparametric measure used to assess the effectiveness of interventions in single-case experimental designs (SCED; Epstein & Dalleray, 2022) by quantifying the degree of separation between baseline and intervention data and is used for effect size measurement. PND is a method to verify treatment development in SCED and allows clinical outcomes research without large samples and the resources required by randomized clinical trials.

Intervention

Within the last two years of therapy, the client of case I attended 30 DBR sessions, and the client of case II attended 70 DBR sessions.

In Table 1 the DBR sequence is summarised.

The clinical use of DBR is more fully described (Corrigan et al., 2025a; Kearney et al., 2023b), where the latter researchers also present a randomized controlled trial on DBR in short time treatment of PTSD/CPTSD with promising effect sizes and low drop-out frequences.

Sometimes therapies with highly dissociative patients stall or are not effective in decreasing dissociation and heighten wellbeing. This might depend on traumatisation impacting the brainstem-level somatic sensory processing mechanisms (Frau & Corrigan, 2025). Then the orienting tension is a helpful aspect of the DBR sequence. The orienting tension is a sensorimotor activation response to potential threat used to anchoring the client early in the appraisal process. In DBR the body's reactions on the earliest appraisal of an event is in focus. We want to find a starting point in an activating stimulus before conscious awareness of emotions, thoughts or defence-oriented behaviours. In DBR it is important to identify the first activation of the appraisal-process, the orienting tension of the superior colliculus that comes in as a response to the activating stimulus, to be used as an anchor in the present day to avoid overwhelm and dissociation.

Then the sequence is slowed down so that the shock can process

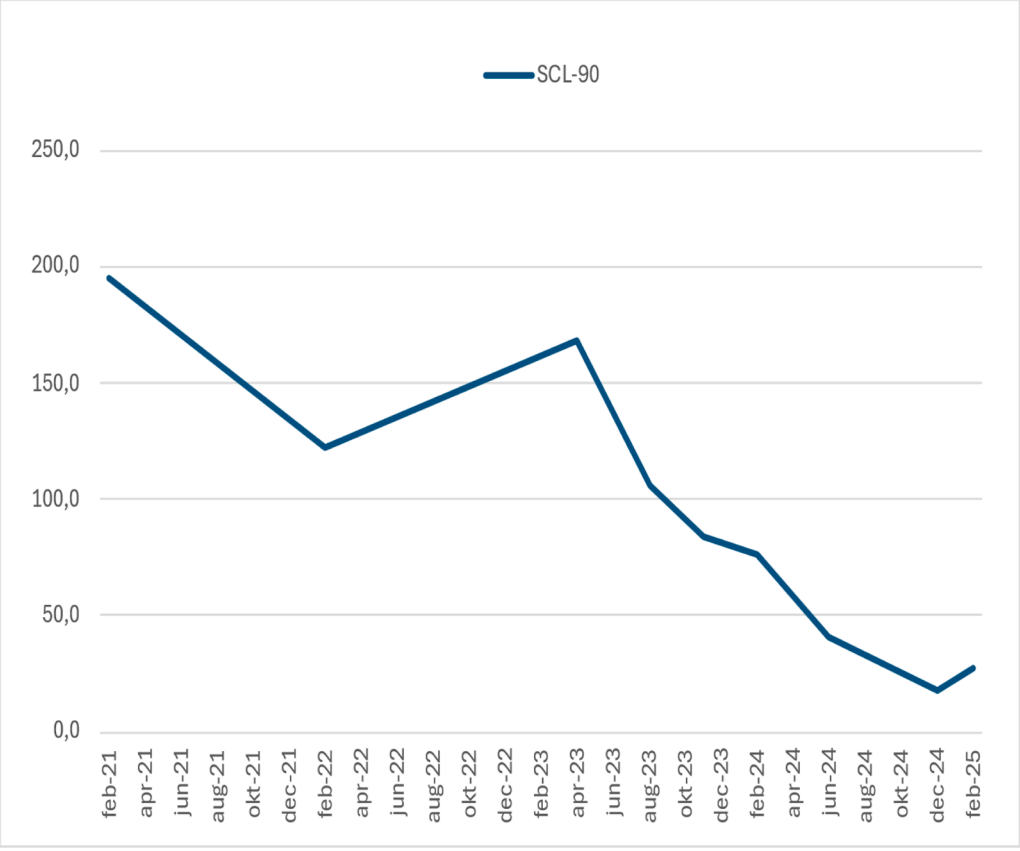

Fig. 1. Client I. The Symptom Checklist–90-R (SCL–90; Derogatis & Lazarus, 1994; Derogatis et al., 1974) 2011–2025. DBR was introduced in March 2023.

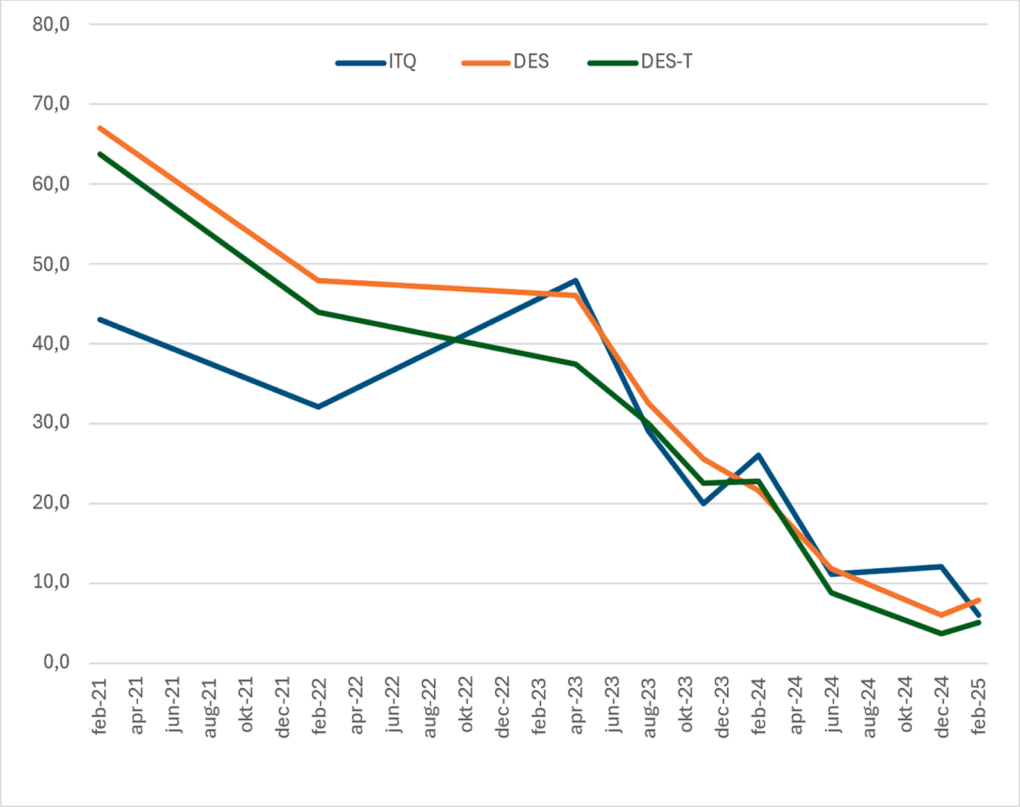

Fig. 2. Client I. International Trauma Questionnaire (ITQ; Cloitre et al., 2018), Dissociative Event Scale (DES; Bernstein & Putnam, 1986) and the Dissociative Experiences Scale Taxon (DES-T; Waller & Ross, 1997). In DES/DES-T the values are in procent. DBR was introduced in March 2023.

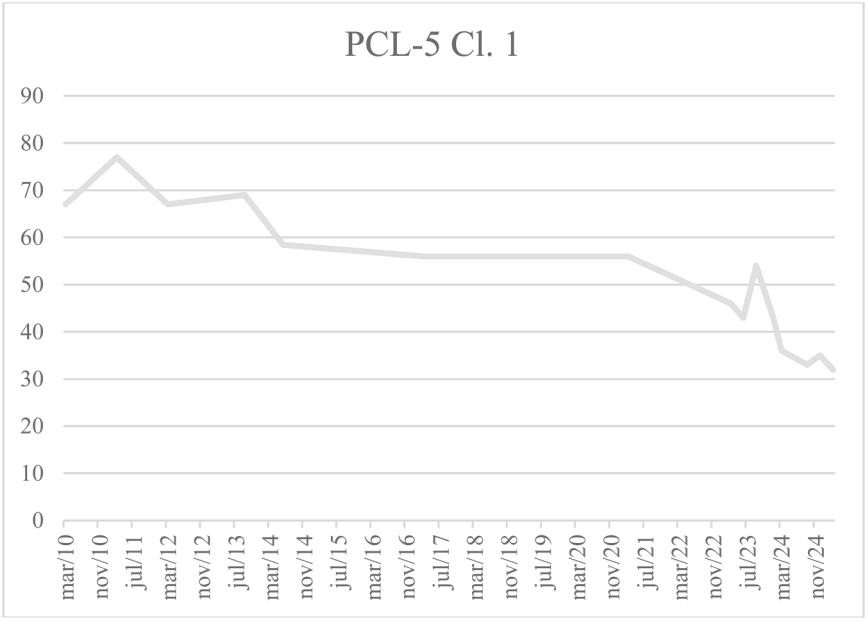

Fig. 3. Client II. Screening for PTSD symptoms 2010–2025. Until 2014 Posttraumatic Checklist-Civilians (PCL-C; Weathers et al., 1993), was the used screening instrument. From spring 2014 PTSD Checklist for DSM-5 (PCL-5; Wortmann et al., 2016) was used. In spring 2023 DBR was introduced.

before affects come in according to Corrigan and Christie-Sands (2020). The chock responses of the locus coeruleus in the brainstem are hypothesized to take place before the affective responses of the PAG of the midbrain (Corrigan and Christie-Sands 2020; Corrigan et al., 2025b). DBR treatment aims to pick up of pre-affective shock and let it dissipate.

Before the defined activating stimulus is presented the client is grounded in the "Where-Self", the self-that knows-where-it is-in-the-world. The Where-Self is considered the egocentric centre of awareness of where the body is in relation to all that is around it and might need to be adapted to highly dissociative clients according to Corrigan et al. (2025b)). After the Where-Self the client is asked to relieve tension in the muscles of the head and neck.

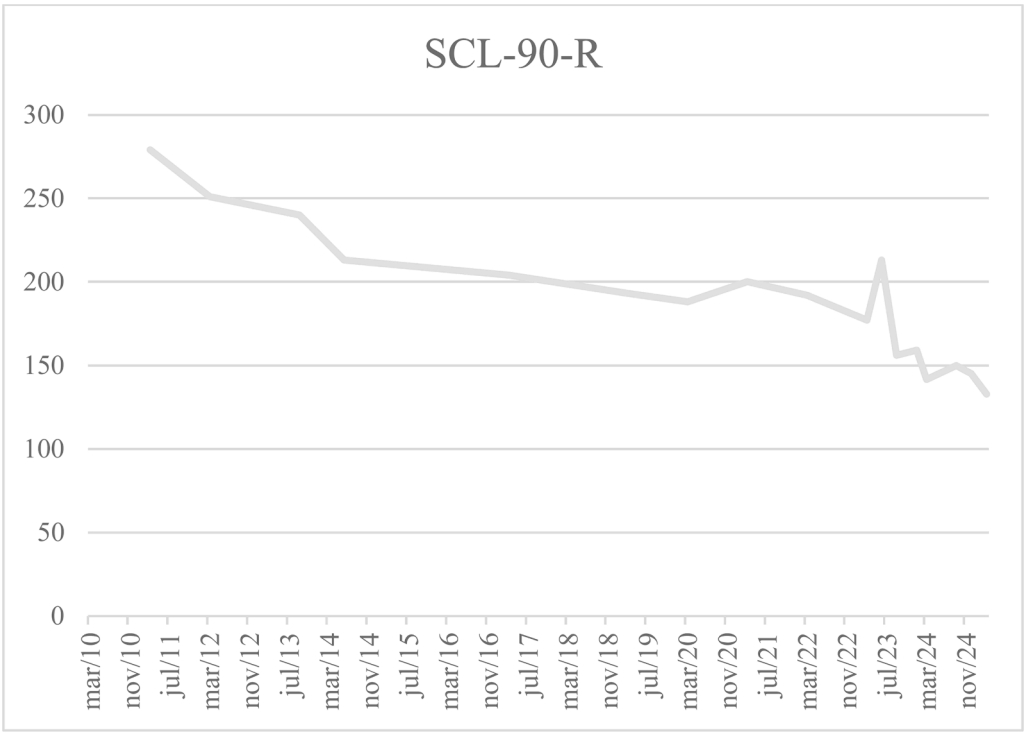

Fig. 4. Client II. The Symptom Checklist–90-R (SCL–90; Derogatis & Lazarus 1994; Derogatis et al., 1974) 2011–2025. In early spring 2023 DBR was introduced.

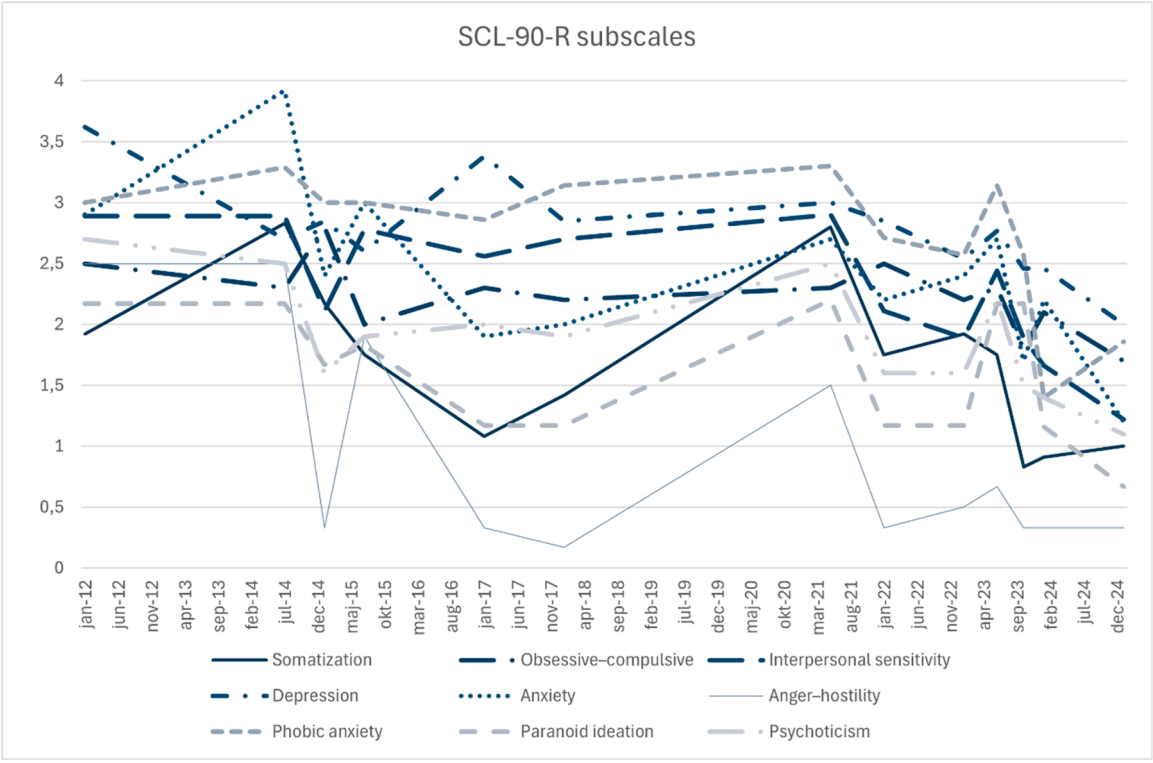

Fig. 5. Client II. The nine subscales of the SCL-90-R; somatization, obsessive–compulsive, interpersonal sensitivity, depression, anxiety, anger–hostility, phobic anxiety, paranoid ideation, and psychoticism. In early spring 2023 DBR was introduced.

Also, the Protoself, the deepest sense of being in a body (Corrigan, 2025) can be used to help the client to be present enough for working through the DBR sequence. In DBR the Protoself is a therapeutic tool developed with inspiration from Damasio (1999). The Protoself refers to the areas deep in the brainstem that control our attention and from where we anchor our sense of self. According to Damasio (1999) the Protoself is the most fundamental representation of our organism, stemming from the brain's constant interaction with the rest of our body. It is the structures in the brainstem and the neural processes and coherent collection of neural patterns that allow us to function as a unit

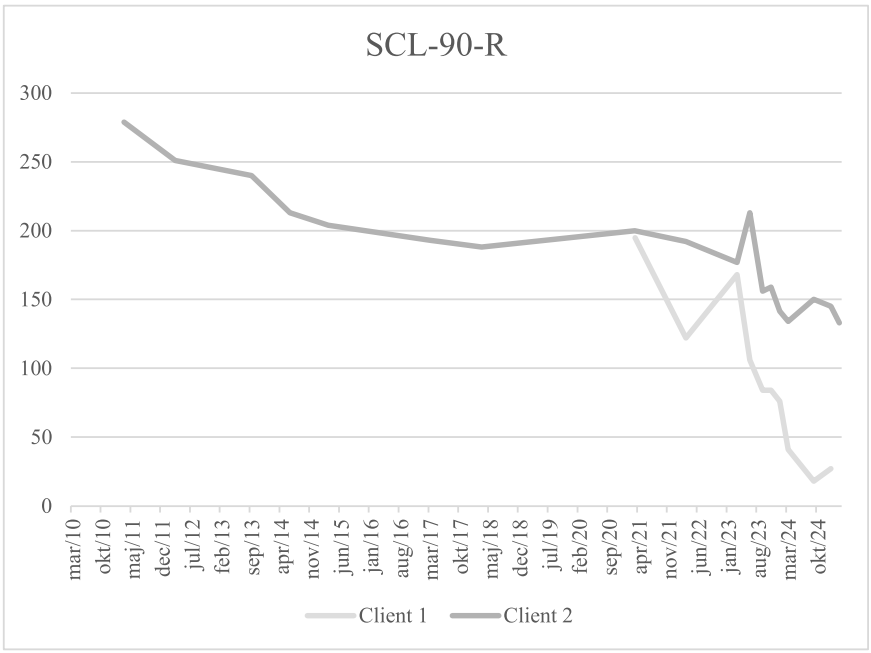

Fig. 6. Client I and II. The Symptom Checklist–90-R (SCL–90; Derogatis & Lazarus, 1994; Derogatis et al., 1974) 2011–2025. SCL-90-R scores during four years of psychotherapy (client I) and the last 14 years of a 15 years long psychotherapy (client II). In early spring 2023 DBR was introduced.

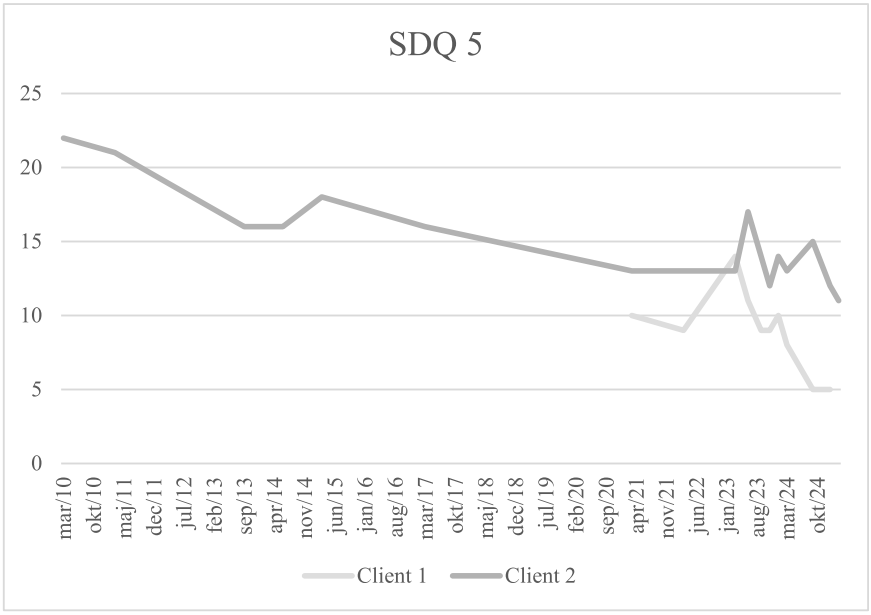

Fig. 7. Client I and II. Somatoform Dissociation Questionnaire (SDQ-5, Nijenhuis et al., 1997, 1999) scores during four years of psychotherapy (client I) and 15 years of psychotherapy (client II). In early spring 2023 DBR was introduced.

with vitality and access to energy. The Protoself maps out what is happening in our body from moment to moment.

The activating stimulus is then presented and an orienting tension in the muscles of the back of the neck, the forehead, or around the eyes is found. The use of the orienting tension is two-fold; it anchors against overwhelm and opens the relevant information file. After this file has been worked through within the DBR sequence, the client is asked for a new perspective.

Case vignette I

The clinical vignette presents details from a healing process of the two last years of a therapy that spanned four years with a highly motivated DID client, with DBR being utilised for the final two years of treatment.

The client, referred to as Grace (a pseudonym), is a woman of younger middle age. She is in a relationship and is employed. She fulfils eight of the ten ACE scores, including eleven years of childhood sexual abuse perpetrated by individuals other than her parents. Despite their lack of direct involvement in the abuse, the client's parents' inability to protect her from harm played a significant role in the psychological harm she experienced. Though, the absence of any violation by her primary caregivers is believed to be a contributing factor to the rapid and positive outcomes observed during her four years of therapy. When

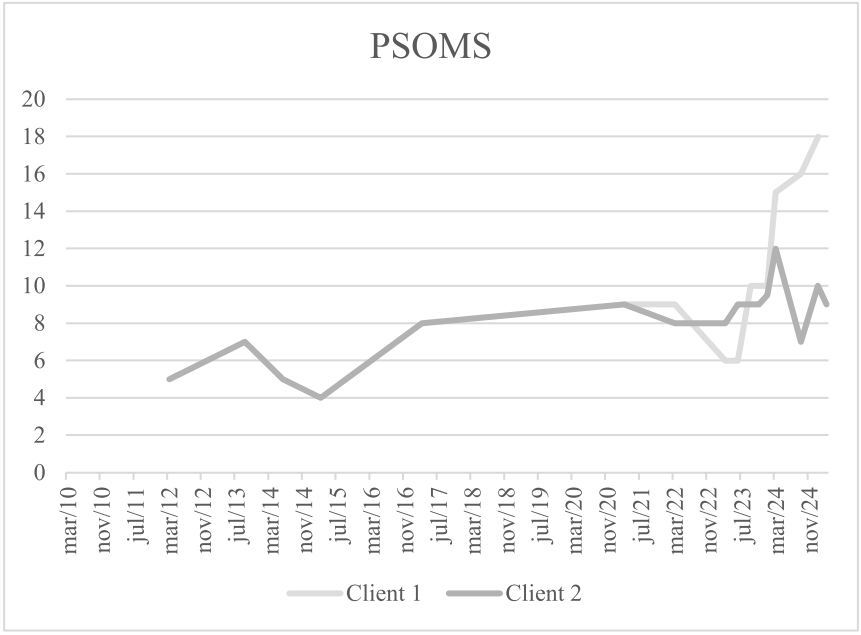

Fig. 8. Client I and II. Positive States of Mind scale (PSOM; Horowitz et al., 1988; Adler et al., 1998) scores during four years of psychotherapy (client I) and 15 years of psychotherapy (client II). In early spring 2023 DBR was introduced.

Table 1
Summary of the DBR sequence. For a more elaborated description see Frau and Corrigan (2025) Standard DBR treatment protocol phases—The O-T-(Shock)-A sequence. For a putative description of brain regions sequentially involved, see page 8 in Corrigan and Christie-Sands (2020).

1. Client's choice of an activating stimulus
2. Where-Self/Protoself and orienting to here and now
3. Turning toward the Activating Stimulus
4. Identify an orienting tension/OT
5. Look for pre-affective shock
6. Give space and time for pre-affective shock energy to dissipate
7. Acknowledge the emergence of affects
8. Ask for a New Perspective/NP
9. Relate the NP to a changed embodied felt sense.
10. Emphasize the importance of being with the NP the upcoming hours, to promote memory reconsolidation (enhance healing mismatch between the old and the new perspective of the self).

she initially commenced therapy, she was grappling with the question of the veracity of her memories. The term 'memory' may be considered deceptive in this context, as the experiences described do not align with conventional autobiographical memory, characterised by prediction, updating and abstraction (Kearney & Lanius, 2024). The intrusions Grace experienced were of a traumatic nature, and the dissociative flashbacks that ensued appeared to be unaltered and relived flashes of severe childhood abuse that some years earlier had overwhelmed her from "nowhere".

It is noteworthy that among DID clients with a history of neglect and/or abuse, particularly those meeting severe A-criteria, treatment often necessitates a more protracted duration initially building relational safety and lowering risk behaviours. The client, akin to numerous survivors of childhood sexual abuse, engaged in sex as self-injury (SASI; Hedén et al., 2023) at younger ages. However, she did not engage in prostitution, nor made suicidal attempts or used illicit substances. Her level of risk was low.

Initially Grace scored high on ITQ, International Trauma Questionnaire (Cloitre et al., 2018), DES/DES-T, Dissociative Event Scale (Bernstein & Putnam, 1986), SDQ-5, Somatoform Dissociation Questionnaire (Nijenhuis et al., 1997, 1999). SCL-90-R, Symptom Checklist-revised (Derogatis 1994), and low on PSOM, Positive States of Mind (Adler et al., 1998), see Table 2.

PCL-C, Posttraumatic Checklist-Civilians (Weathers et al., 1993), PCL-5, PTSD Checklist for DSM-5 (Wortmann et al., 2016), ITQ,

Table 2
Achievement during four years of therapy including the two last years with deep brain reorienting, DBR.

Therapy	*PCL-5 / ITQ*	*DES %*	*DES-T %*	*SDQ-5*	*PSOM*	*SCL-90-R*
Start of therapy	- / 43	67	63.7	10	9	195
1 y	- / 32	48	44	9	9	122
2 y before DBR	49 / 48	46.1	37.5	14	6	168
2 y, 6 m 5 DBR	27 / 29	32.5	30	11	10	106
2 y, 9 m 10 DBR	22 / 20 ITQ=6 + 14	25.6	22.5	9	10	84
3 y, 15 DBR	28 / 26 ITQ=12+14	21.6	22.7	10		76
3 y, 4 m 20 DBR	9 / 11 ITQ=4 + 7	11.7	8.7	8	15	41
3 y, 10 m 30 DBR	12 / 12 ITQ=5 + 7	6	3.7	5	16	18
2 m follow up 4 y of therapy	9 / 6 ITQ=0 + 6	7.8	5	5	18	27

International Trauma Questionnaire (Cloitre et al., 2018), DES/DES-T, Dissociative Event Scale (Bernstein & Putnam, 1986), PSOM, Positive States of Mind (Adler et al., 1998), SDQ-5, Somatoform Dissociation Questionnaire (Nijenhuis et al., 1997, 1999). SCL-90-R - Symptom Checklist-revised (Derogatis & Lazarus, 1994).

Due to her initially elevated scores on the self-assessment scales, including being polysymptomatic on the SCL-90-R (Steinberg et al., 2005) and being above cut-off on the DES and the DES-T regarding dissociation, she was subsequently interviewed with the SCID-D (Steinberg, 1993) and diagnosed with DID.

Contrary to the therapist's expectations, the client demonstrated an early progression into phase 2 of the therapeutic process (Herman, 1992). Phase 2 is characterised by the development of new cognitive frameworks that facilitate the processing, e.g. the working through of traumatic experiences including the narrative surrounding the trauma. Emotional aspects, the impact of the traumatic events on the individual, and on the belief systems influenced by trauma were processed, including self-destructive beliefs such as "I am worthless" or "I'm damaged goods". The process of balancing between safety and facing the past was challenging, and additional stabilisation was required.

In Grace's therapy, even some extended EMDR protocols (Forgash & Copeley, 2008) could be used. These protocols were embedded in resourcing techniques (Gerge, 2018), incorporating clinical hypnosis (Kluft, 2012, 2013) and ego state interventions (Watkins & Watkins, 1997). The transition into phase 2 was facilitated by Grace's advanced meditation proficiency. She was also engaged in a much-loved hobby that had strengthened her capacity of alignment, to be able to challenge herself, and to provide care: equestrian sports. In this way, she had completed a phase 1 work – stabilisation – before starting therapy. It is also of importance to note that, despite experiencing severe sexual abuse during childhood, her parents were not the abusers even if they had not understood how vulnerable she had been, nor had they protected her.

As illustrated in Table 2 and Figs. 1 and 2, Grace demonstrated a significant improvement in her health during the initial year of therapy, during which she attended sessions lasting 75 min on a bi-monthly basis. During the subsequent years, the duration of therapy sessions was reduced to 60 min, occurring once every three to four weeks. Both the therapist and the client expressed concerns regarding the low frequency of the sessions. However, due to economic recession and escalating fuel costs during the second year of therapy, Grace found herself unable to attend as frequently as desired due to the considerable distance she had to travel. The reduced frequency of sessions during the second year may be a contributing factor to the observed relative stagnation in her progress compared to the first year. However, over the subsequent two years, during which DBR was employed, the therapy continued with the same low frequency. In the first year, when the psychoform dissociation began to subside, as measured by the DES/DES-T, there was heightened access to her trauma memories, which potentially then led to more intrusions (Kearney & Lanius, 2024). This phenomenon has been observed to intensify both somatoform dissociation, measured by the SDQ-5, and depression, measured by the depression scale in SCL-90-R. This pattern is not uncommon in the treatment of severe dissociation, where the easing of dissociation is accompanied by the exacerbation of intrusive trauma-generated symptoms.

Speculatively the therapeutic intervention may have progressed beyond the client's capacity to process trauma, and that the EMDR, even when mitigated by resourcing hypnosis and ego state work, may have been too onerous for Grace. This resulted in her becoming dysregulated during and between sessions, which is a common occurrence in highly dissociative clients when treated with the evidence-based trauma therapies (Loewenstein et al., 2024).

Over the course of the preceding two years, Grace has undergone treatment with DBR which has appeared to provide a mild yet efficacious treatment modality for her. Hypothetically, according to the theory of DBR, we have attained a point where the impact of early trauma on her self-perception and her capacity to interpret her sensations has been addressed. The following section presents some shorter excerpts from these processes.

Examples of DBR-sessions during two years of the therapy

Initially, during the DBR sequence, in the following called processing, Grace was often overwhelmed and needed help to slow down her pacing. She got blocked in freeze-states and said, *It's so morbid… like I can't turn my head.* This was potentially the embodied experience of being trapped with tonic immobility due to activation of the lateral, dorsolateral and ventrolateral columns of her PAG in her midbrain (Terpou et al., 2019a, 2019b; Corrigan and Christie-Sands, 2020).

In the DBR sessions Grace discovered how small movements of her head and neck corresponded to being amnestic or not. She also drew parallels to the main perpetrator from her childhood who couldn't let go of her, *because I was so cute*. Something released in her, and she said, *the neck feels calm but it was extremely uncomfortable and this was the first time for several years that I was able to stay with the dissociation. I've never been able to do it before. … This is sick… it's been a long time since I felt this extreme dissociation, I haven't felt it in years. Extremely uncomfortable, the whole body becomes tense and as if I'm trapped in a lead suit…. like when I was a child … It feels heavy and "dead" in my chest. As if a giant's cold hand is clenching around my heart. I feel despair*. She was asked to slow down the pace and was reassured that her therapist was with her in the process. She was also asked to do release breathing. She then could come back to letting pre-affective shock dissipate.

During her second DBR session she said, *It feels peaceful, but at the same time it feels like the whole-body refuses to take it in, I'm not breathing.* With relational help Grace could process, and pre-affective chock transformed. She stated, *the body remembers but not the head … but sometimes I can sort of feel … this extremely unpleasant dissociation now let go, let go at once… I'm back in some kind of denial… This (the DBR) feels like a very creative tool for surviving overwhelming experiences… the extreme dissociation let go, and I think there's a sadness that I had to repress*. This activation eased and Grace stated, *I feel like it's something I haven't been allowed to talk about out loud. In the same way that I wasn't allowed to talk about the abuse… now my neck stretches…* Grace realised that she was alive as the depersonalization momentarily vanished due to the ongoing shifts in, maybe, all four mechanisms of dissociation; intracortical changes due to ease in neurochemical dissociation connected to lessened endocannabinoids and endoopioids, changes in structural dissociation, supposedly also due to a more positively valanced PAG through heightened levels of oxytocin. And, finally, eased supracortical dissociation as she could begin to turn towards hitherto unbearable events and experiences. Then she became angry, and it became difficult for her to breathe when she thought of the betrayals of her life and of not having been protected but instead used. She was once more asked to do release breathing. Then her rage (phenomenological powerlessness) transformed to wrath (empowered anger). Her tenseness eased and it became lighter in her as she reflected on that she could take her place in the world.

Her new perspective became: *Confidence, I have confidence*.

DBR 8. During the session Grace processed contemporary triggers as living with dangerous people and relational issues, such as that there is no point in feeling anything, and how tense she got during sex and the experience of having no sexuality of her own. When processing she said that she was just a body that others could use. She could keep her orienting tension and processed that it felt like she got run over by a bus every time she had sex. Her new perspective became: *It will be all right. I worry that I can't be close and that I don't have my own sexuality and it's not really about the wounds in the body but about wrong signals in the brain. Once my PTSD is over, I won't have these problems. I want to be close.* Next session she processed a troublesome relation and a forced abortion as a young teenager which she previously hardly remembered.

DBR 11. Initially, Grace did assessments after ten DBR-sessions, see Table 1, and was happy with the improvement. She said, *DBR has saved*

my life and made the experience bearable. DBR keeps it at an OK level. I get the ability to process without feeling as if I would die… I have also realized that there is no problem. I will make it through (the therapy) because I see that I will. The time after the sessions is less terrible. There will be no sudden flashbacks… It happens very calmly and as if still. I feel that even after (the session) if I lose control and have no support, if I'm alone, it is still not unbearable but comes very slowly. It is not that high-speed train that a flashback is.

She stated that she now had more communication with her different parts and that they could share music and experiences in a new way, even the young teenage part, the one that was the most violated and broken of her self-states could take part. In the DBR process Grace said, *it feels like I'm sitting here in the room with you for the first time ever… it feels strange, and this is a co-conscious thing*. After a while, she said, *it feels as if I can't trust myself and if I increase the feelings, it's like having a heart attack or stroke or something*. She was asked to go really slow and to do release breathing out from the feeling of being overwhelmed by emotions. Then came strong feelings of hopelessness. She transformed sadness without tears/crying, and said, *it's strange, it feels crawly, does it really hurt as much as it does now?* She was relationally stabilized by her therapist and asked to go slow when transforming the pain of loneliness. After a while she said, *I start thinking about how to communicate between the parts… it's like I have growing pains in my legs… weird … like the legs are getting longer inside my legs. It's a body inside my body straightening out… I have such a phobia that there should be something inside my body that is not me… but this is me*. Then Grace processed a lot of dissociation and got help from the therapist to end the session with more presence. Her new perspective became: *I can start to let go a little and let feelings come out.*

DBR 12. Grace said, *DBR is softer than other treatments and at first, when DBR was introduced into the therapy, I thought that DBR did not go deep (as it didn't hurt so much) but now I understand that DBR changes in the depth without harming.* She talked about how her parts more and more communicated with each other through music. During the DBR sequence she continued to process her vulnerability in childhood realising that she had saved herself all her life, *which feels safe, as I have managed it so far.*

DBR 15. Grace experienced professional successes and felt anchored in her profession and had also come closer to her partner. Her activating stimulus was: *That it is difficult to trust one's own feelings and perception of reality because the perpetrator in childhood was both kind and a monster. That makes me sometimes feel doubtful about my own partner even though I can see that I am projecting*. During the session she suddenly felt nothing from the head down. As a child after the rapes, she was completely gone, and that was almost the case now too. But there came a vibration inside her eyes. She was again reminded to slow down and that the therapist was with her. *I am surprisingly calm, I vibrate, and I get angry… It is an extreme dissociation; to first be hurt and then comforted, it creates dissociation. Maybe it is a sadness… but there is a completely different strength in me today. It pisses me off, but I can handle it. It feels lighter in me*. Her new perspective became: *Now I want to move forward (with my life). I am already doing what I have to do.*

In the coming week Grace wrote:

> "I must share this with you before I repress it. I wrote down some of what has emerged since the session.
>
> The very difficult event.
>
> … If you imagine an atomic bomb. And the power of it inside me. But it never goes off. It's like an implosion inside me. It was something that fell inwardly and there it solidified forever. Like the moment before a Tsunami when the water recedes. But the wave never comes.

I already had a system inside me to survive the abuse that had been going on for so many years. Inner parts took turns being part of the abuse. The broken parts had to take the most. And I kept the parts I liked most about myself "pure" and fought for my life inside myself to defend them. But during the incident, the process was so drawn out and rough in a way I had never experienced before or knew that you could even experience as a human. I left my body completely and took turns with my inner parts breaking down one by one. When there were no more parts, I had to send forward the "pure parts"… I abandoned myself… I think that after that incident, a whole new part of myself was created. Which has been fronting ever since. She is "X" who has no memories at all of any traumas. I remember that when I was lying in bed after the incident, I had a total panic over that I didn't know who I was or what my name was. I didn't recognize my room and felt like a stranger in my own body. I had no memories of even having a life. And it felt like I had to start over and learn about myself and what my life looked like. It was liberating but also very confusing."

The work with DBR continued. Grace got a lot of release from pre-affective shock. She experienced parallel memories and said, *I understand (better now) that I have DID*. From numbness came pain that transformed into vibrations and finally relief. Then came the rage in wave after wave, session after session. Grace thought about how the abuse ended when she as a teenager threatened to put a knife into the perpetrator. A new perspective was*: It's nice to trust someone. Maybe I can trust my partner, I've never trusted anyone before.*

DBR 19. Grace described that something has awakened in her that also was connected to her sexual desire. She said*, I think it is that I have healed. I have myself now*. But this session she wanted to process something during the atrocities of her early teens, and she didn't want to tell her therapist the details, *because it is too terrible*. At the end of the DBR session, Grace, again, was describing a spontaneous inner growth process: *It felt like I was growing, like I'm growing from being three years old* (as she was when the abuses started). *It's unreasonable. It's also unreasonable to stay stuck in the past*. At the end of the session she said, *it's easier (to do DBR), but now there are more difficult things coming*. She was confirmed in this. Her new perspective became: *Maybe I should play more*.

DBR 20. Grace said, *a lot is happening, I've started to live… I'll live with wounds from the past, but I can live with it, and I can start to let go of the burden of that there is something wrong with me. That burden has destroyed my ability to love and to have sex*. Her activating stimulus was contemporary: *Hearing that I am damaged goods*. During the DBR session Grace said, *I feel like it's so fucking reasonable that I have DID. The images flash by… sometimes I can't count numbers, then there's a child part that is active…* During the session a lot of good things were integrated, though also waves of fear came. Grace said, *it comes wave by wave or like a tsunami coming from the right side of my head… Thoughts flutter by, how the hell is everything going to fit in (in me)? It's crazy that I didn't die when I was a child and later when I thought I really was going to die.* She got help repeatedly to go back to her orienting tension, to slow down the pacing, and she was reminded of that her therapist was sitting with her. Grace stated, *there is horror coming.* She was asked if she could wait with the affects and look for pre-affective shock, to give time and space to let shock move through. *Yes, my pelvis is vibrating like hell. My whole fucking body is vibrating… now I feel my neck, it's vibrating. What a fucking trauma. Abuse is something else but, in this event, I was sure I was going to die. Flashbacks come, it's going 190 km/h. It becomes very heavy… I see my different parts. It doesn't hurt; I can't remember it ever hurt. I was already completely hollow*. Grace was continuously helped back to her orienting tension, to slow down the pacing, and was reminded of that her therapist was with her. When ending the session Grace's new perspective became: *I've seen it as a burden to be liked. Maybe it's not. It doesn't have to be dangerous to be liked.*

DBR 21. Grace described that she started to understand that she is a pretty good person, but it was too overwhelming to think like that. *It feels like I am going to explode with something good now when all this power of suppressing is gone. I don't know what I can accomplish. I now enjoy experiencing music and emotions. At the same time, I'm terrified. It feels like positive emotions are coming but I'm a little afraid of it. This part of me is not damaged. I have thought that I was damaged but this part of me is free and natural, associated with sexuality, courage and letting go of control.* Grace continued to process very difficult memories of abuse and the work was

demanding for her. The therapist helped her not to become overwhelmed, or to switch off and completely lose touch with her body. The session ended with a new perspective: *I can't fight with myself anymore. The power of the positive part is stronger than me. It dances with me.*

A few days later, Grace got in touch. She was in crisis, desperate and struggled with memory material that had now became real to her. Now, after more than 20 years after very difficult events, everything had come back. The therapist read the acute stress disorder criteria for her. She met 8/14 criteria for acute stress disorder (5 criteria are sufficient for the diagnosis). Grace herself described it as if she was like a bear that has woken up, one that had been sleeping. She said, *I must look in the mirror to see that it is not like that… that there is not a bear there, just me. It feels like I have woken up from a slumber… there is so much anger. I have shifted the blame and shame onto the perpetrators now, and then this bear has woken up.* She said, *the bear is one thing, it is anger… But another part of me that is in an extreme freeze response feels like it is inside a mountain. I don't know how to get a person out of a mountain when there is not even air between the person and the mountain, you see, the person is not in a cave, but it feels like I am completely petrified*. Several sessions were spent on getting Grace out of the stone, supposedly through easing and transforming neurochemical dissociation that previously had capped withstanding neurophenomenological experiences stemming from mock executions and other atrocities.

DBR 27. Grace experienced more and more of healthy self-respect and integration and described how she and her parts inbetween sessions spontaneously were sucked into a core. She also felt that she had a wound in her from the abuse, she thought about it the other day and that moment became our AS. In the DBR processing the sensation of the hole/wound was immediately activated and she felt strong fear. After a while she said, *it is getting calmer, but it was almost too much… Now comes a new level. It is like I am being pricked by something*. When asked about what was happening in her body, Grace said, *I am cold, my body feels huge*. She was now processing what happened after the rapes with a strong release of pre-affective shock. She had her orienting tension and a lot of vibrations in her eyes came and dissipated. She said, *there are two parts of me, one on the left and one on the right… My eyes are fluttering, I have brought out a part that held all the memories. It is a very strong part*.

A week later Grace sent the following text, here somewhat shortened:

"Sharing a little. The wound consists of thick hard scar tissue. Scars that have arisen on already existing scars. It is a slightly bleeding mass. The size of a football. The wound is so dissociated from me that it is not even inside me but right in front of me. It is at the height of my chest. I can almost feel the shape with my hands. When I approach the wound, the feeling is so familiar, but the feeling is not something that can be described based on our ordinary senses. It is not emotional, psychological or physical. It is something else. Like I am experiencing some ancient "sixth sense". It cannot be described in words.

Cracks in the corners of the mouth … in the soul. It feels like I am being torn apart. Heavy panting bodies. The body is filled to the brim with shame. There is no way out. Only in."

DBR 28. Grace talked about how she sometimes felt that the wound was in front of her, outside her body. That experience became today's activating stimulus. Before she started this therapy, she strongly and often had this sensation. But after the therapy began, the experience decreased, and she instead started to have memories. But ten days ago, she had a strong sensation of the wound. She also knew that she often felt this way as a child. In the DBR process, she immediately became very tired, and said, *it's like quicksand and time goes very slowly* (neurochemical dissociation). She still processed very difficult events from her childhood. Then she didn't feel anything. She was asked to anchor in her orienting tension and go to before she started to feel nothing. Then the pre-affective shock came back in her eyes and the process continued.

The DBR-therapy went on. Over time Grace described an ongoing integration between different parts also between the sessions. She felt her parts more and more clearly. Not being good enough, became an activating stimulus, as she thought that she had been destroyed due to the severe childhood sexual abuse she had endured. She got angry and stated, *there is horror*, and a lot of pre-affective shock released. Her new perspective became: *It feels like after you've been scared and understand that the bad things are over*.

After 30 DBR sessions, Grace felt much better, and she wondered how long she should be in therapy. She processed her own and other children's vulnerability in the childhood abuse she was subjected to. Pre-affective chock transformed, then came anger and she said, *what has given them the right?!* Her new perspective of this last session was: *It's like the last few sessions I've been dying, now I'm starting to have a kind of birth. It is the image of myself as damaged and destroyed that has died. I am beginning to understand that I have been whole all along.*

Her self-assessment scales after 30 DBR sessions were profoundly changed towards health and were asymptomatic. Already after 20 DBR sessions her assessments were almost below psychiatric scores, as seen in Table 1 and in Figs. 1 and 2.

After a month Grace texted her therapist, "thinking a lot about "how to start living" instead of just surviving".

Follow up two months later

At the follow up two months after the last DBR session Grace's self-assessments still were asymptomatic, see Table 1. She was also asked to summarise the DBR therapy: *Something that has really hit home is that I realized that I was never broken. From the beginning, the deep core has always been whole. DBR has helped me get to the core. I believe that DBR is the only way to get there. Before, dissociation protected my core, now the dissociation is no longer needed.*

Summary

Initially, Grace experienced numbness during the DBR sessions, potentially due to her previous unconscious tendency to dissociate when being in contact with herself became too overwhelming. Then neurochemical capping of both active and passive defences presumably took place. However, over time she was able to reach and transform previously inaccessible aspects of herself through DBR. These experiences were potentially stored as unendurable activation patterns of pain in her midbrain and brainstem, patterns that she often previously experienced as fleeting visceral sensations of a looming quality before fading away into neurochemical dissociation.

A lessened depersonalization and neurochemical dissociation supposedly enhanced access to Grace's states of being/ego states. This was accompanied by a more lucid and consistent reality testing and an augmented capacity for boundary-setting. She then was able to recall past experiences and hypothetically she is no longer subject to unresolved and truncated activation of her PAG. She has disclosed the abuse to her close circle and has been believed. The main abuser, initially accusing her of lying, has since ceased to be a part of Grace's life. As she has undergone integration and developed a more congruent sense of self with increased agency and reduced depersonalization, her relationship with her partner has deepened. Her talents are brought to the world and are positively received, and she experiences more strength and happiness.

Intervention case II

Sophia (pseudonym) is a middle-aged person with DID. She has ten out of ten possible ACE scores, the worst possible of the options asked for, including an early upbringing with extreme neglect and sexual and physical abuse. From age seven and on she was regularly drugged and sold to paedophiles. She has been extremely exposed throughout her childhood and has had and still has severe psychiatric suffering, see Tables 3 and 4. Before starting this therapy 15 years ago, she participated in various forms of psychiatric treatments, including in-patient treatment in periods, medications, and supportive contacts. She is still

Table 3
PCL-C, Posttraumatic Checklist-Civilians (Weathers et al., 1993), PCL-5, PTSD Checklist for DSM-5 (Wortmann et al., 2016), ITQ, International Trauma Questionnaire (Cloitre et al., 2018), DES/DES-T, Dissociative Event Scale (Bernstein & Putnam, 1986), PSOMS, Positive States of Mind (Adler et al., 1998), SDQ-5, Somatoform Dissociation Questionnaire (Nijenhuis et al., 1997, 1999). SCL-90-R - Symptom Checklist-revised (Derogatis & Lazarus, 1994).

	PCL-5/ ITQ	DES %	DES-T %	SDQ-5	PSOMS	SCL-90
Start 2010	67 PCL-C	61.6	61,1	22	6	-*
1y	77 PCL-C	65	37,5	21	-*	279
2y	67 PCL-C	67,7	77,5	19	5	251
3y, 6m	69 PCL-C	37,9	45	16	7	240
4y, 6m	58,4 PCL-C 55 PCL-5	45,5	46,3	16	5	213
5y*	-*	-*	-*	18	4	204
7y	56 PCL-5	41	40	16	8	193
8y						188
11y, 3m	52 PCL-5	44	45	13	9	200
12y	51 PCL-5	49	54	13	8	192
13y before DBR	46/45 PCL-5/ ITQ	36,2	41,2	13	8	177
13y, 3 m 10 DBR	43/41	50	60	17	9	213
13y, 6 m 20 DBR	54/43	47,0	57,5	12	9	156
13y, 10 m 30 DBR	43/47 (ITQ = 25+22)	39,2	46,2	14	9	159
14y, 40 DBR	36/47 (ITQ = 22+25)	38,0	45,6	13	9.5	141,5
14y, 6 m 50 DBR	33/43 (ITQ = 22+21)	41,4	52,5	15	7	150
14y, 9 m 60 DBR	35/36 (ITQ = 16+20)	36,7	42,5	12	10	145
15y, 70 DBR	32/33 (ITQ = 17+16)	31,4	41,2[#]	11	9	133

Note. *too disregulated to answer.
Note. [#]As question 27 "voices in the head" in the DES-*T* = 90 %, this heightens the value on DES-T from 34,3% to 41,2%, compared to if question 27 is taken away. The client states she will never unify and doesn't want that either, though nowadays the inner world is much calmer and nicer, it is just accidently there are roams and angry hits from behind in the neck (she had a lot of beatings at her head in childhood), most of the time the parts can cooperate in a more friendly way compared to before.

heavily medicated. She has also been in mindfulness- and dialectical behaviour therapy (DBT)-groups (Granato et al., 2015), which she experienced as meaningless and painful and she thinks that these treatments led to her mental breakdown 20 years ago. In psychiatry she was defined as suffering from a borderline personality disorder and schizophrenia, though was diagnosed with PTSD before admission to the here described therapy.

Psychiatry paid for her first eight years of the psychotherapy presented in this vignette. She was initially screened, and a SCID-D interview was undertaken due to her high scores on the DES; DES-T and SDQ-5. She fulfilled the criteria of a DID diagnosis. The initial diagnostic assessments also revealed a severe eating disorder (bulimia nervosa). Sophia had periodically starved as a child and had a very complicated relation to food and eating, "Grown up-Sophia", the part that mostly comes to therapy, is vegetarian, but the "night-eaters" cooked meat, and ate everything available. Sophia is now improved, though, it is since we started with DBR two years ago that Sophia has access to positive affects, has gained more energy, can be with other people without constant fear, and has begun to sleep better. Before the introduction of DBR we worked together for 13 years. In the beginning of our contact, Sophia had many hospitalizations and suicide attempts, sex as self-injury (SASI, Hedén et al., 2023) and many other very dangerous and painful risk behaviours. These included suicidal and non-suicidal self-harming and drug abuse, including opioids with the pronounced purpose of avoiding feeling her body and herself. The therapy is ongoing and today she has much less risk behaviours and better object constancy. Sophia can usually remember her therapist between sessions. But not always. The chronic suicidality and self-harm have gradually stopped over the years. She is still symptomatic though her self-assessed measures move towards retaken health, where she one year into the therapy scored 279 on the SCL-90-R and now scores 133 (values for Swedish female normal population are below 47 according to Fridell et al. (2002). The changed values presented in Table 3, Figs. 3 and 4, Table 4 and Fig. 5 can potentially be effects of the ongoing therapy, see Tables 3 and 4 and Fig. 5 illustrating the change patterns in the nine subscales of the SCL-90-R. As the agreed-on goal of the therapy is not unification of Sophia's parts, though a heightened integrative capacity and friendliness of her inner world, the DES and DES-T values might be somewhat false positive. Today, potentially also the SCL-90-R subscale of psychoticim is somewhat higher screened compared to Sophias's ongoing reality. Steinberg et al. (2005) proposed that individuals with DID may present with symptoms that mimic psychosis. This may endorse items on the SCL–90 where clinicians should be aware that elevated polysymptomatic profiles may reflect underlying dissociative rather than psychotic–spectrum disorders. For example, question 16. Hearing voices that other people do not hear is one of the questions where persons with DD might score high.

The Boon, Steele and Van der Hart (2011) skills training manual has been used as a repetition of stabilisation in parallel with the relational work and soothing strategies of the inner world(s) in Sophia's ongoing third reality (Kluft, 2013). Sophia and her therapist partook in the Top DD-study (Myrick et al., 2015). Sophia claimed it didn't make any difference. The therapist thinks both approaches helped the client-therapist dyad to become more real and realistic. More than 100 sessions with

Table 4
The nine subscales of the SCL-90-R; somatization, obsessive–compulsive, interpersonal sensitivity, depression, anxiety, anger–hostility, phobic anxiety, paranoid ideation, psychoticism and the Global Severity Index, GSI. The table includes the values from Steinberg et al. (2005) on 95 adult outpatients with dissociative disorders (DD) and the values from a Swedish female normal population (*n* = 707) (Fridell et al., 2002).

SCL-90-R	2y	3 ½	4 ½	5y	7y	8y	11 ¼	12y	13y	13 ¼	13 ½	14y	15y	DD (*n* = 95)	Normal values, women (*n* = 707)
Somatization	1,92	2,83	1,75	2,17	1,08	1,4	2,8	1,75	1,92	1,75	0,83	0,91	1	1,09	0,49
Obsessive–compulsive	2,5	2,3	2	2,8	2,3	2,2	2,3	2,5	2,2	2,3	1,8	2,1	1,7	1,55	0,65
Interpersonal sensitivity	2,89	2,89	2,78	2,11	2,56	2,7	2,9	2,11	1,89	2,44	1,89	1,66	1,22	1,58	0,55
Depression	3,62	2,7	2,6	2,85	3,38	2,9	3	2,85	2,54	2,77	2,46	2,46	2	1,89	0,72
Anxiety	2,9	3,92	3	2,4	1,9	2	2,7	2,2	2,4	2,7	1,7	2,2	1,2	1,48	0,56
Anger–hostility	2,5	2,5	1,9	0,33	0,33	0,2	1,5	0,33	0,5	0,67	0,33	0,33	0,33	0,98	0,39
Phobic anxiety	3	3,29	3	3	2,86	3,1	3,3	2,71	2,57	3,14	2,57	1,4	1,86	1,48	0,16
Paranoid ideation	2,17	2,17	1,83	1,67	1,17	1,2	2,2	1,17	1,17	2,17	2,17	1,16	0,67	1,28	0,41
Psychoticism	2,7	2,5	1,9	1,6	2	1,9	2,5	1,6	1,6	2,2	1,5	1,4	1,1	1,25	0,23
GSI—average score 90 items	2,78	2,67	2,37	2,26	2,14	2,1	2,22	2,11	1,97	2,37	1,73	1,67	1,48	1,39	0,49

neurofeedback (Van der Kolk et al., 2016) was conducted, though, before we started DBR two years before these measures, Sophia's quality of life and ability to self-soothe was very low.

The DBR treatment

The first 10–20 DBR sessions were focused on starting to identify an orienting tension, an anchor. As soon Sophia found her orienting tension, she became overwhelmed by dizziness. It took 50 DBR sessions before the Protoself exercise (Corrigan, 2025) could be used. Being present with herself was deeply unpleasant for Sophia and something she had spent her entire life avoiding. Her self-assessed measurements also temporarily deteriorated when measured after the first ten DBR sessions. Nevertheless, Sophia experienced an increased quality of life right from the beginning of the DBR work, so the implementation of the method continued. The therapist also realized that some of what previously was done in the therapy, before DBR, had partly contributed to Sophia becoming better at distancing herself from her inner world and her felt sense (Gendlin, 1978). This might have been necessary in order to reduce risk behaviours, though had not really resulted in healing (Hull & Corrigan, 2019). Sophia was still frequently haunted of intrusive images, flashbacks, thoughts and body sensations that continually challenged her fragile top-down control and triggered her phobia of her inner world.

Both Sophia and her therapist believe that the long and solid collaboration on a psychodynamic basis (Lemma et al., 2008), including participation in the TOP DD study and more than 100 h of neurofeedback training has been a prerequisite for her being able to do DBR today. Today, the DBR sessions are also calmer and more processing than during the first year of DBR.

Below is a summary of our 41st DBR session.

Activating stimulus: *That I reacted to my adult child being so sad (sadness over a dead pet), when I read the email.*

First comes worry, but Sophia can pause it and then find her orienting tension. It starts to tingle in her arms and upper body. Then comes more worry and stress that rubs against the chest. Sophia says, *it's always like that, this stress is always there*. She is asked to make clear contact with her orienting tension and do release breathing out of the sensation in her arms and upper body. For Sophia, the negatively charged affects were so intertwined with the pre-affective shock, so she needed help to reduce her general stress load, even though she also had ongoing pre-affective shock. *I feel guilty, I haven't given my child good tools. I tried to kill myself when she was a child and teenager. Soon my child will be the same age as when I broke down. I'm so scared, I don't want to outlive my child by a day,* release breathing. *It's stressful and sad. I'm so afraid of conflict.*

Sophia had now become more cognitive, which is a way of protecting oneself from feeling how things feel and from being in process, so she was asked if she still had her anchor, her orienting tension. No, she had lost it. When she, with her therapist's help, found it, she showed that she was so scared that she was shaking. She was asked to continue to do release breathing out of the activated fear. She said, *I can't bear to be sad, I can't bear it.* Whereupon one of her very defense-oriented parts, which previously was given the working name "The Bastard", looked over and wondered why Sophia and her therapist were doing this shit. The part was welcomed and told that they were doing this (DBR) because it helped Sophia to feel better. Sophia laughed, said*, yes, I had forgotten that*. She continued the DBR process and found a new perspective: *I simply must go there* (to the child) *more often. I must make sure that we have contact more often.*

By giving pre-affective shock space to transform when sitting together with the scratchy and empty sensation in Sophia's chest, something changed deeply. In the session reported, many affects came that are now starting to be bearable for her to feel. Other times the emptiness and aspects of Sophia's dissociative shutdown have been in focus.

In this therapy, the therapist's experience of working with ego states, such as when the Bastard part spontaneously appeared, is used. But parts-work, eg. addressing or asking for parts to come through is not used. Though, in Sophias polyfragmented system, when neurochemical dissociation eases, parts might spontaneously check in. The Bastard is a part that can seem very contemptuous and distant and that has helped Sophia avoid feeling difficult feelings during an upbringing with a lot of abuse and very little emotional protection. The Bastard has protected her from experiences that have given rise to a lot of pre-affective shock that is now transforming while Sophia's life is getting easier. After another 36 DBR sessions, she told her therapist how much the Bastard liked her. The Bastard thinks DBR is annoying, but now lets the therapy continue.

Sophia still experiences a lot of dysregulation, fear and suffering that her sad and terrified parts have not yet processed. Many parts of her system are anxious and fearful about the DBR work but are letting it happen. One part, with the working name "Nothingness" and which has had a psychotic quality, is currently the part that is most critical of DBR and which ridicules the method. Before DBR became a treatment modality in the therapy, that part of Sophia was never in her body. Now it is, after several DBR sessions where Sophia processed feeling completely divided, previously living with two parallel bodies and having several hallucinatory experiences. The adult parts of Sophia finds DBR good and helpful.

Sophia's summary of her therapeutic process

After 15 years of therapy including two years with 70 DBR sessions, Sophia answers a few questions:

How do you feel now?

I feel reasonably well and am more grounded in reality than ever before, but I am also more aware of my body and have access to more and bigger emotions than about a year ago. That and the inner stress that I feel has increased. This means that I get tired faster and need to rest more than before, especially after social situations. (But before we started with DBR, she rarely participated in social situations.) My basic feeling (the part that is most prominent) is still mostly sad, filled with sadness and full of feelings of loneliness, but I have many more moments and days when I feel joy and contact with others and that it is possible to endure.

What do you think DBR has added to the treatment work?

Effectiveness! I am less afraid of emotions and thoughts than before in therapy. Thoughts that I previously avoided or distanced myself from feel more manageable now, sometimes. I think it's because with this method I am forewarned about the feelings I will encounter during the session. The fact that we decide in advance which triggers to trauma material may come up means that I at least have a chance to warn the parts of me that are listening. However, I still feel that I don't dare to go that far, and my defensive reactions are usually stronger than my will. On the other hand, I feel better, so we must be doing something right.

I feel that DBR works, especially when processing deep or early traumas. It goes slowly but feels steadily better, which feels safe. DBR gives me a chance to process trauma without having to relive everything emotionally. Previously, the phobia of that has prevented me from having the energy and courage to heal. With DBR, I mostly feel that there is a path forward, both in therapy and in life, that I have the energy to go on.

DBR feels calmer and more regulated than, for example, hypnosis-based work or EMDR (which I have not been able to use). I enter the body before the feeling, which makes the process kinder but still deep despite/thanks to the fact that it does not happen on a narrative level. Sometimes, however, it is unpleasant, frustrating and a little strange not

to be able to tell where your thoughts are during a DBR session. I also feel that in theory I do not understand the process of DBR work as well as I understand other therapy methods.

If it feels different for your inner parts/parts during DBR sessions compared to other therapy methods that you have experienced?

DBR feels less confrontational for my inner parts. There is not a direct conversation with a part, as e.g. with ego state work. The parts hear but are allowed to process silently in the background. It gives me an experience of inner security. Sometimes I still think that the inner parts feel anxious and a little abandoned by not being "seen" and addressed.

What is the therapist's role in DBR work?

I would never have dared to do this without you. What I mean is that if we hadn't put so much work and time into our relationship in therapy, I wouldn't have had the emotional conditions for a method like DBR. I know (most of the time these days) that you don't want to hurt me. I know that if my rational thoughts scatter and disappear, you will be there to see it. I am sure that you understand the complex reactions from different parts of me, reactions that I still fear. Most of the time, I know that you regulate and navigate for me when I don't have that ability.

Is there anything else that you have noticed that you think I should ask about?

I have noticed that it is often only afterwards that DBR really starts to land on me – like the body continues to process in silence, even after the session is over. This makes it sometimes difficult to immediately put into words what has happened inside me, or whether any new perspective has emerged.

Case vignettes summary

The outcome of single cases is often visually analysed, though also nonparametric measures as percentage of nonoverlapping data (PND; Tarlow & Penland, 2016a, 2016b) can be used for effect size measurement. When the two first years of the therapy of client I were compared with the two last DBR based years through PND, the symptomatology was significantly lowered (p = 0,02) on all measures apart from the SDQ-5. Also, for client II the measurements on PCL-5 (p = 0,0027), SDQ-5 (p = 0,0366) and SCL-90-R (p = 0,0004) were significantly lowered according to PND when the degree of separation between baseline (the 13 years of previous therapy) and intervention data (the two last DBR based years) was quantified. That does not mean that the other values did not change, though the nonoverlapping data did not differ significantly (p = 0,05) when the results from the earlier 13 years of therapy were compared with the results of the two last years of DBR therapy with PND. Visually there were notably differences, and these were in line with the statements of client II. In the subscales of SCL-90-R, somatisation, depression, phobic anxiety and psychoticism changed significantly according to PND (p = 0,0091). There was a trend of change (p = 0052) for obsessive-compulsive, interpersonal sensitivity, anxiety and paranoid ideation. There was no significant change for the subscale anger-hostility, as that subscale supposedly had already decreased due to the previous 13 years of therapy.

The relational holding offered before the introduction of DBR into the therapies was informed by a relational psychodynamic stance (Lemma et al., 2008). Also, knowledge of innate affects, including shame (Nathanson, 1994; Hohfeler, 2025), our attachment system, and dissociative processes guided the interventions throughout these therapies. The interventions included hypnosis (Kluft, 2012), ego state interventions (Watkins & Watkins, 1997) and in case I some extended EMDR protocols (Forgash & Copeley, 2008). The therapies aimed to build trust, mitigate risk and suffering and enhance continuity and accessibility of autobiographical memory. The final two years of therapeutic interventions were based in DBR, purportedly with the objective of reach the clients' appraisal processes of their deep brains. Thus, potentially mitigating the long-term effects of trauma, eg. the shock responses from the locus coeruleus, the defence cascade and neurochemical dissociation driven by the opioids of their PAGs.

During the DBR sessions their experiences of themselves changed profoundly. These changes potentially stemmed from dissipated neurochemical, structural and supracortical dissociation (Corrigan et al., 2025a). The intracortical processing of structural dissociation, when the neurochemical dissociation hypothetically mitigated, putatively led to the spontaneous integration of trauma-bound ego states. These changes and the hypothesized lessening of supracortical dissociation (Corrigan et al., 2025a) helped the clients turn toward experiences and internal states that they previously had turned away from, as they previously had been overwhelmed by pre-affective chock, deep loneliness, terror, and panic.

Discussion

The reason for the described significant changes, although their causality at this point is speculative, may be related to the implementation of DBR into the therapies. The question whether the previous interventions and years in therapy have been a necessity for the introduction of DBR or not is not answered in this study.

The efficacy of DBR in enhancing these two clients' capability to change and heighten their quality of life seemed reasonable. The clients' ability to become more present in their lives was substantiated. It is conceivable that these alterations were connected to the introduction of DBR. Potentially the method appeared to enhance their integrative capacity. The changes might have begun at the brainstem level (Corrigan & Christie-Sands, 2020; Corrigan et al., 2023) and ultimately aimed at the functional networks of their brains (Lotfinia et al., 2020; Purcell et al., 2024). Hypothetically, the introduction of DBR into the therapies potentially altered the functions and connectivity patterns of the clients' brains, thus bringing them and their way of functioning closer to what has been observed in healthy controls. The clients' observed changes in self-assessments and statements might correlate with an uncoupling of the hyperconnectivity of their PAGs from their sensorimotor networks (SMN). Additionally, an uncoupling of their central executive networks (CEN) from their default mode networks (DMN), and of their posterior DMN from their SMN, due to the gains of the therapy is a hypothesised possibility. The hypothesis that the connectivity between the anterior and posterior nodes of their DMNs now is reinstalled may explain the heightened ability to mentally 'time travel' and recall the past while maintaining a focus on the present (Kearney & Lanius, 2024). Such change is hypothetically driven from the midbrain apparatus and changes the individual's capacity towards being more fully present in the moment while also reflecting on the past. Thus, the previously mentioned changes in the clients' self-assessments could correlate to changes in their functional networks. To verify this, brain scans would have been needed to ascertain whether there initially was an overmodulation of their subcortical brain activity through their CENs, and if it has begun to change, whether their SMNs and posterior DMNs are in a process of decoupling, and whether the functional connectivity of their anterior and posterior DMN has begun to normalize. The neurophysiological basis for the clients' regained mental health remains to be elucidated, although there has been a notable shift towards improved mental well-being for both client I and client II. The clients now have access to more embodied selves and, consequently, increased agency.

DID is, just as PTSD, a broad diagnostic category. Who committed the atrocities against the child, and whether the victim received comfort and help or not in the aftermaths of the traumatic experiences seem to impact the development and the complexity of the condition labelled DID. Supposedly betrayal trauma effects (Freyd, 1996; Fung et al., 2023; Yalch & Robbins, 2025), intertwine with the A-criteria. The clients in

case I and II were both exposed to sexual abuse from age three, though in case II her experiences during her first three years of life supposedly would have led to development of DID without adjacent A-criteria. The same principles have been adapted in both vignettes, e.g., initially building relational safety and then addressing traumatic experiences and the trauma-related dysregulation. During the last two years of therapy DBR has been the main psychotherapy modality. In case I the person is freed from the impact of earlier traumatic experiences, in case II the therapeutic process is under way, and the client is still alive. In Figs. 6–8 the differences in their change patterns can be seen including the enhanced change during the two last years when DBR was implemented.

For individuals who have experienced profound and ongoing severe childhood abuse and neglect, the effectiveness of different therapy approaches, including interpretive therapies and the evidence-based treatments of traumatisation are often limited (Corrigan et al., 2023; Loewenstein et al., 2024). If existential loneliness, chock, terror, disgust and humiliation shame, and other states mediated from the PAG, still recurrently haunts the persons we need to search more effective ways to help them. The need for other forms of treatment has been requested (Corrigan & Hull, 2015b; Holbæk et al., 2024; Nijenhuis, 2017). A research group, Dimitrova et al. (2024), gave a partial explanation for why evidence-based methods do not always work so well with more complex traumatization and dissociation. Their research showed that the DID patients had an increased (unconscious) cognitive control and thus avoided trauma-related knowledge about themselves through their central executive networks (CEN). Their CENs appear to be used to not register information from the self. Thus, particularly for those who fulfil the criteria of DID, diagnosed or not, the mere presence of kindness or positivity from a therapist may not be sufficient to facilitate the clients' reconnections with aspects of their selves that they alienated from in early life. Also, kindness and interest might be triggering for those repeatedly manipulated and abused in social interactions. To effectively engage with aspects of these clients' life-worlds, the relational stance of therapy seemed to be nourished by a brain-informed understanding of the deep brain's appraisal processes. This approach was facilitated by the recently developed trauma therapy method known as DBR.

As illustrated in the case vignettes' process notes, spontaneous healing processes may emerge when working with DBR, characterised by their transformative potential and originating from the client's innermost depths. These healing processes can occasionally bear resemblance to hypnotic inductions, exposure therapy and other methods, yet they are distinguished by their spontaneous nature, stemming from the client's intrinsic healing process. In accordance with the DBR theory, this phenomenon can be explained by the fact that DBR aims to address the core trauma experienced by the individual. When the neurochemical dissociation, that once was mediated from the ventrolateral columns of the PAG to shelter the individual from experiencing pain in unbearable situations, eases, the described shifts come. DBR offers a method that is based on an understanding of the seeking system and the basic affects of the PAG. Consequently, clients may once again be able to turn towards and address that which was previously considered too overwhelming to process, including their pre-affective shock responses.

During the sessions, the clients exhibited a reduction in dissociative tendencies purportedly attributable to the precision of the DBR procedure. This process may have occurred through assisting their shifting of focus to their superior and inferior colliculi in their midbrains, as, in DBR, the client is anchored early in the appraisal process through the orienting tension activated from the superior and inferior colliculi. The attuned relational adaptation of DBR appeared to assist the two clients of the vignettes in maintaining agency and enhancing their ownership of their bodies. This seemed to have helped them becoming present enough to be able to retrieve themselves from dissociation and depersonalization. Potentially DBR facilitated access to their neurophenomenological selves' capacity for change as they became able to endure states of being that had previously been deemed dead, non-existent, or destroyed, or which were previously considered too dangerous to approach. This opened the door to change.

DBR seemed to offer a new therapy paradigm through the slowing down of the chock response on brainstem level. The finding of the orienting tension is the key to processing through DBR (Corrigan & Christie-Sands, 2022) as the orienting tension opens the file that can be transformed through the DBR sequence. This supposedly happened as the clients' superior and inferior colliculi helped them anchor in an orienting tension and gave them the possibility to elicit shock before becoming overwhelmed by affective and/or defensive responses activated through their PAGs. The dissociative closing down seemed to have changed (case I) and begun to change (case II), when neurochemical, structural and supracortical dissociation dissipated. This potentially happened due to a deep switch in maybe, all four mechanisms of dissociation, according to Corrigan et al. (2025a). Potentially the treatment has led to intracortical changes due to neurochemical changes connected to lessened outbursts of endocannabinoids and endoopioids from the PAG and associated areas of the midbrain (Corrigan et al., 2014; Corrigan et al., 2023; Terpou et al., 2019a, 2019b). Then, the two clients experienced lessened depersonalization and could begin to be in contact and transform pain and fear. Their responses of anger, sadness and shame begun to shift as their dissociative symptomatology eased. According to the hypothesis of DBR these primary affects correspond with activation-patterns in the dorsolateral and lateral columns of the PAG. These responses, which presumably have been present most of the clients' lives, supposedly, began to ease and transform due to the incorporation of DBR into their therapies.

As seen in case II the PTSD and complex PTSD symptoms seemed to ease, see Fig. 3, even if the focus of the two last years of DBR focused treatment has been on contemporary situations and not on her multiple A-criteria. Thus, exposure does not seem to be essential for healing to happen as DBR probably has the potential to induce changes in brain functions, including a shift towards reduced depersonalization, enhanced threat perception, and heightened levels of resourceful states (Panksepp, 2012) without exposure. Potentially DBR can target specific areas of the brain, thereby enhancing the coupling and de-coupling of its functional networks (Kearney & Lanius, 2024; Purcell et al., 2024). Potentially DBR offers a psychotherapeutic intervention that has the capacity to bridge the divergent experiences of the life-worlds of highly dissociative clients, who often exhibit a range of trauma-affected states of being. DBR potentially facilitates a shift in both their internal states and external realities, as well as a transformation in their sense of self (Panksepp & Northoff, 2009), as illustrated in the clinical vignettes presented.

DBR could potentially enhance our understanding of the *subjective experience* during trauma, asked for (Ataria et al., 2019), thus offering an alley to deepened neurophenomenological understanding of the paths of traumatization and healing. Such approach can give an integrated understanding of the biological basis of mental illness, its treatment and its tight connections to the lived experience (Lutz et al., 2025; Nijenhuis, 2019), thus deepening the first person-perspective. Though, it is not self-evident that a better description of neural activity in traumatized individuals promotes more efficient therapies according to Nijenhuis (2019), who, concerning highly dissociative persons, proposed that a neurophenomenological understanding need to be multifaceted. If so, dissociative disorders can be understood and treated through a neurophenomenological lens integrating the phenomenology of the first-person-perspective with the third-person-perspective of neurophysiology (Purcell et al., 2024).

The single case format gave room for the lived experience of being in therapy (Finlay, 2009; Gerge et al., 2025) as phenomenological concepts such as lifeworld, pre-reflective experience, and the lived body ought to be given space (Zahavi, 2019) in psychotherapy.

Conclusion

Using single case design (Epstein & Dallery, 2022; Lobo et al., 2017), this article illustrated two single case treatments of DID providing preliminary evidence about DBRs potential in reducing dissociative symptomatology and comorbidities. The findings of the two case reports indicated that DBR therapy may be useful and might improve mental health for persons with DID, here exemplified in a treatment with 30 DBR sessions, and in an ongoing therapy with, so far, 70 DBR sessions conducted. The reduction in symptoms measured with self-assessments could potentially depend on the common factors of psychotherapy as the effectiveness of different psychotherapy methods has more common denominators than is usually stated (Falkenstrom & Larsson, 2017; Kirsch et al., 2016; Luyten et al., 2017; Norcross & Wampold, 2019). The causality of the presented changes in the clinical vignettes is not clarified, though might depend on the introduction of DBR after 2 (case I) respectively 13 years of therapy (case II) where significant changes were notified with the nonparametric percentage of nonoverlapping data (PND; Tarlow & Penland, 2016a, 2016b). When the two first years of the psychotherapy of client I were compared with the two last DBR based years, the symptomatology was significantly lowered ($p = 0{,}02$) on all measures apart from the SDQ-5. Also, for client II the measurements on PCL-5 ($p = 0{,}0027$), SDQ-5 ($p = 0{,}0366$) and SCL-90-R ($p = 0{,}0004$) were significantly lowered according to PND. In the latter case the 13 years of previous therapy were quantified related to the two last DBR based years. Also, visually there were notably differences, and these were in line with the statements of the clients. Potentially DBR offers a non-overwhelming opportunity for phase 2 treatment for severely dysregulated dissociative clients.

In the presented cases a preparatory relational phase of several years, knowledge about how to adapt phase specific treatment (Herman, 1992; ISSTD, 2011) and how to cooperate with highly dissociative and fragmented systems of severely traumatised and dissociative clients was supposedly a prerequisite for the introduction of DBR in the treatment of DID. DBR is not instead of trainings in diagnostics, risk assessments or how to adapt stabilisation and grounding (ISSTD, 2011; Boon et al., 2011; Brand et al., 2022). Neither is DBR instead of understanding the powers of countertransference and enactments in therapies with DID clients (Loewenstein & Brand, 2023), nor is it instead of being able to handle trauma-induced awake trance-states (Gerge, 2009) or altered states of consciousness (Frewen & Lanius, 2015; Lanius, 2015). With that said, DBR seems to offer a psychotherapeutic intervention with the capacity to bridge and heal the neurochemical dissociation and the divergent experiences of the life-worlds of highly dissociative clients, who often exhibit a range of trauma-affected states of being. Through a method developed from affective neuroscience and brain imaging studies (third person perspective), DBR potentially facilitates a shift in both the clients' internal states and external realities, as well as a transformation in their sense of self (Gendlin, 1978; Panksepp & Northoff, 2009), as illustrated in the clinical vignettes presented. Then the first-person perspective can be lived with heightened agency and ownership of the self, including retaken access to emotions and a congruent life history.

Considering the recent advancements in our understanding of the neurobiology of how our brains process shock and traumatic experiences, we need to integrate neuro-scientifically guided therapies based in the midbrain apparatus into the treatment of chronic traumatisation and dissociation. DBR offers a hypothesis and a method regarding the processes of appraisal and dissociation on a whole brain level where the midbrain is seen as an integrative hub and the orienting tension is the key that opens the file. Then the impact of traumatic events and attachment woundings can be transformed through the midbrain and brainstem as regulatory pivots of attention and arousal. DBR appears to offer precise and attuned therapy to clients who early on shut down and dissociated in the face of unbearable atrocities, thus helping them to reconnect with their ongoing sensory experiences. This can facilitate their regulation of higher cortical functions (Blithikioti et al., 2022; Kearney & Lanius, 2022; Panksepp, 2012). The incorporation of the knowledge from Corrigan and Christie-Sands (2020), Corrigan et al. (2023, 2025a) and Kearney and Lanius (2022, 2024) into therapy seemed potentially beneficial.

For those trained, and experienced in treatment of severe dissociation, DBR seems to offer a game changing possibility to enhance healing together with some of the outermost suffering psychiatric clients – those with DID. Though, if the changes described in the two clinical vignettes were related to the DBR interventions, or not, is at this moment speculative even if the clients' first-person perspective statements point to such conclusion. With the words of Sophia: *What is clear is that DBR makes me truly begin to understand and approach things that previously felt impossible to face*.

Limitations

One limitation is that the author carried out the clinical interventions presented in the case vignettes. Another limitation is that the mechanisms explaining the value of DBR in treating severe dissociation is currently only hypothetical. Another problem is the limited evidence due to the paucity of quantitative research studies on the efficacy of DBR in treating the psychobiological syndrome of DID (Purcell et al. 2024). Although consistent with recent neurophysiological findings, the therapeutic claims regarding the implementation of DBR in the clinical vignettes are not supported by brain scans as no biological markers of disease severity nor neurophysiologic outcome measures were used.

Further development

To examine whether cautious enthusiasm is reasonable, future research on the use of the DBR within phase-oriented treatment for dissociative disorders needs to be undertaken. Interventions that are tailored to the individual and informed by the neurophysiology of the traumatised brain are required. An understanding of the neurobiology of dissociation and DID is necessary for the development of psychotherapeutic interventions for DID (Purcell et al., 2024). Advances in neurobiological understanding of the brain's appraisal processes and dissociative processes have led to the development of DBR, a novel psychotherapy modality. The question of whether DBR can become an evidence-informed neuroscientific guided psychotherapy for severe dissociation, including DID, or not, needs to be substantiated through quantitative research and through neuroimaging techniques capturing changes in brain function and connectivity pre- and post-therapy. The feasibility of the methods needs further investigation also through phenomenological qualitative first-person-perspective research.

It is essential to research the efficacy of DBR in the treatment of well-diagnosed DID clients through pilot studies followed by controlled studies with waiting list controls and comparisons with treatment as usual and/or other methods. It should be noted that the treatment of severe dissociative disorders, including DID, typically necessitates a prolonged duration. This renders the randomised controlled trial (RCT) questionable, as DID is not amenable to brief interventions (Brand et al., 2009; Nijenhuis, 2017). Though, for example the introduction of DBR, can be sequentially analysed in the shorter term. These studies would hopefully be evaluated by independent outcome measures such as biological markers, functional network analyses and other neuroimaging assessments in combination with the clients' verbal and written self-reports. Then clients' self-experienced changes together with changes in brain function and intrinsic network connectivity could support the evidence in a credible manner. Also, studies of dropout rates and symptom worsening in treatment of severe dissociative disorders with DBR need to be undertaken.

CRediT authorship contribution statement

Anna Gerge: Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Conceptualization.

Declaration of competing interest

The author declare that she has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

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